

STATE OF VERMONT
PUBLIC SERVICE DEPARTMENT

DRAFT VERMONT ENERGY PLAN

September 28, 2011
7 p.m.

131 Fairground Road
Brattleboro, Vermont

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

P R E S E N T

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

CAPITOL COURT REPORTERS, INC.
P.O. BOX 329
BURLINGTON, VERMONT 05402-0329
(802) 863-6067
(802) 879-4736 (Fax)
E-MAIL: Info@capitolcourtreporters.com

S P E A K E R S

Richard Stafursky	39
Walter Schwarz	41
Nicholas Bartenhagen	43
Margaret Bartenhagen	44
Rep. Sarah Edwards	46
Guy Page	49
Michael Bosworth	50
Bill Jewell	52
Becky Jones	54
Betty Frye	81
Kate McCarthy	94

1 COMMISSIONER MILLER: Let's go ahead and
2 get started so we can reward those of you who
3 came and came on time and have a productive
4 couple hours on the energy plan.

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

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

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

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

23 So what I thought I would do tonight is
24 start off with a presentation. I would call
25 it brief, but honestly it's about 30 minutes.

1 I'll try to get through it as promptly as I
2 can so that we can turn to comments, but I do
3 want to just set the stage for the plan so
4 that you -- for those of you who haven't had a
5 chance to look in detail at it, you can at
6 least see the format that we've gone through,
7 some of the ideas that we have, and the
8 reasons why we have the ideas in it.

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

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

1 That's great. Thank you for coming.

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

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

24 So the Comprehensive Energy Plan
25 statutes that the Legislature has put in place

1 charged the Department to work with other
2 state agencies and departments to come up with
3 a Comprehensive Energy Plan on all energy
4 sectors, and that's the process that we've
5 engaged in since -- well since Governor
6 Shumlin came into office in January. He made
7 very clear that it was a first year priority
8 for him to have the Department complete this
9 process.

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

19 So where are we now? About a third of
20 our energy comes in the transportation sector.
21 That's where we use it. About a third in our
22 homes, and just over a third in our businesses
23 and industrial uses. In each type of energy
24 end use there's different mixes of actual
25 energy source. Like in transportation it's

1 almost all gasoline not surprisingly or
2 diesel, where in residential it's broken down
3 pretty evenly between electricity and home
4 heating.

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

15 So anyway about a third, a third, a
16 third. If you look at Vermont's energy usage
17 over time, this is a chart, I know it's hard
18 to read, but it's a chart from the 1970's
19 through 2005, and what it tells you, if you
20 just look at the way of chart's trending, we
21 use a lot more energy now than we used to a
22 couple generations ago. It's not a surprise
23 given the way life has developed, but it's
24 proven by the data, and there's quite a bit of
25 increased usage in transportation which is the

1 orange bar, the second one down, and in
2 electricity which is the red bar, the third
3 one down, but frankly all of them, if you
4 look, have trended up.

5 Next slide. Greenhouse gas emissions,
6 which can be tied to energy usage depending on
7 the source, have also over time -- this goes
8 from 1990 to present and then projects
9 forward, have over time trended up. If you
10 look from 1990 to about -- if you look from
11 1990 until about 2002 or 2003, you see a trend
12 upward, and then good news from 2003 close to
13 the present you see a relatively gentle slope
14 trending in the other direction down.

15 So that's good news. However, the
16 Legislature has set goals for greenhouse gas
17 emissions that are aggressive and will help
18 Vermont reduce its total greenhouse gas
19 emissions footprint and environmental impact.
20 The two goals that are most immediate is a
21 2012 goal which we frankly will not hit. We
22 would have to be on this path to get to it in
23 a year, and this goal represented by the
24 dotted line here leading us to 2028, and I
25 think there's some good news here. We have

1 some work to do, but there is a trajectory you
2 can kind of see based upon recent progress.
3 If we can just get that line going down, we
4 can head towards 2028 and the goal that's been
5 set.

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

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

22 Of the electricity we're doing fantastic
23 frankly with regard to renewable energy.
24 Nearly 50 percent of it is from a renewable
25 source right now, and that includes

1 Hydro-Quebec. It also includes renewable
2 projects where renewable energy credits are
3 sold out of state. So that's a source-based
4 number, almost 50 percent, but on the other
5 side when you look at transportation and home
6 heating and industrial we're only five percent
7 renewable, and that's mostly biomass for
8 heating, and so there's quite a bit of white
9 space still on that side of the graph.

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

14 Next slide. Costs for a second. This
15 chart on the left shows the dollars out of
16 your pocket for using various energy sources,
17 and electricity is the first bar. It's the
18 most expensive in absolute dollar terms
19 compared to other sources of energy such as
20 LPG, oil, and gasoline. If you adjust for
21 inflation, which is what this right graph
22 shows, what you see is that while electricity
23 is the most expensive in absolute terms, it's
24 actually flat from an inflation point of view.
25 In fact, it's a little bit down. In other

1 words, it has not kept pace with inflation
2 which is good news from a pocketbook point of
3 view. The other types of fuels have exceeded
4 the rate of inflation. So they are going up 2
5 to 3 percent more than inflation.

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

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

22 Okay. So just touching upon some facts
23 in each energy sector other than electricity,
24 efficiency, one of the things we did in the
25 plan, you'll find in the appendices, we asked

1 for an economic impact study of our efficiency
2 programs in the State of Vermont, and there's
3 a lot of different ways one could do that.

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

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

1 the numbers. So that's very good news.

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

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

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

25 We're also we found, we knew this but

1 crunching the numbers is another thing, we're
2 behind the legislative goal. The Legislature
3 has a goal of improving the energy efficiency
4 of 80,000 homes by 2020 in a way that would
5 save at least a quarter of energy costs for
6 those homes. 25 percent. We're behind. We
7 would need to rapidly increase our rate of
8 efficiency projects in order to reach this
9 legislative goal.

