* *

NEW YORK STATE ENERGY PLAN HEARING

SYRACUSE, NEW YORK

MARCH 6, 2014

* *

H E L D A T: SUNY College of Environmental Science and Forestry
1 Forestry Drive
Syracuse, New York
March 6, 2014

A P P E A R A N C E S:

JOHN RHODES, Chair, Energy Planning Board/NYSERDA

JAMES BAY, NYS Department of Agriculture & Markets

JARED SNYDER, NYS Department of Enviromental Conservation

MICHAEL SNYDER, NYS Department of State

Lisa M. Miranda,
Court Reporter.

MR. RHODES: Good morning and welcome. My name is John Rhodes and I am the president and CEO of the New York State Energy Research and Development Authority and here today in my role as chair of the state energy planning board.

I would like to introduce to you the other representatives of the planning board that are here today. James Bays, First Deputy Commissioner of the Department of Agriculture and Markets. And Michael Snyder, Policy Analyst, Department of State. We expect to be joined by Jared Snyder, Assistant Commissioner, Department of Environmental Conservation.

This is a hearing to accept public comments on the 2014 draft State Energy Plan that was approved by the State Energy Planning Board on January 7, 2014 and made available on the Energy Plan website energyplan.ny.gov.

The plan was issued in accordance with Article 6 of the energy law. Public notice of the issuance of the plan and notice of the this public hearing were published in the state register on January 29.

The draft state Energy Plan is the result

of many months of serious and thoughtful work and envisions an energy system for New York State that is clean, flexible, affordable resilient and reliable.

It states the initiatives to achieve that vision that focus on five areas; improving energy affordability, unleashing the power of private sector finances, providing a more resilient and flexible power grid, give customers more control over their energy use and aligning energy innovation market demand.

According to the plan it outlines some long-term policy goals, near-term action items that lead toward those and meaningful metrics along the way.

The draft plan consists of two volumes. The first volume provides 15 key initiatives to advance the state's energy future. The second volume addresses energy uses, its sources and impacts and provides detailed background that we use to develop the overarching vision and initiatives in the first volume.

This is the last of six public hearing sessions that were planned to receive public comments. And let me just pause here to do

some housekeeping, if I may. The exits are assigned as we're to, the bathrooms are out this door (indicating) to the left and down the past the serving counter. Rules for this session: The only hard rule is no signs on sticks or poles. Otherwise, if you have signs, please feel free to express your views with those. We would ask as a courtesy that you not obstruct the views of others behind you. And, in general, if you have sentiments toward a speaker, I ask that you keep those within bounds. Please express yourselves. I will notice that in prior hearings there has been a supportive clapping, et cetera, in the middle of speaker comments. This actually districted that speaker. It's up to you to do that, but it might be courteous to allow the speaker to get done and then express your support, but it's up to you. So those are the ground rules.

We're guests of ESF, of course, and it would be nice if we stayed within bounds of the corium. That's actually been how these have all gone. They have been orderly and passionate, and that's exactly as it should be. Written comments, besides oral comments that

already are given today on the draft plan, will be accepted through April 30th. And information on the submitting those written comments can be found on the Energy Plan website. If you decide to submit written comments, please do so as soon as possible so they can be carefully considered. All comments, whether -- all public comments, whether oral or written, will be considered by the Energy Planning Board as it works toward issuance of the final Energy Plan. All comments county equally regardless of how they were received written or at sessions like this.

The planning board's targeted issuance of the final plan is in the spring of 2014.

The process today is simple. Those who wish to comment at this hearing have been asked to sign in upon arrival, your name will be called one at a time to speak. When your name is called, please come to the podium to provide your statement. I will make a practice of when I announce a name to announce the name of the following speaker or the on-deck person. A court reporter is here to provide a transcript to the planning board of everything that is

said today. It is very important that there be only one speaker at a time so that the court reporter can hear. The speaker should address their comments in the direction of the microphone. And please make an effort to speak clearly and slowly. It is also very important that those in attendance be courteous to the speaker so that his or her comments can be transcribed accurately by the court reporter. If you provide a statement, and have a written version with you, it would be helpful if you could provide that to us either today or following the hearing so that we can provide those to the court reporter to assist in providing the transcript.

All speakers are asked to focus on issues that pertain to the draft and energy plan orally. Your comments should be as succinct as possible so we can hear from as many of you as possible. We've set a five minute deadline for this purpose. But of course after everyone has had a chance to address the board, repeat speakers may be afforded another five minutes should hearing time permit. Formal presentation and Power Points are not being

allowed today.

Again, our goal is to hear from as many of you as possible. As this is a statement hearing, the planning board is not entertaining questions. This is an opportunity for us to receive feedback and hear from you on the draft plan. Those who want to comment, but do not want to speak in public, again, you can submit written comments via our website. And, again, that's the energyplan.ny.gov.

With that, I will note that we've been joined by Jared Snyder, Assistant Commissioner of the Department of Enviromental Conservation.

I want to thank you all for coming today and just ask if there are any questions about the process for this session that I can answer at this time? Seeing none, I will call our first speaker Lawrence Paul to be followed by Sarah Eckel.

AUDIENCE MEMBER: Thank you for very much for having me speak today, I appreciate it. I wish to highlight a major flaw in the draft 2014 New York State Energy Plan. This document fails to seriously address the paramount issue of climate change and the global warming

crisis. Instead of providing a path for achieving greenhouse reduction goals, the plan actually promotes an expansion of the natural gas production and consumption as well as construction of additional natural gas pipelines and other gas infrastructure that will encourage fracking in other states and possibly here in New York State. This will also increase the level of carbon dioxide and methane emissions for decades to come. This is the complete opposite direction that we need to go. This plan will cause a significant increase in the release of methane gas into our atmosphere by the extraction of natural gas from shale, leakages from pipelines, transport vehicles and storage area spills. Not to mention the contamination of our water, air and land from the fracking process. Let us also not forget the danger of liquified natural gas. 40 years ago 40 people died in Long Island from an accident in liquified natural gas. Also, we must remember the recent explosion on our rail systems and also the terrible tragedy in Quebec. Methane gas is by far the most potent greenhouse gas of any other fossil fuels. It

is many times the warming effect of carbon dioxide. We have well surpassed the safety limit zone of 350 parts per million of carbon concentration in the atmosphere. In the spring of 2012 the carbon dioxide levels reached 400 parts per million near the Artic region and today we are at that point now. Also, every year this increases two to three parts per million each year. We're getting closer to the tipping point to the point of no return in which we'll be facing irreversible climate change. For than a decade we have experienced the direct effect of global warming through extreme weather patterns, rising oceans, melting Artic sea ice, flooding, tornadoes, hurricanes, droughts and fire. And it is getting worse. The New York State Energy Plan needs to be a document that provides an aggressive, bold and innovative plan with a sense of urgency. Urgency that leads us to a significant reduction of emissions in our atmosphere and by banning fracking as well as reducing and phasing out fossil fuel energy for a non-fossil renewable energy resources. Thank you.

MR. RHODES: Thank you very much. Sarah Eckel to be followed by Linda DeStefano.

AUDIENCE MEMBER: Thank you for the opportunity to speak today. My name is Sarah Eckel, the legislature and policy director for the Citizens Campaign for the Environment which has 80,000 members and is not-for-profit. CCE will offer comprehensive written comments. Today I would like to highlight the natural gas outlined in the plan. The Energy Plan said that that's a vision for reducing New York's contribution toward climate change, however throughout the plan the goal is -- are to move from oil to gas. From oil to gas. The plan lays out the expectation that the dependence on the gas will significantly increase. Gas is not sustainable in the area for New York and increases its use toward the work that the state has done to provide public health and energy. Indeed the plan acknowledges the public health impact of oil and coal, but largely ignores those impacts when it comes to gas. A 2012 study on a set of chemicals, non-methane hydrocarbons compounds found in the air that directly said it produces more than 50

NMHC found in natural gas wells in rural Colorado including 30 that effect the brain and nervous system. Some detected levels high enough to potentially harm children who are exposed to them before birth. The author said this source of chemical is likely a mix of raw gas that's vented from wells and emissions from industrial equipment used during the gas production process. This adds to the concern of how air pollution from gas is effecting public health during all stages of production and delivery. The study author reflected 30 NMHC that effect the endocrine system. Several belong to a class called PHA -- I can never say that word without looking it up -- detected what other scientists are found high enough to impact child development. Woman exposed to certain PHA are more likely to have children with lower birth weight and lower IQ scores. In 2013 the Rand corporation provided a study doing air emissions into gas drilling operations in Pennsylvania. They stated weight extraction industry provided the VOC and more emissions equivalent to our larger land. The same air quality provides today 7.2 million to

3.2 million and further stated that 80 percent of the damages occurring in the year after the well is developed and more than half the emission damages come from compressor stations. These are just two examples of how the gas and impact -- how gas impacts public health through its direct air emissions. The evidence keeps amounting against the gas industry claim that it's a clean fuel. Gas is a dirty fuel just like coal or oil. Pound for pound it has the comparative impact of methane on the climate and is over 20 times greater than carbon dioxide over a hundred year period. Globally over 60 percent of total methane emissions come from human activity. In regard to the industry, natural gas and petroleum are more greater sorts of methane emissions in the US. Methane is primarily a component of natural gas. Methane is omitted during the process of storage, transmission and distribution of natural gas. A recent study for the university reports that methane, like from the drilling and production of natural gas, makes the claim it changes the benefit of natural gas specifically in regard to the transportation

sector. The study also concludes there's about 50 percent more methane in the atmosphere than previously estimated. Additional studies show that methane links have occurred throughout gas supply from drilling to compressor stations to transportation. And increase reliance upon natural gas doesn't reduce our greenhouse gas emissions. Scientists warn against another reliance of natural gas in our electricity system. The electric power sector is the largest contributor to UC global warming emissions and currently account for approximately one third of the nation's total emissions. To limit some of the worst conveyance of climate change, the US tried to cut power sector emissions by 90 percent from current levels by 2050. If New York continues on its current path toward a natural gas dominated electricity system, the electricity sector would generate up to three times the national research counsel's recommended amount of the carbon emissions. Renewable energy sources such as wind and solar generate little to no global warning emissions. And, together with improved efficiency, play an essential

role in developing a low carbon electricity system. To meet the national research power security, the UC needs to invest heavily in energy efficiency and increase renewable energy. Gas is to the climate like building a bridge to warming worlds. As previously discussed, it does not aid in the goal of reducing public health impact from fossil fuel. So going from coal to gas or oil to gas is like switching your cigarette brands. This is not the answer New Yorkers need or deserve. And New Yorkers have the opportunity to move away from dirty fossil fuel. And it needs to completely move away from fossil fuels toward the sustainable energy future. CCE urges New York State to adopt an energy plan that lays out a clear path toward a sustainable future that is reliant upon renewable energy and does not provide incentives or encourage any transition that New York depends on natural gas or other fossil fuels. And thank you for the opportunity to comment today.

MR. RHODES: Thank you very much.

Linda DeStefano to be followed by James Borra.