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

21 Okay. Transportation. Interestingly
22 most Vermonters spend more than the national
23 average on transportation. For most
24 Vermonters it's closer to a third of total
25 household expenses right after housing. So if

1 you think about it, most Vermonters spend more
2 on driving, and that's vehicle, insurance,
3 everything else than things like health care,
4 education, and food.

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

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

23 Why does that matter? Well it matters
24 because it integrates with where we live and
25 how we work and use services. From a land use

1 point of view what's really interesting is,
2 you probably all know this, Vermont is a
3 relatively sparsely populated state, right?
4 We're not as dense as the rest of the country.
5 That shows you our density compared to the US
6 average, but 30 percent of Vermonters live in
7 what the state calls our 21 designated
8 downtown areas. Live in relatively compact
9 downtowns.

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

18 Next slide. It's obvious I think, but
19 there is actually data that supports the idea
20 that people travel fewer miles if they have
21 accessibility to service closer to work, you
22 know, and where they live. In other words, a
23 mixed use of buildings in an area so that they
24 can get services closer to home. So how we
25 grow matters. The energy usage of a village

1 is different than the energy usage of a suburb
2 or a community on the edge of a more dense
3 area.

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

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

17 So what does that look like just
18 graphically? Next slide really quick. 23
19 percent, that's what you saw before. 90
20 percent all sectors. So if you think about
21 it, just pause for one second, think about it
22 when we said that transportation is about a
23 third of our energy, residential is about a
24 third, and commercial is about a third. We
25 will need significant, significant switching

1 toward renewable energy in the transportation
2 sectors and in the home heating and business
3 heating sector if we're going to reach this
4 goal because we're already at 50 percent in
5 electricity. Even if we went to a hundred
6 percent electricity, we'll not hit this goal
7 without significant movement in transportation
8 and heating.

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

21 How will the goal be achieved? This is
22 my version of it in graphical terms. It
23 should be and needs to be an acceleration
24 curve over time rather than a straight line
25 progress. Why is that? Well simple reason is

1 transportation -- we're at the edge of a
2 change in transportation. We now have Ford,
3 Chevy, Nissan coming out with plug-in vehicles
4 for consumers. I have no illusion that's
5 going to all of a sudden mean that we have
6 volts on the road in Vermont, but it will over
7 time change the way we drive. It will change
8 our options for the fuels we use, and that's
9 just one little example.

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

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

25 Next slide. You also need, in doing

1 that, to address all areas of policy that can
2 affect change. Outreach and education,
3 letting people know what the goal is, why the
4 goal's important, what the services are that
5 can support the goal, finance and funding.
6 What are the programs that folks can use, for
7 example, for efficiency such as the PACE
8 program. It's just an example, but I think
9 supports that.

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

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

25 Next. Okay. So this is inevitably an

1 unsatisfactory exercise because the plan is
2 long. There's a lot of recommendations, but
3 I'm going to try just to give you a highlight
4 of what we recommend in each sector so that we
5 can prompt some discussion.

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

19 Right now if you did an efficiency
20 measure, windows help with thermal efficiency,
21 light bulbs help with electric efficiency,
22 those are two different programs. It's
23 confusing for homeowners. It's hard to put in
24 place. We need to figure out how to make
25 consumer delivery easy and more accessible.

1 We also need to look at the funding and
2 finance mechanism before just concluding that
3 a certain amount of money is needed. We need
4 to look at what the mechanisms are in place,
5 how consumers can access those financing
6 mechanisms, including on utility bill payment
7 which is something we believe would help, and
8 then have the discussion about how to fill in
9 the gap.

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

16 Okay. Electricity. Efficiency,
17 specifically we have called for a three
18 percent annual savings. You'll remember
19 quickly on a slide before I showed you that
20 we've been achieving about two percent. We
21 think we can ramp that up. I know three
22 percent doesn't seem like a big ramp up, but
23 it's based upon a couple things. First, the
24 ability of the programs to actually spend the
25 dollars and achieve the savings, and then,

1 secondly, a recognition of the balance
2 necessary for affordability because electric
3 efficiency does require upfront investment.
4 We spend, you know, money every year. So we
5 think we should achieve three percent savings
6 greater than in past years because the
7 economic case for electric efficiency is
8 compelling. We need to keep doing it. We
9 need to do it more robustly.

10 Thermal efficiency. So specifically
11 with regard to buttoning up our homes for
12 heating purposes we believe that Vermont can
13 set a goal to double the percentage of new
14 Energy Star homes by 2020. That's currently
15 30 percent and we think by 2020 we can set
16 policies that encourage new builds to go to 60
17 percent to be Energy Star homes. That will
18 put us on a path to support net zero energy
19 usage, which is both efficiency and renewable
20 energy, and in a home by 2030, and that's an
21 ambitious goal, but we have residential
22 building energy standards, commercial building
23 energy standards, and the Department is right
24 now engaging in a process for code compliance
25 for those programs that will also help support

1 this goal. So there are things already
2 happening with regard to that item.

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

16 We believe that the state can achieve in
17 a realistic and affordable way a 75 percent
18 electricity goal by the end of our 20-year
19 planning cycle. We need to do that, though,
20 in a way that's supportive also of in-state
21 local generation. So we suggest that the
22 Legislature take up the challenge of expanding
23 the standard offer program, and we ask that
24 market based pricing mechanisms be put in
25 place specifically looking at auction

1 mechanisms that can be used to set the price
2 for that type of renewable energy project.

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

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

22 Also, just looking at the lessons that
23 we've learned in the last few siting cases on
24 small solar and the small wind projects to
25 determine whether there's any simplification

1 that can be done on those smaller projects.