AUDIENCE MEMBER: I have three points and they're all fairly brief. The first one is the plan is much too reliant on natural gas. Given the methane emissions from natural gas and given that methane is a greenhouse gas even more potent than Co2, this plan will not slow climate change. Your previous two speakers talked in great detail, so I won't go onto my second point which has to do with nuclear energy. The plan assumes that nuclear energy should continue to be part of the energy mix. Instead the plan should be looking at how to phase out the nuclear facilities as soon as possible and should be put forward decommission plans. This would minimize the danger to workers and the public as the decommissioning is taking place. The plan does acknowledge that Indian Point may be shut down, but it doesn't deal with the reality of upstate nuclear reactors. I live about 36 miles from three nuclear reactors, and it's a great concern for me. If there were to be a catastrophe there, I don't think there's any efficient way that people are going to be evacuated. At least 20 of the upstate

reactors -- Fitzpatrick owned by Entergy and Ginna owned by Constellation -- are very old and in financial trouble. This was pointed out by a financial analyst organization. In the case of Fitzpatrick, it seems that Entergy is trying to get the last cent out of the plant while not spending on proper maintenance. For example, the Fitzpatrick plant needs a new condensor, but Entergy shows no sign of installing one. The Energy Plan should include a statement about a over-crowded storage of nuclear waste at the reactors. Let's require that nuclear waste -- some of it is going to be around for hundreds of thousands of years, we have no way of knowing how to keep that away from the environment for that period of time. So we're leaving a horrible legacy to generations to come. The plan should also acknowledge the storage of the nuclear waste at dumps at West Valley near Buffalo and the fact that that has been leaking from a container. The company that started that nuclear dump went bankrupt, left it up to us taxpayers to deal with it. The state government, the federal government for years had been trying to do some

clean up. It is still full of nuclear waste. And the Energy Plan, which does not recognize the serious safety public health and environmental contamination problem of one of the energy sources, i.e. nuclear, is woefully incomplete. Any my third and final point is that the plan should include a suggestion to fund energy conservation studies and education about energy conservation. Energy efficiency is important, but it's distinct from energy conservation. For example, someone might buy an energy efficient refrigerator and then decide they can also buy a freezer because their refrigerator is saving energy, yet the overall result may be more use of energy. Clever ad campaigns and programs in schools can encourage energy conservation. And studies can help to determine the best strategy for motivating people. For example, I heard of a study which found people are motivated to save energy when they perceive that their neighbors are doing so, even more than when they think they're going to be saving money, which is an interesting result of that study. More studies can be done more. Education could be done.

Know that Onondaga County has been very good at going into a school and educating about recycling with the children. Sometimes the children would come home and educate their parents. That same kind of thing can be done on energy issues. Thank you.

MR. RHODES: Thank you very much.

James Borra to be followed by Keith Schue.

AUDIENCE MEMBER: I want to start out by saying any of my remarks are nothing personal, in case any of you people are involved in the panel otherwise. All these good patient people behind me have brought a lot of data, facts and things that I believe our leaders are already aware of. And I think it's sad that they have to come to these kinds of meetings and bring these facts forward as though they're a secret. They're not a secret. There's a root problem. The root problem is business as usual where a board or a governmental agency will craft something that's absolutely not for the public, never was and never was intended to be. That's our group problem. It's the old way of doing business. That's why we're here today. We

have an energy problem because we continue to do business the old way. The old way is how we got where we are right now. And we can't continue to do that. It doesn't work. So instead of bringing data and facts, I just try to bring the truth. And truth is we have to change. Our leaders have to change. They have to be responsible and represent the people for a change. Thank you.

MR. RHODES: Thank you very much.

Keith Schue to be followed by Alicia Alexander.

AUDIENCE MEMBER: Good morning. My name is Keith Schue. I live in Cherry Valley, New York. I'm here today representing myself as well as the organization Sustainable Otsego. I have a master's degree in engineering and I've worked in the private sector as an electrical engineer for 14 years. I also have been involved in enviromental conservation and government relations. I've served on various federal, state and local advisor boards. I've been directly involved in the review and writing of plans, policies and regulations. As your document admits, we are facing a climate

crisis. Global warming is now upon us. Artic ice is melting faster than scientists had even predicted. And we are experiencing extreme and deadly weather patterns like Hurricane Sandy. Addressing this crisis requires an energy plan with teeth. Respectfully, we don't have that here.

Volume one contains facts and words from people like Albert Einstein, Thomas Edison, Nikola Tesla and Rachel Carson. It also contains some bold-sounding initiatives, but they're really only conceptual.

Volume two contains data, lots of data, some of which is probably accurate and some of which I do believe is questionable. But in reading this as a whole I found myself asking where is volume three? Where is a volume three that takes some of the visionary concepts of volume one, compares it with information of volume two and creates an actual plan for what you're going to do and how you're going to do it? Nowhere in this document is anything said about the actual percentage of energy that will come from difference sources. What is an intended target for renewables and what time

frame? You do not have a plan unless you make some decisions about those things and unless you include some analysis of what facilities will be needed, what facilities will be phased out and what other grid improvements you're going to start to do to achieve that. We're concerned that this plan relies much too heavily on passive forecasts made in the absence of planning. Significant advances have been made in wind and solar technology, however, the forecast in this plan predict almost no growth to renewables. By putting dubious forecasts before planning, you're essentially creating a self-fulfilling prophecy. A vision of the future very different from the beautiful photographs of wind turbines and solar farms that are in the document.

For this plan to have meaning, we believe it must set an aggressive numerical target for renewable energy with 50 percent of all powered generation from renewables by the year 2025.

Going further, the document should have an action plan for continued investments in renewables so that New York State can become

fossil fuel free by the mid-century.

2050 is also when the promise is made in executive order Number 24 by Governor Paterson comes due for reducing total greenhouse gas emissions across all sectors by 80 percent. Although the Energy Plan mentions that goal, it fails to lay out ny strategy for how it's going to be accomplished. Instead it invents a substitute interim target for 2030 for reducing one greenhouse gas, which is carbon dioxide. Well, this completely ignores methane, the main ingredient of natural gas which, according to the intergovernmental panel on climate change, is 33 times worse than CO2 as the driver of climate change over a hundred years and 86 times worse over 20 years.

By the way, the next 20 years are actually the critical time when scientists tell us that decisive action must occur to avoid the worst impact of climate change. We don't have a hundred years to solve this problem. Instead of cherry-picking targets, which favor the natural gas industry, a credible schedule should be developed with a series of numeric benchmarks at regular intervals for the

reduction of a total greenhouse gas emission, including benchmarks within the time frame of this administration. I think we all know it's easy to make promises while on somebody else's watch.

We're also very concerned that this plan places caps on the potential benefits of renewable and efficiency programs. If NYSERDA is saying the best we can hope for is that 37 percent of New York's energy needs to be met with renewables, the most energy we will be able to save from energy efficiency improvements is only 20 percent, than, frankly, you're basically conceding that your 80 percent total greenhouse gas reduction goal is impossible. The numbers don't add up. We are deeply concerned that instead of focusing on renewables, that plan sets a course for even greater dependency on fossil fuels, especially natural gas. Three of the plan's initiatives Numbers 6, 8, 9 explicitly promote conversion to gas and acceleration of gas infrastructure for transmission and distribution. And many of your initiatives ambiguously refer to clean energy. That is without saying what you're

actually talking about. Let's make this very clear: Natural gas is not clean. When you perform a life-cycle analysis of impacts, meaning how you get gas out of the ground, fracking, air and water contamination, disposal of frack waste water and methane leaks that occur in processing, transmission, storage and distribution. We know that natural gas, when you put all that together, fracked gas, it's not clean. If Governor's Cuomo green bank is going to be used to promote the consumption of fracked gas and the building of gas infrastructure, then it's not a green bank.

Finally, what this plans says about the possibility of fracking here in New York is truly puzzling. The section titled New York Production Forecast begins with a statement saying that natural gas production levels are expected to continue dropping. However, this is immediately followed with words and a chart that forecasts them actually to rise. In fact, tripling with the lifting of today's moratorium. So literally the document contradicts itself all on the same page. Hopefully Govenour Cuomo will make the right

decision and not permit fracking in New York. But even if that happens, even if he makes the decision by embracing a plan that welcomes fracked gas from outside, then we are still polluting the environment, contributing to climate change and making the problem worse.

I'm just about done.

I hope you agree with me New York can do better. We must do better. We urge you to put forward a plan with more teeth and less gas. A plan with specific measurable targets and specific meaningful action that will build a sustainable future based not on fossil fuel, that will one day be gone, but instead on renewables. That is the only path that will truly lead us to energy independence as a state and as a nation. Thank you very much.

MR. RHODES: Thank you very much.

Alicia Alexander followed by Nancy Norton.

AUDIENCE MEMBER: Thank you all who have presented before me for your beautiful well-thought out comments. And thank you the board and panel for listening to our concerns. My name is Alicia Alexander and I'm with the Grassroots Accommodations Coalition for energy

Sustainability. We are the welcome committee for the world here in New York. We have great food, we have great water, yes. We would like to keep it that way. As an accommodations owner who sees people from pretty much every country around the world, they love to see Upstate New York, they love to see our great city. And we would like to -- we would like to continually provide that. We don't want wells, we don't want polluted water. Less than one percent of all the water on this planet, less than one percent of all the water on this planet, is drinkable. While much of this globe is experiencing drought, and worse vying for water, which New York is so rich in great lakes, Finger Lakes, Catskills and Adirondacks. We have a very precious irreplaceable commodity. To exchange our precious water for polluted, fracked and poisoned water does not just border on insane, it is the very definition. This is an irreplaceable commodity needed by every living organism on the planet. Not just us. And it is in excusable to play with that. We have already, due to the great minds and the great energy that have gone into

this Stanford report, we have already at least a decent plan. Don't tell me it isn't possible. Iceland, Germany, Spain, Portugal, Denmark. We in America used to be leaders. New York State was the first to hold the world fair. We are not leaders anymore and we need to be. We need to be leaders. And Govenour Cuomo needs to step up to the plate, as we all do, and become leaders in a world that is so damage by greed rather than by sense. Dollars rather than by sense. And I ask you all, you all, to think about all the words you're hearing here today and make a decision that works and that's blessed by God.

MR. RHODES: Thank you.

Nancy Norton to be followed by Melissa Chipman.

Can I just one second ask for all of us to check our cellphones that they're off?

AUDIENCE MEMBER: I'm also a vacation rental owner and I hear from people all over the world about what a fantastic place we live in. And I really appreciate that we've been given this. Thank you for your work on this and for your attention to these issues.

NYSERDA had helped my family finance solar panels for our house, do heat audits, home audits, energy audits, business energy audits. The federal government has helped us to -- with tax rebates to get two electric cars. So with our solar panels we don't buy gasoline anymore, unless we come up to -- up to Syracuse or travel. And I would like to see more charging stations along the way. We would love to have been able to park and charge my car while I parked here. I'm also representing many, many friends and family who were unable to come today. I hope that Mr. Bays will continue to advocate for Upstate New York agriculture and tourism economy. Fracking would devastate it. The people who care about the organic foods that they're able to buy in New York City because our producers bring them down there would not be interested if we were suddenly like Pennsylvania and had to worry about our cows and our calves dying because they're being exposed to fracking. I'm concerned that my business would suffer very much. I'm not sure how much you guys address building codes. My husband and I like to travel. We go around the

world. We see houses all over the place with solar hot water heaters on the roofs. I've never seen them here. Our building codes should be reflecting the needs for our grandchildren to have a healthy place to live. I have a five-year-old -- she's seven-years-old, granddaughter and a two-year-old grandson, I have a 20-year-old daughter, I would love to see my daughter have children, but I can't. To me, it feels like being Jewish in Germany in 1933 that I wouldn't want my kids to have kids. I don't know what life will be like for them in a hundred years for their children. I've heard from a New Yorker they're looking at potential things going on as they are having sterilization in 150 years. I can't imagine what that means for life going forward. I recently read a book by Derek Bunhofter and have a quote from him, which I won't be able to give you exactly. Walk the right direction on a train that is speeding the wrong direction doesn't really do any good. We have changed to heat pumps at home, we have 28,000 watts of solar power, we have electric cars, I don't use my gas dryer, I

hang my clothes, I use an electric dryer. We do everything we can. I don't buy plastics, I make my own soap. I mean my life is just the way of trying to make this world better in reducing my impact. Sometimes it's a little over-the-top, but... I don't want to be walking the wrong direction on a train that is speeding toward extinction. So I hope, even though I may not have addressed your point directly, that you hear not just my voice but the voices of the many people who I've talked to about this who have shared these concerns and that you will work on making the best program. You cannot listen to the fossil fuels and money special interests, but listen to the actual citizens of this area who care about our world going to be a better place. Thank you.

MR. RHODES: Thank you very much.

Melissa Chipman followed by Judy Pierpont.

AUDIENCE MEMBER: Greetings everyone. My name is Melissa Chipman and I live in Hector, New York on Seneca Lake, and it's very near the opposed gas storage facility for the whole Northeast. And I'm a part of Gas Free Seneca. I'm very opposed to storing gas in my

neighborhood. I also want to talk about dollars and sense. Not c-e-n-t-s, but s-e-n-s-e. Could you consider doing an audit and figure out how much it would cost to go fully renewable with solar panels and geothermal and wind energy and drop this other -- drop using money to continue down on the train on the wrong track going down the wrong direction going toward our extinction? Do an audit of how much it would cost to go fully renewable versus how much it's going to cost to stay with natural gas. How much is it going to cost for all explosions and all disasters that are going to come done the line? We know this could happen. Every day I have a friend who tracks it on the Internet. She checks, she checks Canada, she checks the UK, she checks all over the United States. Every day there's an explosion of natural gas. So I would just ask that you would please consider doing an audit and consider comparing the cost. We just need to stop doing the insanity that we're doing and figure out it's going to cost about the same. Thank you.

MR. RHODES: Thank you very much.

Judy Pierpont followed by Sara Hess.

AUDIENCE MEMBER: I'm Judy Pierpont from Dryden, New York and I want to thank you for entertaining our comments today and for all the inspiring comments that I've heard so far today. The Draft Energy Plan has no growth to alleviate substantial reduction of greenhouse gasses. It's not necessary in the global effort to avoid a shift in our climate, which are the last thing I -- I mean we have storms, floods, droughts, fires, unstable and particularly an air current pattern, we're right now enduring the polar vortex, right, which is some unusual shift in air patterning and rising sea levels. On Page 296, volume one of the draft plan, it says that it's the intention of New York, quote, to "reduce the intensity of its carbon emissions from the energy sector by 50 percent by 2030 measured in carbon dioxide emissions per state from the 2010 baseline. Putting New York on the pathway to achieve an 80 percent reduction in total emissions by 2050." Sadly, this claim doesn't provide an accurate accounting of greenhouse gas emissions that play a significant part in

climate change. The reduction -- the reduction in total emissions refer only to carbon dioxide avoiding the fact that greenhouse gas emissions do not consist solely of carbon dioxide. The claims seem to actually ignore the effect of unburned methane emissions on the climate. I really do not understand how in a supposedly science based document knowledge of the effect of methane can have a been is cyst that moat I can down made. It's known that it's -- that it is a more potent greenhouse gas than carbon dioxide. As many have said 86 times over 20 years. That's important. 20 years. It appears that in the interest of promoting accelerated natural gas use, the plan makers simply chose to leave it to the old belief to those within the natural gas industry that since natural gas burning, with less carbon dioxide emissions, it therefore contribute less than greenhouse gasses to the atmosphere. It is so hard to move people who want to believe something off of their position no matter how much good science is produced. So it's alarming to me that while touting, quote, "Aggressive environmental goals," unquote, the

plan advocates increased investment in a methane driven economy. Methane is a potent greenhouse gas untolerable at every stage. Every stage, drilling, transporting, compressing and consumption of natural gas contributes to greenhouse gas air pollution. Let's look a bit at some recent studies. If the plan had not integrated the more recent science into it, it must do so in order not to set the state on a path to greenhouse gas generation at 2.7 percent or more leakage. Natural gas loses any advantage over coal in terms of its greenhouse gas effect, while the potential gas leakage from production at 1.35 percent. It tends to rely on industry provided numbers. A separate study by 15 scientists from institutions including Harvard and the Natural Atmospheric Administration and Lawrence Burnley National Lab looked at comprehensive atmospheric audits that included the leakage at least three percent over the levels at which natural gas would provide any climate benefits from its lower carbon dioxide level when burned. The title of this study is the emission of methane in the United States.

It is based on comprehensive atmospheric methane observations. Rather than an industry provided numbers EPA uses, the find willing in this comprehensive study are backed up by other more local studies which found four percent leakage rates in natural gas production around tender, a 6 to 12 percent leakage percent rate from a production in Colorado. The science of climate change and greenhouse gas emissions is moving fast. It behooves an energy planner of New York to adjust predictions and projection to New York. In this case it doesn't make sense. Natural gas use, when it's used, will lead to greater greenhouse gas emissions and move New York further away from meeting its greenhouse gas emission goals.

Thank you very much.

MR. RHODES: Thank you very much. Sara Hess to be followed by Joe Wilson.

AUDIENCE MEMBER: My name is Sara Hess. I'm from Tompkins County. And I've been studying energy policies and climate change for the past five years. I will only address one point here and other points in writing. I'm pleased that the draft Energy Plan adopted the

long-term goals set by Govenour Paterson of reducing greenhouse gasses by 80 percent from the 1990 levels in the year -- by the year 2050. That may be the best single element in the plan. But this draft is far from a real climate action plan. The authors must now finish their job by filling in links between the 15 initiatives and short-term concrete action, funding and other resources, to pull out timelines and a process of benchmarking to get the results along the way. I was a planner in my professional life and I know what a plan should be. This draft has not yet met the definition of a plan in my point of view. And that's a -- it's the greatest weakness. I have also written a lot of grant proposal. If I had written this one, believe me, it would not be funded. Without writing and committing to the concrete steps to make the 80 by '50 goal, I believe year by year this plan leaks credibility. By contrast, the solution project by Mark Jacobson brought a dozen of scientists together to study and then outline one way that a transition of wind, water and solar could be achieved by 2050. Obviously there are many,

many ways. This is very hypothetical when talking about the long-range. But I can't help but wonder the -- what this -- where this plan or at least elements of it were not incorporated or used by the authors. Maybe it was, but it's not obvious. A better New York plan would also address how reliance on natural gas, oil and nuclear will be reduced year by year. Instead, this plan seems to focus on the business as usual projection that ramp up fossil fuels and continue nuclear. The long impression is that this really is a business as usual plan. I don't think that was your intention, but that's the way we are reading it. Every day I feel the urgency of climate change motivating me to become a more informed and a more active responsible citizen of our state and of our globe. I urge you, as representatives of our state government, to set more aggressive efficiency and renewable energy goals immediately to be met this year and in 2015 and then 2016 and to create the real plan to meet those goals every year that this goal of 80 by '50 from now until 2050. So please finish the work that you began and write a true

plan that we can believe in. Thank you.

MR. RHODES: Thank you very much.

Joe Wilson to be followed by Janna Watkin.

AUDIENCE MEMBER: Good morning and thank you for taking your time to listen to us discuss the Draft Energy Plan. My name is Joe Wilson and I live in the Town of Dryden. Some of you have heard about the town of Dryden. We are currently being sued by bankrupt multi-national corporation to overturn our citizen generated ban on hydro fracking. It's not fun to be the victim of a bankrupt multi-national energy driven company, but here we are. I also hold three graduate degrees, although I'm now retired. I'm a recovering lawyer, I'm a recovering public administrator, I'm a recovering elected official and I'm a recovering businessman. Amongst the positions I held was a director of planning and coordinator for the State of Delaware, I served for Govenour Mike Castle and his cabinet. Behind closed doors in that cabinet room we would have looked at this plan and said it's a great puff piece, but it ain't no plan. There are many, many new independent plans, most of

which you have heard about, all right. I'm simply going to highlight some again because they're important for you to hear again and again with the presumption that then you will go back or your staff will go back and rewrite the plan to make it an appropriate one. Number one, the plan calls for a greatly increaed use of natural gas, also known as methane, and a massive increase in methane infrastructure. Those proposals -- and I will not go into detail -- will not enable the state to meet the goals that it holds for the mitigation or reduction of greenhouse gasses. Number two, the methane life-cycle produces major chemicals including diesel fumes, smog, produce fuels, cancer causing carcinogens and birth defect producing endocrine disruptors. However, there's nothing in this plan that I could find either by way of regulations or intensity that would cause the corporations that are going to be reducing those gasses to reduce their emissions. Number three, because the authors of the plan do not mention or take into account the negative health effects of the methane life-cycle, implementing this plan will worsen,

not improve the health of the -- us residents of this state. Number four, methane, as we've heard over and again -- and I will say this again because it's important to know -- when it's in the air, it's 86 times greater than the heat trapping global warming gas than carbon dioxide. Yet the authors of this plan did not mention these facts, ignored these facts and do not take them into account in any way that might either lessen or mitigate global warming or improve our health. Number five, such jobs as are generated by methane extraction and infrastructure are shortlived. In general, the production and use of fossil fuels, including methane, requires lots of money but very few people, therefore relying on this diminishes and increases polluting. An unhealthy approach to the generation of energy through fossil fuels will not improve our economy. In fact, we know that the process of extraction, transportation, distribution and burning of methane in particular will push out the many traditional businesses and industries they currently rely on. Especially in upstate which is targeted for fossil fuel extraction. In

short, implementing this plan will dramatically increase our reliance on methane and methane infrastructure and methane production. And methane infrastructure will do far more harm than it will ever do good for those citizens of New York. Thank you.

MR. RHODES: Thank you very much. Janna Watkins. On deck is Linda Griggs.