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

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

25 Transmission and regional markets.

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

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

24 My short response is providing
25 Vermonters choice. Vermont has very little

1 gas infrastructure right now compared to many
2 other states. We are, as a consequence, very
3 dependent, if you look at us compared to other
4 states, on home heating oil and LPG. In my
5 view expanding the gas infrastructure provides
6 choice for Vermonters on a type of fossil
7 fuel, yes, but it's a fossil fuel that has a
8 defined infrastructure, is regulated, has an
9 effective price forecast right now based upon
10 the supplies that are available, and does
11 offer fewer greenhouse gas emissions than
12 other forms of fossil fuel.

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

23 There are trade-offs. We've all heard
24 about the problems that can exist if it's not
25 extracted properly and transmitted properly.

1 It's absolutely critical to keep those in
2 mind. However, there's trade-offs with
3 everything. I would argue that natural gas is
4 worth expanding to provide Vermonters the
5 choice.

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

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

1 provide the energy services in our homes.

2 Okay. Transportation. Turn it over.

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

20 MR. PAPPAS: Yes.

21 COMMISSIONER MILLER: Okay. VTrans used
22 a metric to achieve this really ambitious goal
23 and figured out that in order to reach the
24 goal by 2050 we really should be looking in
25 the next 20-year planning cycle to try to get

1 25 percent renewable energy in our
2 transportation sector by the end of that 20
3 years. So how often does a car turn over?
4 How often do Vermonters buy cars?

5 MR. PAPPAS: 7, 8 years.

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

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

24 MR. PAPPAS: No.

25 COMMISSIONER MILLER: So VTrans is going

1 to look at the combined average fuel economy
2 of the Vermont registered vehicles, figure out
3 what that is, figure out whether it's better
4 or worse than the national average, and either
5 way set a goal to beat it by five percent.

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

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

23 Okay. Finally land use. We look at
24 land use first and foremost as a way to
25 preserve the character of Vermont that we have

1 to conserve our resources and support
2 development in the appropriate places, but all
3 of those things have a benefit for our energy
4 usage as I described earlier. So ACCD has
5 been working on this part of the plan and has
6 a few specific recommendations.

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

23 And also we're going to work on
24 coordinating state incentives and programs.
25 There's a lot of different areas, but just as

1 an example if you have a waste water
2 permitting process that doesn't encourage
3 closer development, that's in conflict with
4 downtown growth. Similarly there's some
5 transportation policies that, if not properly
6 aligned, may not -- may frankly promote sprawl
7 if we're not careful. So we want to look at
8 those things and make sure they align.

9 And then ACCD has a plan to develop
10 specific training programs thinking about
11 outreach and education to make sure people
12 know about and understand and participate in
13 complete streets programs and transit oriented
14 design partnerships, and they are going to
15 hold I think it's three -- three workshops in
16 2012 to do that.

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

22 Okay. There's a few longer term things
23 that we also talk about in the plan or in
24 areas that aren't specific to just one area of
25 energy. One is we suggest, the Department

1 suggests, that the Legislature charge us and
2 others with looking at developing what's known
3 as a total energy standard so that rather than
4 just focusing on renewable electricity or
5 looking at how we might transform
6 transportation towards electric, we actually
7 look at our total energy usage. Say okay 23
8 percent renewable right now. How can we make
9 that 25 percent or 26 percent, 27 percent, and
10 what plan can we put in place to measure it.
11 It would require us to change all units of
12 energy to a common unit such as a British
13 thermal unit, but we believe it's worth doing
14 because it would help our progress.

15 We also have in the plan a number of
16 highlighted farm energy programs. They cut
17 across different areas of energy usage so I
18 just wanted to highlight that for you. And,
19 finally, another one that cuts across many
20 different areas State of Vermont energy
21 leadership, the Department of Buildings and
22 General Services has taken the lead on this.
23 Governor Shumlin and Speaker Smith set a five
24 percent state agency energy reduction goal
25 last spring. Buildings and General Services

1 is right now developing a road map for
2 achieving that, and believe me post Irene this
3 is hugely on the mind of the state, and as BGS
4 has been putting workers -- displaced workers
5 in buildings I have had conversations with
6 them. They are really thinking hard about how
7 can we frankly find a silver lining here and
8 reduce our energy usage. So it's on our minds
9 right now.

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

21 So implementing it. Just very briefly
22 the Governor has asked that the climate
23 cabinet actually have some oversight on this
24 once it's finalized because it can't just be
25 the Department of Public Service. We don't do

1 all of these energy areas. As we've discussed
2 tonight we're working with these folks in
3 transportation and ANR and agriculture and
4 community development to work on this, and all
5 of those folks are part of the climate
6 cabinet. So that's oversight.

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

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

1 cabinet oversight we're hoping it can be very
2 quick.

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

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

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

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

25 COMMISSIONER MILLER: Actually and spell

1 your name also.

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

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

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

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

23 Now that same dried biomass is now
24 called biofuel and it is burned. It is burned
25 so we are burning our forests. Biomass,

1 biofuel are not green. You had mentioned that
2 one of your goals was to get off fossil fuel.
3 That's semantics because it should be you
4 should get off dirty fuel. Now that's
5 semantics as the use of fossil fuels category
6 was intended, so that other fuels that are
7 dirty are not included in that such as natural
8 gas, biomass, and when you talk about
9 renewable you cannot use biomass either
10 because you're destroying the forest. How is
11 that renewable? Or you're preventing the
12 forest from returning. How is that renewable?
13 When you log an area for lumber every 20 or 30
14 years, that's not renewable. Renewable is
15 when you return the forest to its natural
16 state. Then it is renewed.

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

25 The forests have been coming back for

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

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

14 COMMISSIONER MILLER: Thank you.

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

17 COMMISSIONER MILLER: Thank you.

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

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

23 Global warming is coming quickly, and I
24 think that a 2050 date was given for the
25 reduction in energy, in fossil fuel use. I

1 think -- I really think we only have 10 years.
2 The next 10 years. When I was -- when I was a
3 boy I was 15 and the Japanese bombed Pearl
4 Harbor, and I saw the automobile industry shut
5 down or change over to war production in three
6 months. They stopped building passenger cars.
7 I think we should do that now, and of course
8 Vermont can't do that on its own. That's a
9 federal possibility, but it's insane to be
10 building millions of fossil fuel automobiles
11 at the present time. We must electrify every
12 way we can as soon as we can. That about does
13 it.