AUDIENCE MEMBER: Hi. My name is Janna Watkins and I'm the executive director of New York Interfaith Power and Light. And I'm here to offer a perspective from the faith community on the energy plan. My organization, Interfaith Power and Light, is a faith based non-profit organization that organizes a religious response to climate change. I appreciate your time. We're an interfaith organization of members from Judaism, Buddhists and there's a whole list on other faith tenants, all the major faiths. New York Interfaith Power and Light is a national group. We have over 40 states in our organization and 130 members state-wide. In order to address the urgency of climate change, the energy plan must go further take our state away from fossil

fuels and grid power toward renewable energy. The plans must call for mandatory energy fossil fuels that will meet the state's goal of reducing carbon dioxide 80 percent after 2050 and at least 50 percent of New York's electricity come from renewable sources by 2025. We cannot allow fracking for our overall health And like from fracking emits greenhouse gases which is worse on our lives. You have your time and an opportunity to rise to the occasion and do something about the issues that effect all life on the planet and we can become heroes or we can chose to hide our heads in the sand and then we'll have to face the question from our children why didn't we address the problem when there was still time. Thank you.

MR. RHODES: Thank you very much. Linda Griggs followed by Ellen Harrison. Is Linda Griggs here? We'll come back to her.

Ellen Harrison to be followed by Marion Karl.

AUDIENCE MEMBER: Good morning. Thank you all for being here and listening to us. And I look forward to seeing a revision on the plan that hopefully will encourage a lot of these

comments. This plan needs to be revised so that as others have said through goals that become specific plans with measurable outcomes. We need a plan that charts a course away from fossil fuels and toward energy efficiency and renewables toward a distributed production network. All of the ways that fossil fuels are obtained are an environmental disaster through air, water, they disturb the habitat. They offer destruction of a community. And many of us that were sort of vaguely aware of this became much more concerned and much more aware as we've seen the impact of hydraulic fracturing in neighboring Pennsylvania and aware of impacts elsewhere. I want to applaud New York State, our governor and the previous governor, and at this time the DEC and the State Health Department for being cautious when it comes to fracking and not buying into the command. What we are seeing is a tremendous increase in the knowledge of what kind of impact that type of fossil fuels develop is having on health, on the environment and on the climate. It's part of an effort that an organization called physician scientists and

engineers for healthy energy put together a biography of just peer reviewed articles. There are lot of reports and lots of other kinds of information, but as scientists, and my background is in science, we understand that the power renew process it's not perfect but it's the best we've got for a way of insuring that that is published as it at least has been subject to some kind of scrutiny. It's not just hype. Two biographies, which I would urge you to take a look at, they're -- it's focus is primarily health and enviromental issues in this case related to energy extraction and use. In the last biograph it currently has 240 such peer reviewed articles. It's very specific. And what we found was more than half of the articles have been published in the last year, so there were no health studies a bunch of years ago. Now they're coming rapidly. And so I am really admiring the fact that New York State has health out there and we're going to be the beneficiary of such information. I am hoping that it will go from a moratorium to a ban on fracking in New York State. We learned how dangerous this practice is. So while we're

not fracking in New York, we are experiencing and will be experiencing more of the impacts of natural gas development. What we're seeing are a lot of pipelines being built. As somebody said earlier, those all have leaks. Compression stations are part of the whole process. Those compression stations are significant sources of air emissions. In addition, of course they're going to lead to exports which is going to lead to price increase. But that's another issue. We also are seeing waste coming in from Pennsylvania. And I only will be surprised if we begin to see waste from elsewhere. So this gas, we must not allow this plan to provide gas. There are too many negative impacts. If you want to see that biography I mentioned, it's the PSEhealthyenvironment.org and then there's a place to click down below. So I also think that the plan needs to promote distributed generation. Having become aware of the impact of energy development else where, we installed a geothermal at our house, I rode here in an electric car and we're planning solar to be installed this spring. But one of the things

we just learned was that the rebate incentive from NYSERDA has been cut significantly. Now I think we're wealthy enough, we'll go ahead and do it anyway. But I'm confused. That's going in the wrong direction. This plan needs to be very specific about how New York will increase the use of renewable through things like education and rebates and ways that we can overcome anymore by which happens in the renewable field. But we need to go ahead. Thank you.

MR. RHODES: Thank you very much. Marion Karl followed by Claire Howard.

AUDIENCE MEMBER: My name is Marion Karl and I live in -- I want to thank you for being here today and also to NYSERDA who helped me with an energy audit in my house, an implementation of a heat pump which has helped me cut back significantly on my use of fuel oil this very cold winter. I also live in the town of Middlefield, which is another one of those towns that was challenged by the gas company for their industrial development. We stood for two challenges but face another challenge coming up in the Court of Appeals later this

year. Many people have spoken about things about this plan that they don't find satisfactory and reiterating that's it not a good thing because it means that it's all very important. But I want to mention just a couple of other things as well. The transportation goals are vague and misleading and not supported by science. The draft plan promotes vehicle diversity and places at New York clean fleet initiative, not limited to electric vehicles. However, this program provides public money to help purchase vehicles that run on compressed or liquid natural gas. New science has shown that natural gas is actually worse for the climate than the traditional fuels like diesel due to methane in the supply chain. Further, the draft plan offers no detail about how Ne York will implement a memorandum of understanding as seen with seven other states to put 3.3 million emission vehicles on the road by 2025. Rather than encourage vehicles that run on climate killing fossil fuels, New York should establish specific targets to advance to electrical vehicles and hydrogen fuels. And my second

point is that the plan ignores security and terrorism concerns. Although the draft plan discusses a sector for nuclear power, it essentially ignores the vulnerability of natural gas infrastructure such as processing and storage facilities, pipelines, compressor stations and distribution systems to attack. A 2008 congressional record titled liquified natural gas infrastructure security found that LNG infrastructure is inherently a hazardous and potentially attractive to terrorism. And in 2013 and LNG plant was targeted by Al Qaeda. If gas infrastructure grows in New York, as proposed by the draft plan, those dangers will grow as well and has not been addressed at all. Thank you very much for taking my comments.

MR. RHODES: Thank you very much. Claire Howard to be followed by Julia Walsh.

AUDIENCE MEMBER: Good afternoon. And thank you all for being here with us today. My name is Claire Howard. I come from the village of Skaneateles that's just down the road. It's eastern most Finger Lakes. I've lived there most of my life. I'm 63-years-old, I was born in 1950. But by the time benchmarks that are

made reference to in this plan come to pass, I may not be on the planet. In 2050 most of us in this room may not be here. So I don't speak for myself, I speak for my children, my grandchildren, your children, your grandchildren and our great-grandchildren. The seven generations as the Native American guides tell us. If you can imagine this room multiplied by many, many times and each seat filled with one of our generations to come, a child, a grandchild, a great-grandchild. What we're planning for with this plan is for the future generation. Not for us, but for the future generation. So I hope that you listen to all the scientifical data that has been portrayed today. I don't have a prepared statement, I don't have facts and figures. I just simply say that we put aside personal agenda, politics, business as usual and that we think creatively, that we think with a vision, that we honor what we have learned. We have clear, clean water to drink, good food to eat, a stable climate to live in. Our children may not have that unless we plan, starting with this plan, to make their future one that's as

good as what we have had. So thank you very much and good luck with the next version.

MR. RHODES: Thank you very much. Julia Walsh. And may I just check if Linda Griggs has returned to the room? After Julia Walsh we'll have Reverend Nancy Kasper.

AUDIENCE MEMBER: I'm the founder and director of 4 Fracking Action. We're a member organization of New Yorkers which is over 200 organizations across the state over a thousand businesses and 300 faith leaders state-wide. We will be submitting technical comments. I want to start by acknowledging the work that was done to produce this document. The many hours and revisions, the dramatic shift over the past few years by the administration that one that appears to be a rush to now which is as listening to this science. And the scientific studies and evidence overwhelmingly shows that fracking in inherent unsafe and it's poisoning water and air and land across the great country and make Americans sick. And with this document, the process shows we clearly have a long way to go. As you can tell from being here at these public hearings, and

to your credit, Mr. Rhodes, it's great that you're here in person, the people of the great state care about New York State's Energy Plan and future. I can sincerely say that we wanted these to be a more accessible process, which unfortunately is was not. Lastly, in a local citizen organized forum on the Energy Plan with two experts, over a hundred people turned out to their local library that had adequate parking, handicapped accessible and was in the evening after work, a spirited two hour dialogue discussion took place. That is what we wanted the Energy Plan process to be like. Instead, the hearings have been hard to access and happen during the workday. I literally risked my life to attend the first hearing in Albany driving from New Paultz in bad weather and passing car accidents on the way up only to find an equally bad parking situation. Syracuse isn't that much different. I was just parking before I had to stop and park in order to drive an elderly woman to the steps of this building, and that's just simply unacceptable. We need more hearings across the state that are easily accessible to the public between now and

the end of April. We also need the missing documents that are the foundation of the Draft Energy Plan. The study on renewable energy efficiency potentials and the greenhouse gas inventory. It is obvious, just to those of who are closely paying attention to the details, that -- and there are many of us -- that the plan was rushed politically. Instead of pushing back into those studies that were critical to be included in the completed form with the draft plan, they were not. And so now that you have literally been caught empty handed for the third time today in a public letter that colleague generated to give us the missing studies both on the sustainable renewable and energy efficiency potential and the greenhouse gas inventory. I request that you release these documents and an extended comment period and new public hearings for the citizens of the state. And before we have to demand it again publicly through another public sign-on letter with a dozen organizations, we would much rather prefer to work with you rather than to have to advocate over and over again for the simplist demands. I want to make

my statement today at least with some personal words. I didn't come here to participate in a charade. And all of the good people who came today to every hearing that's been happening didn't come to participate in a charade. We have other things to do. We have -- we're not here because we like going to public hearings or talking about the horrors of fracking and gas infrastructure or climate change. We are here because we are educated citizens who care. Sometimes I'm asked what drives my movement, my answer is always love. We are fighting for our lives and the life of this beautiful planet because we love our lives here, we love our children, our families, our community, our rivers and streams, farms and mountains across the this great state. That is what drives this movement. Ask anyone in the room here today why they are here, and I can guarantee you that four out of five people will say because of their children and grandchildren. New York is at a crossroads and we need to lead this nation and the world with an aggressive renewable Energy Plan and energy efficiency plan. We need this plan to reflect not the ramping up of

gas infrastructure that will bring fracked gas to our community at the expense of our neighbors and Pennsylvania. We need this plan to reflect the phasing out of the gas and gas infrastructure. We need this plan to reflect the step by step shutdown of every nuclear reactor in the state. And as Fukushima showed into our world, we have to finally learn and accept that there are no such things as evacuation plans. There's no evacuation plan as climate changes become more and more prevalent. There's nowhere else to go. Mr. Rhodes, and fellow commissioners, the people of New York want the New York State Energy Plan to not be a mediocre piece of writing with glossy photographs and charts that will ultimately sit in an office building in Albany collecting dust on a shelf, much like the state's never released climate action plan. No, we want the New York State Energy Plan to be a living document. A real plan that we can all build and create and achieve together with you. We want to work with you to make sure that New York is a leader that inspires the country and the world of what is truly

possible; that we can stop this madness of blowing up rocks for pockets of gas and instead harness the energy of the sun and wind and water. Let's create an Energy Plan that drives an upstate economic resolution that will support our young people, our unemployed with manufacturing insulation of renewable technologies. I mean this public session should not be the end of this process, But truly the beginning. We look forward to working with you. Thank you.