14 COMMISSIONER MILLER: Thank you.

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

17 MRS. SCHWARZ: No.

18 MS. LAUNDER: Okay. Nicholas
19 Bartenhagen.

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

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

25 MR. BARTENHAGEN: Bartenhagen

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

5 COMMISSIONER MILLER: Really hard.

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

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

23 MS. LAUNDER: Thank you.

24 MR. BARTENHAGEN: My wife, Margaret.

25 MRS. BARTENHAGEN: Thank you. Margaret

1 Bartenhagen. I would agree with Walter
2 Schwarz that I think there's an urgency here
3 that -- and I understand this huge task that's
4 ahead of us, and I know that it takes time,
5 but I also feel that we may not have 39 years,
6 and that, you know, from 2011 to 2050,
7 especially as one of your charts showed that
8 we had a goal that we did not reach, my
9 concern is that that could continue to happen,
10 although I will join my husband in expressing
11 my appreciation for this total shift in
12 emphasis and sincerity and willingness to hear
13 public -- I won't cast aspersions on any
14 prior, you know, Administrations -- but I will
15 say that it's very exciting to me living in
16 this state to have a sense that there's a
17 seriousness here, and having just experienced
18 this incredible hurricane and being a member
19 of the Windham Regional Commission, just newly
20 elected to the Executive Board of that body,
21 and being very involved in communicating the
22 emergency e-mails to my Town of Halifax, it's
23 very clear that we're going to be continually
24 faced perhaps with these dramatic and extreme
25 events, and if we do not prepare seriously the

1 way this suggests, presentation suggests, and
2 the way it appears that the Administration is
3 now looking at all aspects of this, I think,
4 you know, it's forward thinking. We
5 definitely need to go there as quickly as
6 possible. So I'm excited about that
7 possibility.

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

19 Having recently done an energy audit on
20 our property and actually incorporated some of
21 the suggestions, I would also say that yes I
22 think education and, you know, getting the
23 word out to Vermonters in general how do you
24 access. It was not easy trying to figure out
25 where to go to get this information, and I

1 think in order to encourage that, that should
2 really be one of the first things that are
3 done because it's fairly easy to do, get the
4 word out how people access information, but I
5 will say it's really exciting what's
6 happening, and I think Vermonters, my
7 experience having lived here for a while, are
8 ready and willing and really want to move this
9 forward, and so I think just given the
10 opportunity it's a big yes.

11 MS. LAUNDER: Sarah Edwards.

12 REP. EDWARDS: I am the Representative
13 from District 3 in Brattleboro representing
14 downtown. So the downtown didn't actually
15 experience all the devastation that the other
16 two districts did, District 2 near the high
17 school here and the hospital and the District
18 1 which is out in West Brattleboro. So I'm
19 glad to hear reference to the opportunity to
20 take a look at what infrastructure we do have
21 and how we can again jump on that acceleration
22 curve, but I came here tonight, number one, to
23 get a preview of what we're going to be
24 dealing with in January.

25 I do serve on the Natural Resources and

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

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

20 The other one is biomass concerns. I
21 have been getting lots and lots of e-mails
22 about biomass. Not so much that we should
23 have biomass from what I've been hearing from
24 the constituents, but that its primary use
25 should not be for electricity. It's an

1 inferior way to generate. It's fine if you
2 use it through a CHP, which is combined heat
3 and power.

4 MR. RECCHIA: Combined heat and power.

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

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

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

25 MR. PAGE: Thank my parents. Guy Page,

1 Vermont Energy Partnership. Is now an okay
2 time for a question or two or should I wait
3 for questions afterwards?

4 COMMISSIONER MILLER: We may answer it
5 after.

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

17 And another thing is you mentioned a
18 possible revision of the plan. Right now
19 Vermont Yankee is in the federal court. If
20 the resolution of the whole federal court
21 thing is that the plant is allowed to operate,
22 how will that affect this plan? Would you --
23 if it turns out that it is -- it does get a go
24 ahead from the courts, is the state open to
25 revising the plan to include that, whereas,

1 right now it's just sort of a -- it's not part
2 of the plan as I read it.

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

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

8 MR. PAGE: Sure.

9 MS. LAUNDER: Okay. Michael Bosworth.

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

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

19 Each of the major sections could have
20 its own sort of summary. I think electric
21 supply and demand is 140 pages, but there was
22 no sort of summary of it. Same thing for some
23 of the others, and also just sort of
24 consistency of structure. I notice the
25 transportation one had a pretty nice section

1 on conclusions and recommendations tied to
2 goals. Some of the others did not. So I
3 think that would be a good thing to have.

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

14 I think I did see one or two
15 recommendations here I kind of liked. As far
16 as the incentive program that has been applied
17 to things like solar, if it can be applied to
18 more directly to biomass projects, I think
19 that would be a good thing. We first tried to
20 look at a very large district energy which is
21 -- for Brattleboro which is a pretty complex
22 thing to do because you got multiple owners of
23 land, you have streets to cross. Now we're
24 sort of more focused on what are sort of
25 smaller projects that could involve two or

1 three or four adjacent buildings, and so
2 incentive programs might help that type of
3 project along might be a good thing to have.
4 Thank you.

5 COMMISSIONER MILLER: Thank you.

6 MS. LAUNDER: Bill Jewell.

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

15 The paradigm shift you guys should be
16 thinking about is we now have kind of point
17 sources of electricity, of fuel, and so on,
18 and it all gets kind of shipped here. I think
19 the nation should be thinking in terms of each
20 individual home and business and building is a
21 power source, and how do you deal with too
22 much energy when you don't really need to use
23 it. Electricity you have to use pretty much
24 as it comes off the generator. So you need to
25 be thinking about how do we collect that and

1 store it; batteries, hydrogen, fuel cells,
2 however you want to do that. That needs to be
3 local collection and distribution towards the
4 state.