MR. RHODES: Thank you. Reverend Nancy Kasper to be followed by Roland Micklem.

AUDIENCE MEMBER: My name is Nancy Kasper. I'm a mother and an ordained minister living in and doing good work in the beautiful town of North Rose, New York. I take a look at this Energy Plan and I was pretty impressed. There are a lot of words in here and beautiful glossy pictures and very little substance to it. So I brought along a copy of the Jacobson study for you guys so on your next try, you can have it right at your fingertips. So a little joke here. Do you want to know how to make God laugh? Tell him your plan. This rather

uninspired plan was conceived from a very narrow, anthropocentric perspective. As if humans were the only life form worth considering. And it was constructed from a false belief that we humans are separate from nature. Here's a news flash: We cannot be separate from nature. The big truth is we are all connected. We are all connected. Inextricably interconnected and interdependent with all life. Except we seem to have forgotten this truth because nowhere in this plan is there any mention of the collateral damage to wildlife, to animals, to natural habitat, the forests and to other important elements for life like water and air. All life that will inevitably suffer, be damaged or destroyed resulted with the implementation of this plan. This plan has no heart, no substance, no clear path or goal. It speaks in vagaries and contradictions, contains conflict of interest and hidden agendas. This plan does not direct us to the correct action necessary to avoid total ecosystem collapse. History has shown us time and again that when humans willfully destroy life in pursuit of power and

control, they ultimately destroy themselves. What I see in this plan is a history repeating itself today with our culture of consumerism perpetuated by the myth that is wealth and power. And power is control. And we believed it well enough to give controlling power to those with wealth. And the irony here is that we're struggling today about energy. The energy that powers consumerism, the energy that creates wealth for the few who want to control power at any cost. It's a vicious cycle of destruction. A downward spiral of self-destruction. And, in fact, humans are effectively causing their own de-volution. This plan was based on the false assumption that we can dig our way out of this environmental mess. See the paradox? The more we drill, the deeper we get, the bigger the hole in the ozone. If we continue down this path of fossil fuel consumption, we'll end up destroying all life, including our own. Our mother earth is already giving clear evidence of our operating outside of her laws of nature. She'll not support us if we do not support life. And it is clear that humans have already altered the condition

for life on earth. We are experiencing the effects of what we have created in this precariously imbalanced ecosystem that's now in crisis. We can see that with mass species extension, resources depletion and enviromental degradation. You know it, we know it. We have to face the fact that we have reached a critical choice point. The alarm is sounding. There's an urgent call to wake up from the old dream and step into a power of possibility and personal choice to create the future we imagine for our grandchildren by becoming more conscious, more loving and compassionate humans on this planet. The time has come and it is now. So I emphatically urge you to reject this plan as an idea whose time has passed. Heed my words, because when I look at this plan, I hear God laughing, laughing to tears. Thank you. John.

MR. RHODES: Thank you very much. Roland Miclem to be followed by Patty Campbell.

AUDIENCE MEMBER: Good morning, or good afternoon I guess it is right now. Being a self-creative person, I'm not trying to brag, you understand, I would deliver this message to

you in my own way and I hope you will all bare with me. It goes something like this: When they go a fracking in the Marcellus shale, the water they will be using will get a thousand wails; the gas that we'll be venting soon as your drilling starts, will saturate the atmosphere like one humungous fart; the stuff they will be bringing up from way down underground will make your gag and counter start jumping up and down; those fracking chemicals with names no one can spell, will make a weary cocktail of a water in your well. And then here we go on the final one I just got through doing here. Now, way up here in New York State where we're counting on the governor and hoping he will come through for us when push gets down to shove. Thank you for your attention, Gentlemen. We're going to be doing a musical called Sustainability and it will be in North Rose Wilcott High School at t some date later. If any of you fine gentlemen would like to attend, just get in touch with me after this thing is over and I will give you the particulars. Thank you very much.

MR. RHODES: Thank you very much. Patty

Campbell to be followed by Michael Dixon.

AUDIENCE MEMBER: I'm so happy to be amongst all these people who I'm resonating with and to have this opportunity. I don't have too much to say because everyone else has said my feelings. But one thing is that I hear these individual comments for fracking and like natural gas is the way to go, now I can send my kids to college, I just hear it too frequently everywhere. And, you know, a few years ago, I think it was last year, I gave some money for a counter ad but I never heard that counter ad, so it's really hard for the average person to speak as loudly as the gas companies. So that's one point I want to make. The transportation of the natural gas, I mean even if we don't do natural gas in New York, the transportation -- I mean I see more and more trains with these gas cars and it's really alarming. And in light of the accident in Quebec and just that this is an accident waiting to happen and it's just pretty scary. And all -- this is some accident waiting to happen with all this use of fossil fuels. And I really also think that we need to get away

from the fossil fuels. Let's see, one thing that so few people mention is conservation. And I just want to say that I lived in a beautiful old apartment building in Saratoga, New York, it was like four-stories high. The ceilings were like 12 to 15 feet high, really high. And when it was cold, like it was last night, it was so hot in there you would have your windows open. So I think there's a lot of these old buildings. And if we want to save our old buildings, but couldn't there be some address to the infrastructure maybe that would help create some jobs. So jobs in that section. And just asking ourselves what we can do to change our lifestyles for more conservation and just to see what we can do as individuals. Thank you.

MR. RHODES: Thank you very much. Michael Dixon and Kay Kin, they're both from -- one is from the -- both from the Vienna Planning Board. Neither are here.

Robert Henry.

AUDIENCE MEMBER: I pass. I agree with everything that everyone said here today.

MR. RHODES: We've noted it, sir.

Kevin Bernstein to be followed by Phillip Rose.

AUDIENCE MEMBER: Thank you for the opportunity to speak to the board. My name is Kevin Bernstein and I'm providing these remarks on behalf of (inaudible) LLC, which is normally known as Energy Extreme. I will have some written comments by the end of the comment deadline. The same state Energy Plan ignores a critical source, and that's propane. The SEP for short failed to identify any strategy or initiative to enable access to a greater supply of propane or development infrastructure to assist with that effort address the supply price that's still upon even in March. In event testimony before the house energy power subcommittee, it stated that, quote, "if there's one lesson learned from the 2013/2014 winter, provided market conditions, it is that the infrastructure network was inadequate to meet consumers needs." There are a number of facets to this, the and government can assist in assuring that all human needs are met. However, recent experiences with the proposed Finger Lakes project located in Redding, New

York shows that unfortunately the government is not assisting in trying to avert this crisis. Constructing expanded underground storage in the Finger Lakes area near Redding is essential to meet the northeast's and New York's propane needs. This is -- the northeast needs this, Ne York State needs this and there's a local need for greater propane infrastructure. In a 2010 report it stated that propane is an important heating fuel in New York and the strong demand during the winter heating system puts a strain on the industry's ability to meet that demand. New Yorkers and the entire region in general are highly dependent on propane from outside the region in New York. The Teppco Pipeline, which delivers primarily from storage facilities in Texas, recently had pipeline capacity difficulty in propane supply in New York. In recent testimony before the house committee, that I mentioned earlier, the National Propane Gas Association said that the expansion of underground propane storage in the Finger Lakes area near Redding is essential to the northeast propane needs. Called on Govenour Cuomo to approve the facility which

added over 88 million gallons of propane storage in the region where demand far out weighed local supply. But the State of New York, including the DEC and the governor, failed to make the decision. The underground storage cavern has been nearly five years in the permanent process with everything in the way. The DEC wants it done, DEC has all information it needs to make the final decision, but yet the (inaudible.) We have seen a number of challenges confronting the propane supply chain ranging from pipeline shutdowns to rail strikes in Canada to ships not coming in on time from oversees. Supply lines can and do break during the winter and they have caused shortages in the past. This winter propane marketers themselves needed to drive long distances to obtain supply. Propane industry proposes it addresses these issues and their responsibility weighs through issues like the Finger Lakes storage facility. And now the difficulty stated in the energy plan itself ignores the need and demand for propane in New York despite the fact that the vision set forth in the portion notes that New Yorkers face

rising costs in continuing in extreme weather. Talk about how residential, commercial and industrial customers have the tool to easily and efficiently handle their consumers, but New YOrk has not taken into light these costs to customers to utilize one of these tools, storage. Finger Lakes ultimately makes available to 2.1 million additional or 88 million gallons mentioned of local supplies that will be immediately available. Approval of that improves the resistance of propane infrastructure in other regions in the US. In recent weeks a major storage facility in Ontario has seen very high demand to its propane to New York, New England and the mid west. Were the Finger Lakes facility to be in operation, would dramatically reduce New York's demand for propane stored in those areas. Approving the Finger Lakes facility would have benefits beyond New York and New England. However, unfortunately regulatory inaction has caused consumers to (inaudible) the impact or willingness of companies to invest in New York, which we understand or understood to be open for business. These issues must be addressed

in the final SEP. And it is time for government action because New York consumers and residents cannot afford this. Thank you very much.

MR. RHODES: Thank you. Philip Rose to be followed by Matthew Lemke.

AUDIENCE MEMBER: My name is Philip Rose and I live in a little town called Fenner, New York. Fenner has public parking, it has a clean hydropower station and a solar system for pouring that facility with leaders with alternative energy and renewables. And myself and a number of our citizens conducted a petition drive several months ago where 70 percent of our -- of all registered voters in our town issued a ban on hydrofracking. It's pretty clear that the that the public is well educated about issues. You have heard testimony continually about what this really means. The season for fossil fuels is almost over. It's ending. We already see the end of it, so to put any real serious thought that is really limited and short-sighted. So renewables is with us. We can really do this, obviously if we put our minds to it. If we

lean the human intelligence toward this problem, we can solve it creatively and cleanly. We don't need to continue these other processes that urge -- that are not working. The plan really needs to be a visionary plan. It needs a -- it needs to have steps that really put in the direction of a sustainability planet, a sustainability state. Nobody want this other environment. We have all benefited over the years, but the need is really on this. So what the plan needs to do? It needs to, first of all, to really increase the capacity of electricity to handle the renewables. It really needs a plan how this electricity is going to solve the problem. If we're going to use our cars and our homes with electricity, we need to be powered by this. We need to really increase that dramatically. We need clear benchmarks that aren't part of this plan. We need to eliminate hydrofracking. We need to decommission nuclear power. We need to develop alternative transportation methods. We need to really look at this (indicating). I work in Syracuse. I drive around. I see these new construction going up for buildings and clearly

they're using none of these new techniques. Where are the guidelines? There's no passive solar being used. The insulation looks minimal to me. It's really poor construction. Housing projects going up, these buildings going up. They don't take into any consideration all the -- what we've learned on how to reduce energy needs. So there needs to be strong legislation and guidelines for construction and for refitting all the homes that we have now and public funds to do that. Liquified gas, I mean this is a disaster. Nuclear is a disaster. I mean it's clear we need to bring people to the table. Really need to bring people who have done this research. There's some incredible intelligence and information out there now about this. It's global too. You know, America needs to step up. New York needs to step up and really be part of that. We can no longer be obstructing the future. The planet is calling for this. We need to participate in that. The people need to be brought to the table. I think that's all I want to say. And I appreciate your coming here, I appreciate you listening and I really

look forward to working with you in the future to really make this a sustainable planet.