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

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

23 Natural gas I think we should be really
24 considering that. I agree wholeheartedly we
25 need to get natural gas here. There are some

1 problems with hydrofracking. Probably what
2 can be done with that is you need to do --
3 with the mix of the stuff they are putting
4 down there now is you need to treat that with
5 a separate specialized treatment plant. The
6 other thing they could use dry ice like they
7 do for wells hydrofracking, and that gets rid
8 of CO2. That would be a good thing to do two
9 things at once.

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

22 MS. LAUNDER: Thank you. And Becky
23 Jones.

24 MS. JONES: Hi. I'm Becky Jones,
25 Brattleboro. I'm very excited to be here. I

1 don't know how many of you knew about the
2 moving planning event in Montpelier. I was
3 there. 1500 people. It was very exciting.
4 So I'm sort of representing 350 Vermont.
5 We've sort of been gaining steam since the
6 spring.

7 You probably already assumed there was a
8 350 Vermont, but there wasn't. There was just
9 350. Now there's 350 Vermont too. So there's
10 all kinds of people getting more and more
11 excited about being part of the solution and
12 you'll be hearing from us. We'll give you
13 some information. So it's pretty exciting.

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

23 I wanted to mention, and I will be
24 sending some information to you, that I've
25 been working on I guess a project to link

1 health care solutions with energy solutions
2 and I'll send you more. It's a little bit
3 lengthy so I don't want to say too much. You
4 know all about it.

5 REP. EDWARDS: Yes. It's good.

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

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

18 COMMISSIONER MILLER: NEEP, the National
19 Energy Efficiency Partnerships.

20 MS. JONES: Yes. I think that's exactly
21 what it is. Anyway this tour is I believe a
22 nationwide or at least region-wide effort to
23 educate people, and so my office on Lake
24 Street is going to be on it and a few other
25 buildings that are green, and there's just

1 incredible amounts of resources, and if anyone
2 wants a copy of that, I can get that to you.

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

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

12 COMMISSIONER MILLER: Thank you for
13 coming today.

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

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

1 chat about some of the questions that are
2 raised.

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

14 You know Vermont is in a unique position
15 with the resources we have and instate and in
16 immediate neighbors to make this work and to
17 really provide some stability, and what I
18 really want to say is besides that paradigm
19 shift, the dramatic cooperation among your
20 state agencies is astounding to me. I've
21 always hoped for it. This is the first time
22 we've actually been able to be part of it and
23 implement it, and working with Liz and the
24 DPS, staff at the Department of Public
25 Service, actually when they came and said

1 we're going to be do a Comprehensive Energy
2 Plan and we're including land use I was like
3 oh my God, what have you done to your
4 department. I was just very excited because,
5 you know, that's -- I think this is the first
6 time that's been included, is it not?

7 COMMISSIONER MILLER: Certainly with
8 ACCD's direct participation.

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

16 MR. PAPPAS: Hello. The transportation
17 part of this plan, you know, for us to put
18 together was quite challenging because unlike
19 electricity or the thermal side, we really
20 don't have a lot of control in how cars are
21 manufactured, how fuel efficient they are, and
22 that's one of the reasons why, you know,
23 you're looking at a date of 2050. It seems
24 like it's really far off, but when we
25 considered the pace of technology and its

1 evolution and the transportation sector it's
2 very clear that's going to continue to be a
3 challenge; but that said, our portion of the
4 plan was broken up into two different sections
5 because we feel like there is an economic
6 security component to the plan and an energy
7 reduction component.

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

23 One example that's not in the plan
24 because we've been working on this just, you
25 know, past couple of weeks, you may have heard

1 that there is a bill in the U.S. Senate
2 allowing heavy trucks to use the interstates.
3 That's been an issue throughout the state,
4 yeah, and we're about an inch away. They are
5 voting tomorrow and so far all indications are
6 that that provision will be left intact. You
7 know that's an example, a concrete example of
8 how we can become more energy efficient in the
9 transportation sector with an action that's
10 relatively simple. It's one piece of
11 legislation that's expected to result in
12 significant fuel economy, not to mention the
13 safety benefits of not having heavy trucks
14 passing through our village centers.

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

25 When we were asked to put our section

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

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

1 close to that goal.

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

17 The first thing we did was we asked
18 Vermont Law School to -- and this gets to
19 Guy's question in part as well on cost. The
20 first thing we did is we asked Vermont Law
21 School to do what they have termed a
22 conceptual map of current state law and
23 regulation, and it also looked down at the
24 municipal regional level, although frankly it
25 focused on statewide laws and regulations, and

1 the reason we asked them to do that is because
2 it hadn't been done before, and coming in as a
3 new Commissioner and getting familiar with
4 what my Department does it became clear to me
5 pretty quickly there were some conflicts here
6 and there in state laws and regulations, and
7 it would be really great to have somebody look
8 at that comprehensively. We can identify
9 where those conflicts exist and use it in our
10 planning process going forward to fix it and
11 align it going forward. So that's the first
12 appendix is from law -- Vermont Law School on
13 a legal conceptual map of energy law.

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

21 We then engaged for our electric
22 planning purposes a consultant to look at
23 different scenarios for electric planning for
24 the next 20 years, and those do include in
25 partial answer to Guy Page's question economic

1 impact scenarios as well. They also include
2 carbon or greenhouse gas impact. We did that
3 in consultation with a bunch of folks,
4 including many business groups. We met with
5 GBIC, which is the Greater Burlington
6 Industrial Corporation, and others who asked
7 for some additional costing information.