MR. RHODES: Thank you. Matthew Lemke to be followed by Richard Montana. And then I'm gonna suggest a five minute beak at that point.

AUDIENCE MEMBER: Good afternoon and thank you for this opportunity to testify today on the 2014 draft Energy Plan. My name is Matthew Lemke and I'm the Southern Tier Organizer and SUNY Binghamton Project Coordinator with the New York Public Interest Research Group. NYPIRG is the state's largest consumer and environmental advocacy organization. And NYPIRG representatives have spoken and on different topics at each of the scheduled hearings on the Draft State Energy Plan. And we'll submit formal comments, written comments, at a later date. I will focus my comments today on how the plan addresses natural gas. The Draft State Energy is entitled New York, Shaping the Future of Energy. And two of its four key metrics are a cleaner environment and improved energy affordability. However, the plan forecasts significant increases in consumption of natural gas to meet our energy

needs as well as forecasting the tripling of natural gas production from shale deposits within New York with the use of fracking. Relying on natural gas, especially from fracking, within New York or beyond it's borders seriously undermines both of those goals. The plan envisions a massive increase in natural gas use in New York over the next 20 years requiring significant buildout of natural gas infrastructure. The plan contains initiatives to encourage oil to gas conversion for heating buildings, accelerate investments in natural gas distribution rely more heavily on natural gas for electricity generation and embrace fracked gas from other states.

So let's talk about the environmental impact. Increasing reliance on fracked gas to meet our energy needs will not result in a cleaner environment. Fracking results in significant methane emissions during every step of the process, extraction, transportation and distribution. And pound for pound methane is far more a potent greenhouse gas climate change than carbon dioxide. The state must look at all greenhouse gas emissions, not just carbon

dioxide. If we're serious about addressing climate change, methane emissions were fracked shale gas seriously undermines any benefits of reducing carbon emissions by converting from other fossil fuels to natural gas. The state simply cannot meet its goal of reducing greenhouse gas emissions 80 percent by 2050 under this plan. Methane is a far more potent climate change agent than carbon dioxide and a massive shift toward natural gas, especially fracked gas, will undermined the plan's stated goal of reducing greenhouse gas emissions.

In addition to greenhouse gas emissions, fracking is a dangerous polluting process and the impacts of fracking on water and air quality are ignore completely in this plan. These impacts have not been acknowledged and accounted for in this plan, despite an entire section of Volume 2 being dedicated to impact and consideration. While this plan states that this does not call for fracking to be allowed in New York, this claim is contradicted by the forecasts included in this plan. Indeed the plan's assumption that natural gas production will more than triple within New York State by

2035 can only be achieved by allowing fracking. If a key goal is to protect the environment here in New York, then fracking must be banned and the plan must chart a course to wean New York off natural gas, not increase our reliance on it.

So let talk a little about the consumer impact. Heavy reliance on natural gas would leave consumers vulnerable to the volatile fossil fuels market undermining the plan's core goal of energy affordability. Given the likelihood of regulatory and global market changes, this plan's failure to account for those would leave consumers in the lurch. The plan relies on price forecasts that operate under the assumption that current laws and regulations remain generally unchanged through the projection period. With more information coming out about the negative impacts of fracking, national and state laws and regulations are very likely to be strengthened. This is already happening. In fact, since this draft plan was released, Colorado announced new emisson regulations for fracking. Therefore, relying the assumption of an unchanged

regulatory regime is a clear flaw that leaves consumers vulnerable to price spikes. Also the plan explicitly acknowledge the potential for increased export of natural gas and resulting price volatility that would be created, by the plan only calls for monitoring the situation. Given the numerous currently proposed export terminals failing to account for the drastic price increases that global export of natural gas will inevitably cause in domestic market is a serious shortcoming that leaves consumers vulnerable. Instead of increasing our reliance on natural gas and putting rate payers, public health and our environment at risk, the state needs to maximize its commitment to renewable energy and energy efficiency. The final plan must be strengthened to account for the negative environment and consumers impacts from fracking and natural gas reliance, provide a clear road map for moving away from fossil fuels, including natural gas, and move New York toward a carbon free nuclear free future. Quite frankly, New York deserves better. Thank you once again for this opportunity to testify here today.

MR. RHODES: Thank you very much.

AUDIENCE MEMBER: My name is Rich Montana and I live essentially on Long Island but I spent the last four years of my life in Central New York completing an undergraduate degree at SUNY Cortland. I'm here right now because I'm concerned and an informed citizen of New York State. Before I start I would like to thank you for your time and allowing me to share my thoughts and opinions here today. He main point of this draft state Energy Plan is to have a cleaner environment and improved energy affordability, one obstacle to achieve those goals would by hydrofracking being permitted in New York State. To achieve these goals, the state must put a ban on hydrofracking. The current methane use and the drilling coupled with hydrofracking and the dangers that surround our environment at the fracking sites. This method of fracking a natural gas provided both air and water would result in significant methane leakage previously noted. If New York State's goal to reduce greenhouse emissions by 80 percent by 2015, that's previously promised by executive order, hydrofracking cannot be

part of New York State's future. In an attempt to curb gas emissions, renewable resources are needed in a greater effort to make solar and wind power available to the average household must be made available to make reusable energy more accessible to the average family. Introduce them at a young age. Put solar panels on public schools would be widely beneficial to educate the youth on green energy as well as setting positive examples and providing public schools with reusable energy sources. Furthermore, attention must be paid to our nuclear program. Nuclear sites are clear and present hazards for our communities. They pose a serious threat for a wide variety of accidents as well natural disasters. Nuclear energy should be halted in the State of New York. Active nuclear sites in New York should be subjected to the highest safety and regulatory standards. Thank you, again, for giving me an opportunity to speak today. I hope this time will result in a cleaner, better environment for New York State.

MR. RHODES: Thank you very much. We'll take a break at this point. We'll shoot for

five minutes and then we'll resume.

(A brief recess was taken.)

MR. RHODES: Zachary Allen to be followed by Nicole Clark.

AUDIENCE MEMBER: Hello. My name is Zachary Clark and I'm a student at SUNY Cortland pursuing currently a degree in conservation biology.

So the issues presented in the Draft Energy Plan strike me as incredibility important to address. I would like to thank you for this opportunity to speak as a concerned resident of New York State. I would like to discuss climate change and how New York State addresses these issues.

In the Draft State Energy Plan state is not adequately meeting our need to reduce greenhouse gas emissions by 80 percent by 2050. The plan focuses on reducing CO2 emissions but fails to account for other greenhouse gasses which are more potent, such as methane. To combat this issue, the final energy budget must include a 14 percent reduction of greenhouse gas emissions by 2018 from 2011 levels and 20 percent reduction by 2021. In order to meet

our 80 percent by 2050 reduction in emissions, we need to move away from fossil fuels like natural gas that release large amounts of greenhouse gasses like methane through burning and drilling for it through hydrofracking. We also need to transition our energy system to a clean renewable system and support energy efficiency.

I grew up in the Adirondacks and I would love to see the healthy and clean New York State I saw as a child stay clean. And the only way that can happen is through support of the renewable energy resources and reducing emissions as well as improving energy efficiency. Thank you for your time.

MR. RHODES: Thank you very much. Nicole Clark to be followed by Diane Swords.

AUDIENCE MEMBER: I want to thank you for giving me an opportunity to speak to you today. My name is Nicole Clarke and I live in East Islip on Long Island. I'm currently a student at SUNY Cortland. The reason I'm talking to you today is to express my concern for the future of Central New York, which is my local environment.

Everyone here today can agree that we need to reshape the future of energy in New York. Coincidently, that's the title of our Draft State Energy Plan. However, the goals of reaching a cleaner environment and improving energy affordability is not realized in this plan. The plan proposes that a massive increase in natural gas and use in New York over the next 20 years with a significant buildout of natural gas infrastructure and hydrofracking. This is implying that we would have to rely on fracked gas to meet this energy goal but this will not result in a cleaner environment.

Obviously fracking is a dangerous polluting process and the impacts a fracking on water and air quality are ignored completely. These impacts have not been acknowledged or accounted for in this plan. We would be taking one step forward and about 20 steps back if we allow for fracking in the State of New York. If the main goal is to protect the environment, fracking is not the answer.

I take the this issue personally because my residency for four years will be Central New

York. I've made personal connections within this community and I care deeply about their future. Hopefully listening to us today will help make the plan making New York wean off of natural gas and not increase our reliance on it. The cards are in your hands. Thank you.

MR. RHODES: Thank you very much. Diane Swords.

AUDIENCE MEMBER: She left.

MR. RHODES: Jessica Johnnes to be followed by Maria Sherwood.

AUDIENCE MEMBER: Thank you. My name is Jessica Johnnes. I'm a recent graduate of SUNY Purchase and I currently live in Cortland, New York. I want to thank you for the time and the opportunity to speak before you today. I would like to talk to you about the New York State Draft Energy Plan proposal to increase the comsumption of natural gas in order to meet New York's energy needs.

Not only do I feel this is the wrong direction New York needs to take to reach a more sustainable energy future, but this proposal also falls short on the promises New York has already made to combat global warming.

I've lived in Upstate New York for my entire life, which means for me, and most everyone in this room, hydrofracking is not a new word. My family owns a 114 acre farm that sits squarely on Marcellus shale and we've been offered to lease our land, as well as our neighbor farmers. The monetary promises offered to us have not been lost on our ears either. My mother was diagnosed with cancer five years ago. At that time she was the sole breadwinner in the house and she passed away less than a year later. My step-father, who does not have a college degree that is almost necessary today, was fortunate enough to find work and we've been able to keep our property. Our story is not so different from many stories that are exemplified by the gas industry, but my family chose not to frack. The more New York State holds off on hydrofracking, the more science reveals the deep and lasting environmental effect of this process.

We can just look to our neighbors of the south to see numerous mishandling of waste water, contamination to well water, the degradation of air quality and the degradation

of road infrastructure. The New York State Draft Energy Plan completely ignores the pollution to our water and impacts on air quality and does not acknowledge an adequate system to deal with these repercussions. These repercussions affect our heath and ultimately undermine whatever initial economic advantages that are produced. We need to focus on the long-term solutions that solve our energy problem.

What is more concerning for me is that New York State has a commitment to reduce greenhouse gas emissions by 80 percent by year 2050. This is a commitment to combat global warming and develop our state towards a cleaner energy future. This goal simply cannot be met by hydrofracking and building infrastructure dependence on natural gas in New York. Hydrofracking releases significant methane emissions -- as many people have said today -- all along the development process and, as you know, methane is more potent greenhouse gas than even CO2.

I'm calling for a revision in the New York Energy Plan that will focus our promise of

80 percent by 2050. To do this, our 50 percent by 2030 goal should include all greenhouse gas emissions, not just CO2. I would also like to see mid-terms targets of 14 percent by 2018 and 20 percent by 2021 that will help ensure our goal. Ultimately, I want to see the expansion of renewable technologies such as solar and wind power and not natural gas. I want to see a beautiful New York and focus on renewable energies that will set us on the path to get us there. Again, thank you for your time.

MR. RHODES: Thank you very much. Maria Sherwood.

AUDIENCE MEMBER: She left.

MR. RHODES: Kaylee Marlow to be followed by Evan Greenberg.

AUDIENCE MEMBER: Good afternoon. And thank you for allowing me to speak today. Before I say anything, I want to note that we've heard a lot of stuff bad about fracking, and just to bring some balance I want to say something good about fracking. I mean the ability to make tap water flammable is a scientific achievement, it's very useful in entertaining small children, other than that,

there are really no benefits to hydrofracking and it's absurd that we have not it yet. We have only have to look to Pennsylvania to see the benefits of hydrofracking. I could pull up my cell phone and go on Youtube right now and find at least a dozen videos of pipe leaks, pipe explosions and hydrofracking incident. I could find 900 different articles on those subjects. I could find 900 different articles on nuclear energy. They can see what disasters can happen here. Because according to reports that I read time ago, the nuclear power plants in the United States are built by the exact same design as nuclear power plants in Japan. That means what happened to Japan can happen here. That scares me considering we have -- I think we have three nuclear plants in New York, and some of which are around where I live and that scares me. I think we need to transition to a green energy efficiency in New York. The only sector that did better in the recession in, the great recession, was the green sector. I think we had to just keep on reinvesting this green entity. We need a hydrofracking ban. The dangers are real and the science is on our

side. So I just want you to ban hydrofracking and then we'll come back and have another discussion on it. Thank you. Have a nice day.

MR. RHODES: Thank you very much. Evan Greenberg to be followed by Mona Perrotti.

AUDIENCE MEMBER: My name is Evan Greenberg and I'm a student at Binghamton University. Thank you for the opportunity to speak today. I may not wake up every morning and put a suit on, I may not shave my face and comb my regularly, I may not have a speech printed or any public experience whatsoever, I may not have a long family legacy in politics, I may not have a huge policy campaign followed by big business, but I'm still an American citizen and I deserve to have my voice heard. I desire to drink clean water, I desire to have a clean environment available to me. The use of natural gas in this state is not the solution to the environmental energy problem we are facing. Fracking will reduce our plant and water making consumption nearly impossible. It will diminish property value, exaserbate climate change and hinder any growth in the green energy we need. We need to invest in

green clean wind and solar electric power. This will not only create jobs, but it will also reduce the greenhouse gas emissions. We need to set goals and planning needs of reaching them instead of increasing natural gas production. We need to increase renewable energy production. Our future should be full of clear water and land. Our lives and our children's lives should see progress toward sustainability, not toward larger reliance on promoting fossil fuels. Thank you for giving me this opportunity to speak here today and thank you for taking my opinion and the opinions of all these educated people into consideration when this Energy Plan is drafted and revised.

MR. RHODES: Thank you very much. Mona Perrotti followed by Sandy Scofield.

AUDIENCE MEMBER: Hello. Thank you, I'm glad to be here today and I thank you for this opportunity to come and speak on the Energy Plan draft. I'm from Clinton in the Utica area and I do wish, I would like to say, that you have included other hearing dates in other areas of the state. Certainly Binghamton area

and Utica. And had you considered better parking arrangements.

To the plan. I question the plan's reliance on, and indeed that seems to be a vigorous push for, greater dependence on the use of natural gas in years ahead. This document does not access the real dangers and impacts of fracked gas production, transportation and usage. The plan does mention in a gentleman way a certain for health and enviromental issues but does not specifically address the concerns. The release of powerful greenhouse gas methane is barely noted. And it is unaddressed in the plan. I ask how you can present a plan that purports to take us safely into the future without firmly acknowledging these realities and using this knowledge to shape a true plan. I question this draft with a serious plan because it implies a greater use of climate changing fossil fuels and ignore the opportunity to create an aggressive and effective blueprint based on conservation and renewable energy resources. I ask that you redraft this plan, which does not contain clear goals and mandates

and benchmarks with time frames. I ask that you reconsider what you have in place and have our energy production come from a true renewable resource. These figures stand in the strict contrast to renewable energy production already achieved by other nations. In fact, within the past few years it was revealed that wind power had become the largest environment production sector in Spain. In 2013 Mark Jacobson and others revealed a detailed report that lays out a specific plan for New York State to achieve a fully renewable energy future or reality by 2030. I did not see that valuable report referenced any place in your plan and I ask why not. I would like you to know how difficult it was to repeat, at least easily, references within the plan to clean energy, which was not clearly defined but which clearly indicated to me natural gas was included. Each of us here, including all of you I believe on stage, knows that the term clean energy cannot be applied to the fossil fuel natural gas. In my eyes, this misapplication of the word clean compromises the draft document. Also there was the

repeated use of the word consumers. I believe that this plan, while it should, of course, recognize the energy needs of its citizens for the environment, needs of this should speak to the citizens of New York who are looking for an outline path toward a safer energy end future for us all. Please reconsider this plan. There's no more important responsibility than getting our energy future right and I ask that you just do that. Thank you.

MR. RHODES: Thank you very much. Sandy Scofield to be followed by Jessica Azuley.

AUDIENCE MEMBER: My name is Sandy Scofield and I'm from Clinton, New York and I appreciate you planning a day for us to be able to get to your hearing, thank you very much. It seems that this Energy Plan puts a major reliance on natural gas. Not a good plan. Gas is a depletable, finite resource. I've heard that fracked wells are productive for only six to 20 years maximum. What do we do when the gas runs out? What is New York State's Energy Plan then? Resource depletion should be addressed in any Energy Plan that is drawn up. And actually I don't see why we couldn't leave

the gas in the ground for future generations when fossil fuels will be extremely scarce. What I would like to know, and I -- actually from the Energy Plan, is how to retrofit my home for new sources of energy? I rely on gas, darn it all. And I sure would like to have a way to figure out how to retrofit my home. I would also like to know guidelines and incentives to help communities provide their own decentralized energy that Al Gore talked about so long ago. Decentralizing energy is the safest as far as security goes. The safest way to go. And probably a much more efficient way for us to produce energy. I would like to know what intensives will be provided for developing renewables and what are -- these maybe. There's a renewable that we haven't even talked about yet, nobody has mentioned hydrogen. The Energy Plan could provided models of innovative projects that are currently happening in our county. For instance, just the other day over at Oneida County Sheriff Rob Maciol announced that our county prison will be the first in the state to be completely fuel by solar energy on an

eight acre site. These examples should be part of an Energy Plan for other communities. And I'm sure there's many other examples, so... The new Energy Plan should focus on helping New York transition from fossil fuels to renewables. And I ask you to come back with a forward looking innovative, inspirational plan making renewables our major source of energy. Thank you so much.

MR. RHODES: Thank you so much. Jessica Azuley to be followed by Issac Silberman.

AUDIENCE MEMBER: My name is Jessica Silberman. I'm the program director for the Alliance for a Green Economy, a coalition of grassroots organizations working together on environmental and energy issues in New York.

Like so many here, AGREE objects to this plan's promotion of natural gas. A lot of people have talked about this; the conversion of oil to natural gas and home heating the construction of new natural gas pipelines. This is the wrong direction. And we also urge you to, in fact we demand, real targets for this plan and for how we're going to meet the goals that have already been set by the state

for renewable energy and efficiency by 2015. You note in the plan we're really struggling, but we don't see a real clear plan in this document for how we're going to reach those goals next year. We also don't see clear goals for 2020 and 2025 for renewable energy and energy efficiency. So we really need these to be part of the Energy Plan. Since so many people are talking about natural gas today, I'm actually going to focus my remarks on nuclear in the plan. The Alliance for a Green Economy is one of the main watch dog organizations for nuclear reactors here in Central New York. So New York has six nuclear reactors, all of which are scheduled to retire by 2050. The draft energy plan inexplicably ignores this retirement schedule. It's not mentioned in the plan. Two of these reactors, Nine Mile Point 1 and Ginna, are two of the oldest nuclear reactors in the US and they're scheduled to retire in 2029. Yet the plan projects nuclear generation levels for 2030 above what they are today. There's no rational basis for this. The retirement schedule for the state's nuclear reactor must be accounted for in the final

energy plan. We should see that 2030 number go down based on these retirements that are scheduled. We believe that nuclear closures will likely come sooner rather than later for many of the reactors here in New York. The nuclear industry in the US is seeing a record number of plant closures due to a combination of rising maintenance costs and inability to complete with low cost alternatives, including wind and solar. Various economists have put many of New York's reactors on the short list of most likely to retire early. Specifically Fitzpatrick in Oswego, is owned by Entergy, is already losing money according to analysts. Entergy is cutting workforce at Fitzpatrick and failing to fix critical equipment like their expensive condenser, which has caused numerous unplanned power changes in the last year. We know it is up for replacement and they have not completed to replace it because it costs so much. Unless Entergy can wrangle some kind of subsidy from the state, Fitzpatrick might should down due to financial loss in the not too distant future. The next is Ginna in Wayne County will see its above market contract end

this summer and may also close early due to financial distress. But we don't see any of this in the Energy Plan. It's important to remember that all of New York's nuclear reactors threaten public health and safety, especially as they age as the companies resist spending money to maintain them. Every day these reactors operate we are at risk of an accident. Meanwhile, all of these reactors are creating nuclear waste that will remain radioactive and extremely dangerous for tens of thousands of years. The Nuclear Regulatory Commission has no plan for how it's going to move this waste to a permanent repository and so it remains local in the community in storage containers that are not designed for long-term storage. Other than Indian Point, which the state is working to close by preventing relicensing, there's no mention of the possible early nuclear closures and no consideration in the plan for how nuclear power will be replaced. The Energy Plan should include contingency plans for all nuclear reactor replacement and these should include strategies for replacing nuclear power with renewable

energy efficiency and policies that will facilitate a just transition for nuclear workers and reactor communities.

I just want to use the remainder of my time now to deliver a letter signed by 36 organizations demanding that the Energy Planning Board release to the public two documents that are footnoted in this plan but which we haven't seen: They're the forthcoming greenhouse gas inventory and the study on efficiency and renewable potential in New York. These are critical documents for the Energy Plan. We've wanted to see what this study says of what that potential is for energy efficiency and renewables in New York. And the ways it's discussed in the plan lead me to believe that it's flawed and I would like to see that so I can comment on it as part of the public comment process. So I hope that you will release those plans, even in the draft form that they're used, to inform the energy plan and to extend the public comment period to give us adequate time to an analyze the studies that have formed this Energy Plan and allow us to comment on them. Thank you.