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

11 MS. LAUNDER: Is that Dave Lamont?

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

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

1 because the biomass question was raised so
2 frequently in the public planning process
3 before this draft was issued. We worked with
4 ANR and said will you help us on the biomass
5 portions of this plan, and in addition to
6 helping us on the substantive recommendations
7 and data in the front part of the plan, they
8 also wrote I think it's an eight page -- it's
9 a quite -- single spaced. It's a quite
10 comprehensive actually forest management
11 report on bioenergy that's worth a read for
12 sure.

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

20 So the point is it's lengthy, but the
21 point was to really put the relevant set of
22 documents altogether so that folks can take a
23 look at that, including work we had done
24 behind the scenes, so that you could see where
25 did that come from.

1 So that was that, and then I think the
2 other specific question -- there was a couple.
3 Let me look. Oh, Nicholas, you had asked
4 about financing.

5 MR. BARTENHAGEN: Yes.

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

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

22 I was on the phone a few weeks ago with
23 Oregon's Energy Department. They have done a
24 program in Portland. They have done one
25 program in Portland and one program in a rural

1 area in Oregon down near Grants Pass looking
2 at how on bill financing could work, and they
3 have implemented a pretty good program
4 actually and they have data on default rates,
5 very low default rates. Banks who are willing
6 to make these -- back the financing because
7 after all utilities, one good thing about them
8 is their regular rate of return and their
9 guaranteed profit because of their monopoly
10 territory.

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

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

19 COMMISSIONER MILLER: Right. Yes.
20 There are some companies up in our neck of the
21 woods. All Earth Renewables leases solar
22 trackers. There are some other companies that
23 are doing that. Encore Redevelopment has done
24 some projects. Actually Green Mountain Power
25 and Northern Power, which is a manufacturer of

1 small scale wind turbines in Barre, I think
2 they are 120-foot turbines.

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

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

18 And then the other specific question,
19 Guy, you had asked about Vermont Yankee.
20 Honestly we haven't crossed that bridge
21 because we're waiting for the results of the
22 lawsuit. From a practical point of view the
23 electric plan in the state needs to look at
24 all resources that are present in the state.
25 So if Vermont Yankee is operating, then by

1 statute the Department will have to inventory
2 that as it were as a part of the electric
3 plan, but that doesn't answer your real
4 question which is what does that do to the
5 energy plan, and I don't have an answer for
6 you while the lawsuit is pending.

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

9 COMMISSIONER MILLER: Yes.

10 MR. RECCHIA: So just to give some more
11 context to the biomass discussion because I
12 think this is really important, you know one
13 of our departments is the Department of
14 Forest, Parks and Recreation, emphasis on
15 forest, and as was pointed out, you know, we
16 have our forest resources. Vermont looked
17 very different 150 years ago, and we have
18 gained a substantial amount of reforestation
19 in that time period, but in the last 10 years
20 or so it's started to decline again. That
21 decline is not due to trees not growing. The
22 decline is due to land conversion, and this is
23 really key is that 76 percent of our forest
24 resource is privately owned. So you have to
25 ask yourself the question, if you wish the

1 trees to grow, what's the value. How do we
2 maintain a value, an economic value, and
3 appreciate the ecological value, but how do
4 you maintain the economic value so that the
5 only return to the landowner is not just
6 waiting until population pressures increase
7 enough that you can subdivide and develop it.
8 That is not sustainable. We will lose. We
9 will lose big time if that occurs, and again
10 with 76 percent privately owned you have to
11 think about that.

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

20 There's a lot of ecosystem values with
21 our forest resources and we should manage them
22 for those. In that context there is some
23 available biomass resource on a sustainable
24 basis that is available. Unfortunately the
25 typical practice has been to high grade forest

1 resources and to take the best trees out and
2 leave the low grade wood because there was no
3 market for low grade wood. As a result, our
4 forests, although there are more of our
5 forests that are -- we have more acreage in
6 tree cover than we had 150 years ago, the
7 quality of the trees is much lower. We need
8 to get back to the point where somebody in a
9 generation can actually see an adult tree and
10 know what one looks like. We don't have any
11 of those right now to be honest.

12 MR. JEWELL: Windham County does.

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

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

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

25 I may be pollyanna-ish about this, but I

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

14 So to the extent that you have to take
15 trees out because of this we ought to make
16 good use of them. Right now we have about
17 750,000 tons of wood being used by homeowners
18 in wood stoves. Michael talked about the
19 district energy projects. If you can -- you
20 know, the bigger you get, like it or not, the
21 bigger you get in terms of a facility, the
22 better air quality controls you can put on
23 those wood resources. A power plant has
24 exceptional air pollution controls.
25 Unfortunately it's not using the wood

1 particularly efficiently, but that's a
2 different aspect of it.

3 Your home wood stove is about 80 percent
4 efficient. Very nice, but your exposure to
5 indoor air pollution is the worst that it
6 could be. So is there a sweet spot in between
7 to look at where you get health benefits and
8 the biomass benefits and the efficiency
9 benefits. So those are all complicating
10 components to this equation, but the main one
11 I want to leave you with is, you know, we are
12 76 percent privately owned forest land and
13 farmland. We have to be able to sustainably
14 keep that through an economic return of some
15 kind to those private landowners.

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

21 COMMISSIONER MILLER: What other
22 comments would people like to either make or
23 --

24 MS. LAUNDER: When you make a comment or
25 have a question, if you can just repeat your

1 name for the court reporter.

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

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

25 I forgot the other point I was going to

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

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

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

25 The other thing is we have a perfect

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

10 COMMISSIONER MILLER: Thanks.

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

23 At any rate, Honda took it away from
24 this Guy in Sunapee because they were going to
25 make their own multi-fuel car out on the road.

1 Well they have never done that, but my thought
2 the opportunity was to have something like
3 that happen in Vermont. Retrofit the trucks,
4 retrofit cars, whatever, to get that -- jump
5 start that whole process.

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

15 COMMISSIONER MILLER: 2030 for new
16 construction.

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

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

22 We attended a number of meetings and
23 also then heard many comments from folks about
24 net zero energy, which just to be clear for
25 those of you who haven't heard about it, it's

1 new construction that accounts for all of its
2 energy usage through either efficiency
3 measures or on-site generation, and what we
4 learned was there's a number of homes that
5 have been successfully built with net zero in
6 Vermont. Those homes are for the most part
7 fairly new. In other words, they have been
8 built in recent years.

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

18 The other caution is cost. The data
19 that we saw in meetings that we attended
20 indicated to us that there is a significant
21 cost right now to the developers and
22 homeowners for net zero homes, and while it
23 certainly can be argued that the cost is
24 appropriate given the need, the reality on the
25 ground is Vermonters need to be able to afford

1 their housing, and so the path that we have
2 suggested is a more gradual one. The call
3 that we received from many people was to
4 support net zero by 2020, but not a year and a
5 half, but much more quickly than we had
6 proposed in the draft, and a lot of internal
7 debate about that, but landing on the 2030 for
8 a couple of reasons made sense to us.
9 Affordability was one.

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

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

23 MR. JEWELL: Did you talk to Jordan
24 Institute?

25 MR. RECCHIA: Yeah, I know they have

1 been doing this for over 10 years so they have
2 got lots of houses.

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

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

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

20 A second question I would have is so I'm
21 one of those people that watched that movie
22 Gasland, and I couldn't get it out of my mind
23 and it freaks me out what I saw, and so I do
24 have concerns that we don't have natural gas
25 here, but neighbors in upstate New York do.

1 Easy to get to, but how are we really harming
2 their environment even though it's so abundant
3 from what I understand.

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

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

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

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

24 MS. FRYE: So that would be my final
25 question to you. I am curious about how you

1 put the information out for tonight. I know
2 how I received it, but I am curious about the
3 effort that was put into it, but still thanks
4 for coming.

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

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

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

14 MR. RECCHIA: In the cinderblock style,
15 right. It's a little different, right, and
16 having just gone to the men's room I noticed
17 they upgraded to the non-handle flush things,
18 but other than that it looks pretty much like
19 the same place. So I'm really from
20 Brattleboro and actually glad to be back here.
21 I forgot that the court reporter is here.
22 Sorry.

23 Secondly, just in terms of dealing with
24 the ability to communicate all of this and the
25 district energy piece, to answer that, the

1 only other option that kind of comes to mind
2 is being a base load heating option would be
3 geothermal, which you could make use of as
4 well. So that's another option.

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

14 Now all their gas comes from traditional
15 gas wells that are associated with petroleum
16 refining up in Canada, but there's probably
17 some hydrofracking involved in that, but
18 clearly the connection of a little loop, if
19 you will, to the New York/Pennsylvania area
20 would cause much more of that, and we raised
21 that with them and said, you know, just like
22 we talked about forest and sustainability,
23 you've got to talk about sustainability and
24 life cycle costs of doing anything, and
25 clearly the hydrofracking has some challenges

1 associated with it that maybe could be
2 overcome with dry ice. We had that
3 suggestion. That was great. Maybe not.

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

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

1 plant. So, you know, these are things we
2 should look at.

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

20 And then finally on advertising this, we
21 have really talked about this at the
22 Department because we advertised it in the
23 papers. The statute has a very formal way of
24 doing that and we did that. We also sent it
25 out as a news media release twice, and I sent

1 out a proposed editorial to all the papers.
2 I've spoken with the Caledonian Record, the
3 Rutland Herald, the Times Argus, the Free
4 Press, Addison Independent called me. So
5 traditional media sources.

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

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

22 MS. BARTENHAGEN: How have your
23 attendance last night?

24 COMMISSIONER MILLER: About like this.

25 MS. BARTENHAGEN: Where were you?

1 COMMISSIONER MILLER: Middlebury.

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

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

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

19 I guess just revisiting the natural gas
20 I think, you know, the one message that I
21 would like to convey to whoever is looking at
22 this is the concern that I think we all have
23 about the method. It's not that it's not
24 cheap. It's not that it's not abundant. It's
25 not that it would help our bottom line. It's

1 how do we get it, and how do we get it in a
2 way that doesn't add to the CO2 burden and
3 that we're dealing with, and also, you know,
4 that doesn't affect our environment at large,
5 whether it's Vermont soil or New York State
6 soil or Canadian soil. I think we have to be
7 concerned if we're going to be consistent in
8 how we acquire these fuels.

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

25 I'm wondering if either Efficiency

1 Vermont or the individual you mentioned that
2 might be sort of an energy -- I don't know
3 exactly the term.

4 COMMISSIONER MILLER: Project manager.

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

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

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

25 It right now has information on both the

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

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

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

17 MS. LAUNDER: I'll just add, I don't
18 know why Efficiency Vermont didn't mention it,
19 but everyone who is listed on their web site
20 is actually BPI certified, Building
21 Professional Institute I think it is. So they
22 have some kind of certification qualification
23 to be on their web site, and for our small
24 scale incentive program there's also a process
25 that those installers who are listed for that

1 program go through kind of not a certification
2 process, but they have to do so many jobs and
3 those jobs have to be inspected. So there is
4 some of that already happening,

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

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

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

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

1 looking through a list.

2 I think it would be reasonable to make
3 this public information. First of all, it
4 would make those individuals more likely to
5 compete for their business, and if I could
6 find someone who is rated 4 plus as opposed to
7 3 plus, I would probably choose that person.
8 So it would be a good idea if you could do
9 that.

10 My second comment is I followed through
11 a while ago, and this will be distributed to
12 the transportation folks, check my math on
13 this, okay, if you travel -- I need my glasses
14 -- if you're traveling 300 miles say north to
15 south coming up from Connecticut or New York
16 to go to your place in Stowe or whatever, the
17 minute you cross the state line if you saw a
18 55 mile an hour sign that was followed by a
19 state trooper, okay, it would take you at 55
20 miles an hour 5.4 hours to get where you're
21 going. At 65 miles an hour it would be 4.6
22 hours. That's 1.2 hours difference.

23 Now you take it down to the commute
24 level using those numbers and check me on
25 these, if you go down to 75 miles, it's a 15

1 minute difference. If you go down to an
2 average commute of about 38 miles or even
3 less, it's 7 minutes. Think of the revenues
4 we could generate from state troopers for all
5 those Connecticut and New York drivers coming
6 up our highway or even Walter if you are
7 really strictly enforcing it.

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

16 MS. JONES: On top of the sign
17 explaining why, less carbon footprint. You're
18 in the Green Mountain State.

19 MS. MCCARTHY: Thank you. My name is
20 Kate McCarthy. I work for the Windham
21 Regional Commission with the Bartenhagens.

22 So I just want to follow up on Maggie's
23 comment about the accessibility of the
24 services. It's true there are lots of great
25 resources out there, but a clearinghouse is a

1 great idea, and one model for that that has
2 been used, I forget exactly where so anyone
3 chime in, it's called the heat squad model.
4 It was funded through ARRA and it's a
5 centralized go-to place full of resources to
6 help consumers homeowners walk through the
7 process from audit to actual retrofit, and I
8 think they may even do some followup and
9 evaluation as well as user education because
10 it's great to have a thermostat --
11 programmable thermostat put in, but if you
12 don't know quite how to use it, the benefits
13 won't be realized, and so it's been a
14 successful approach, the heat squad.

15 I'll just clarify on the Efficiency
16 Vermont web site any contractors who are
17 listed as home performance with Energy Star
18 through the Vermont's home performance with
19 Energy Star program. They have to sign up and
20 be Building Performance Institute certified as
21 well as some additional training to help them
22 to take of advantage of retrofits. That's
23 probably more than you wanted to know perhaps,
24 but thumbs up to the idea of a clearinghouse
25 and check out the heat squad.

1 COMMISSIONER MILLER: And actually just
2 on the heat squad, it is Rutland, right?

3 MR. PERCHLIK: Yes. Neighbor works.

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

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

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

24 Oh, the other thing about the natural
25 gas it has a much lower carbon footprint that

1 most of the other fuel choices.

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

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

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

20 MS. FRYE: So I have a serious
21 recommendation that I have had for years in
22 this state. There really should be an
23 information resource centers in all the hubs.
24 We know what the hubs are and they are not
25 necessarily the 21 designated downtowns, okay,

1 but they are hubs, and, for instance, Windham
2 County, Brattleboro is the hub, and you put
3 all the state information in there and people
4 who go in there, it's real people and it's not
5 volunteers. It's paid people who know how to
6 get proper information to people, and say
7 basically I don't have an answer to that.
8 That's a good question. I'll get back to you
9 and they do, and if it was more implemented
10 like that or you worked with the electrical,
11 you know -- that when you got a bill, you
12 know, everybody gets that pretty much unless
13 you're off the grid, you know, you could
14 partner with them and they get real basic
15 information from that.

16 And I'll just say that for meetings that
17 are going to happen in the community, I'm a
18 supervisor at our solid waste district, and
19 that's 19 towns that come together, and chair
20 of the planning and we've worked a lot on how
21 do we let the town know -- these towns know.
22 So we've paid a lot of money for hazardous
23 waste days and stuff for people to come and
24 we've really realized that postcard that goes
25 to every house the snail mail is guaranteed

1 and sandwich boards that are out there for
2 this thing is coming. Sandwich boards.
3 People driving by in those carbon cars.

4 MR. PAPPAS: So on the issue of speed
5 limits, and I actually think we're closer to
6 55 than people think when you combine winter
7 driving and non-winter driving, we're
8 somewhere there, but the way the speed limits
9 are set, and again that's one of these federal
10 responsibilities, is that in the northeast the
11 interstate speed limits are 65 miles an hour.
12 They are 70 and 75 down south, but the
13 exceptions 65 are urban areas, complicated
14 interchanges or some geometric aspect of the
15 rule that doesn't allow it to go that quickly.

16 On the state highways we actually have
17 the lowest speed limit, 50 miles an hour.
18 It's typically 55 up here, 60 down south. So
19 that's where the speed limits come from. So
20 if we're going to be collecting, we need to do
21 it summer and spring because come wintertime
22 --

23 COMMISSIONER MILLER: Thank you. Well
24 it's 9 o'clock. Are there any comments people
25 feel that they would like to make before we

1 wrap up or -- I really appreciate everybody
2 coming and I appreciate the involvement from
3 have VTrans and ANR, and I thank you again for
4 coming. Obviously we recorded everything you
5 said tonight, but if you do have specific
6 written comments, please get those in to us.
7 You can contact us at the Department, you can
8 mail them in, you can send them by e-mail or
9 submit them electronically on our web site.
10 Any of those are great. Thank you very much.

11 (Whereupon, the proceeding was
12 adjourned at 9:15 p.m..)

13
14
15
16
17
18
19
20
21
22
23
24
25

C E R T I F I C A T E

1
2
3
4
5 I, JoAnn Q. Carson, do hereby certify that
6 I recorded by stenographic means the public hearing re:
7 Draft Vermont Energy Plan at the Brattleboro Union High
8 School, Brattleboro, Vermont, on September 28, 2011,
9 beginning at 7 p.m..

10 I further certify that the foregoing
11 testimony was taken by me stenographically and thereafter
12 reduced to typewriting, and the foregoing 100 pages are a
13 transcript of the stenograph notes taken by me of the
14 evidence and the proceedings, to the best of my ability.

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

18 Dated at Burlington, Vermont, this 4th day
19 of October, 2011.

20 _____
21 JoAnn Q. Carson

22 Registered Merit Reporter

23 Certified Real Time Reporter
24
25