MR. RHODES: Thank you very much. Issac Silberman.

AUDIENCE MEMBER: My name is Issac Silberman. I'm from the organization Citizens Action of New York based out of Binghamton. I really appreciate the opportunity to speak today. At the same time I do want to acknowledge some points with accessibility today. Parking was a bit of a bear. Like I said, I came up from Binghamton and traveled with this fine, beautiful human being to my left who, while is quite mobile, we had quite a walk to get here.

So one point that I actually want to disagree with is nearly everyone who has spoken today is the usage of the word natural gas. This is fracked gas. That's what it needs to be referred to in this document, and in all other plans as well. So I live eight miles above the border of Pennsylvania in Broome County. Along that border there's fracking going on as close to the border as the law allow. These people are getting sick. There's contamination of air and water is not some strange abstract thing to me or my community,

nor are the effects of climate change. We suffered from two multi-hundred year floods in 2006, 2011. So we're on the frontline for the potential for fracking and also for climate change. So it's not okay to balance an Energy Plan on the backs of rural Pennsylvania and potentially rural New York. You can clap if you want to, thank you. Fracked gas is a derailment fuel. It's not a bridge fuel. Natural gas and bridge fuels, both terms that were -- that were created by people who are much better paid than myself and my colleagues in the industry that try to intentionally mislead the public. And investments in fracking infrastructure and pipelines, et cetera is a 50 to 80 year commitment in fracked gas as of a fuel. In Pennsylvania there are almost 9,000 active wells. There are over 50,000 planned. They're a fifth of the way through in the New York. There are 50 to 100,000 fracked well pads planned. That's absolutely unacceptable. This plan is very vague. I would say everyone here agrees that it implicitly calls for more fracking. Right now there are 15 million Americans in 11 states

who live within one mile of a fracking well. Within one mile. What you're seeing is industry arrogance coming out. You're seeing the cover-ups that they're pulling. And we live with this as a very stark amount. Now, meanwhile you all, you gentlemen and ladies that I'm addressing right now, you have the opportunity to lead us. You really do. This is about my future. I'm young. I got organizing completely by accident young, but this is my future. Do I want to have -- I honestly don't, I'm 24-years-old, whether I can honestly bring kids into this world. And I call on all of you to lead us. You have the information, it's out there. There are people who can -- there's going to be incredible amounts of technical information that's readily available. There's renewable energy that's possible. And we need it. And we demand it. We need it in the southern tier. The southern tier can be a hotbed for it and that's, well, what we need. So I appreciate the clapping to comments. I encourage all of you to come into our drilling sites in Pennsylvania, come home with nose bleeds, come home with headaches,

come home having to take a map for four hours because of who the hell knows what's in the air. This is a stark reality that we live with in the southern tier. Along with our community being mapped out for the pipelines. The grid work is already mapped out. EPA requires, in order for frack to occur, you need to have a pipeline within a mile. That's the -- that's a the completion. And those pipelines, meanwhile they're leaking and making people sick and we're not okay with that, and we really demand that you take us through a renewable future that we have. I really appreciate the comments. Have a great day. Thank you.

MR. RHODES: Thank you very much. I didn't call a fellow speaker. Casey Marlow followed by Geoff Wright.

AUDIENCE MEMBER: Thank you. Thank you for giving me a chance to speak. I stepped out for a minute but came back. And I just want to say that thank you again for having this panel. I felt a little bit like the parking to get here was a little bit like a -- you know, the charge for the parking for a public hearing and it was far away and was uphill. If

hydrofracking does go through, which I sincerely hope it doesn't, it will not, I'm totally willing to lay my life on the line to stop it as much as I can. We need a plan that aligns with the innovative and forward thinking for the organized movement and power industries. One which supports the rich agriculture of our region. Hydrofracking, which is implicit in the Energy Plan being laid out, threatens local economies. We need general plan, an honest Energy Plan, solely complies to the clean power of solar, wind and water. We need an energy leader, not followers behold into corporate gas and oil industry that have little to no connection to our community. The targets percentage of renewable energy in this plan should be 100 percent as soon as possible. And so I live just southeast of here in a small town. I have solar and wind power on our little place and on a land trust and I know that it takes -- how much energy it takes to turn on a light bulb. And we practice very strong conservation. As there's a nearby organic dairy farm who farms for their 100 plus cow farm to use exclusive solar energy. And

energy plan should take into account the real production done cost of energy, present cost, community and landscape and quality of life. Infrastructure will effect home value and health. I really want to see more renewables in the energy plan. Thank you.

MR. RHODES: Thank you very much. Geoff Wright followed by David Fischer.

AUDIENCE MEMBER: Hello. I'm Geoff Wright I live here in Syracuse in a suburb. I would like to be able to thank this panel for being open to our comments, and I do. However, it couldn't have been made more difficult to get here if it had been planned that way. Not to be directly confrontational to the whole panel, but at least one of you here okayed this location while being aware of the unusual complication it would pose to those wishing to attend. Besides it's our obligation, it's climate change. It's our obligation. I'm here because I have a daughter who will be 64 in 2050. She's given us three beautiful grandchildren and they will be 44, 40 and 38 respectively in 2050. We have -- as a million of our children here -- we have an obligation

to be a good father and grandfather and simply responsible adults here. But my obligation to show up and rally and to comment here carries very little impact as compared to your obligation as the persons who actually influence policy to effectively protect the future of our future generations.

Now, at the intentional risk of sounding a little confrontational, I would like to make an observation of what seems to be the obvious. The plan couldn't have been more favorable to the gas and oil industry as a whole if it had been written by an agent of the gas and oil industry itself. Might believe that the authors of the New York State Energy Plan acting as agents of humanity as a whole can do much, much better than this. Thank you.

MR. RHODES: Thank you very much.

AUDIENCE MEMBER: This may seem a lot like what the others have said. I'm going to reiterate it in my own words. My name is David Fischer. I'm the chair of the Sierra Group, more specifically (inaudible) and more specifically an expert on mushrooms. I'm also a father and I'm a grandfather. And in 2009,

after hearing an increase of global warming was something Al Gore recently made up for political reasons, I chose to bring myself into it and get some hard data on global warning. That's the most sobering investigation any evolutionary biologist can pursue. If you understand that for the species of this planet from a condition within which homosapien evolved, you can the know about fossil fuels and greenhouse gasses and the global warming and climate change and if (inaudible.) To suggest that our energy path forward requires natural gas and other fossil fuels seems to me an assertion of hopelessness for it is exceptionally clear that continued reliance on fossil fuels, particularly the new fossil fuels which are available only via extreme gassy pollution modes of exchange, is the surest way to ensure that humans fall victim to the longer term impacts of our short-term energy being. It is what my understanding of what some of my fellow citizens were demonstrating today in their comments here as apparently not hatched by the authors of the graft Energy Plan. Enough on climate. Let's talk money. I would

like to make a point of which every New York State citizen, regardless of what was -- what he or she may think about fracking, ought to be aware, and that point is that natural gas industry has every intention of building the facilities noted to turn today's natural gas prices into a memory like gasoline pump prices of less than a dollar a gallon. For God's sake if we turn away from fossil fuels and diligently work toward a new central approach to energy, because not doing so is environmental obtuse, let's do it because we don't want to be trapped by an industry who's overriding concern is supporting the people whom finances of the New York State taxpayers is of no concern unless it adversely impacts corporate profits. Thank you for the opportunity to speak.

MR. RHODES: Thank you very much. Reana Loeb to be followed by Emily Bishop. Em lee by shop.

AUDIENCE MEMBER: Hi. I'm Reana Loeb. And I want to express, first of all, my agreement with most of what has been said here, and well said. Better said than the official

document that came out as an Energy Plan. It's disgraceful, you know. I hear people saying thank you for hearing us. I don't know if you remember hearing us. It doesn't seem that way. Are you hearing the scientists who are telling you about the climate change? And it's real, man. And by 2050, if we haven't done something significant, we don't know where we're going to be. Now, I won't be here then, but my great-grandchildren will, and perhaps their children. Do you have any grandchildren, great-grandchildren or just children? If you do, think about them and while you make these decisions. Think about them. This isn't some fantasy. You know they're not all going to escape to us during the Cold War in some underground shelter where we'll all be safe. No. This serves this man at the time as indigenous people. We say our mother. You don't have to adopt that, just follow what your scientists tell you for Heaven's sake. Because it's all one. It's the truth. And I'm asking you if you can't do what is right because of your jobs or your money, stop and think of your children, grandchildren, great-grandchildren

and everyone's else. Please. We don't have a lot of time. Thank you.

MR. RHODES: Thank you very much. Emily Bishop to be followed by Peter King.

AUDIENCE MEMBER: Hi everyone. Nice to meet you. My name is Emily Bishop and I'm with the New Yorkers against fracking Central New York. I work with most of the people that showed up today. We show up to, you know, rallies, at your doorsteps, you know, we show up in Albany. We do all of these things to make you hear us. And it's been really a pleasure working with everyone here. It's really special and we're building a community. And we've been fighting fracking and we participate and we're here year after year. Before that, when you released the regulations on fracking, and we stopped that, that was us. And that was the work of me an some other people in this room. And that -- it's the public. And we are your connection here, right. Like, we got all these people here today, because I don't remember seeing anything in our newspapers that this was even happening that didn't come from us, so... I believe

that's part of a process that of all of us have to be.

Anyways, I would like to let you know that I will be 60 in 2050 and you all probably won't be around. And I don't want to be in this room in 2050 talking about the same stuff. I want to be out in my community and I want to be installing solar panels on all these people's homes. I want to stop working against you, I want to start working for renewable energy in plans that help me do that. I would greatly appreciate it. And maybe some way that could happen if NYSERDA actually had some money, instead of putting all these pretty pictures in your plan, that money could go toward hiring community organizers like myself to actually implement these plans, too. Implement renewable energy, to implement solar in Syracuse, for example. That would be really great. I would work with you on that. Also -- and you have to include us in this, right, because we are the ones making the decisions for your community. We have banned fracking, we have resisted pipelines, we have solarized communities. We have done things that we want

you to do, but we are doing it instead. And this plan doesn't make it any easier for us to do that work. And we would like for the plan to have that included. We want the plan that includes jobs to increase. We want jobs that include technicians and engineers and whoever else is needed to hook up every city to renewable energy. And we would rather much start working on actual solutions and continue fighting something that threatens the health of all of beings, especially our precious water resources. And if we can all get organized to keep fracking out of our state, imagine what we're going to do when you set it up so that we actually implement renewable energy. We're the ones that are going to do that work for you. So if you make it easier for us to do it, than imagine what we can do. If we can keep fracking out of our state, which we're going to keep doing and we're going to keep our energy there until it's banned, you're going to be, at least all of our organizers, ban fracking and instead work toward renewable energy. What do you want? Do you want us to keep trying to ban fracking, would you like all these people all

across New York State work on renewable energy? Please, like serious. I don't want to be fighting fracking when I'm 60. I'm 23, you know. I feel bad for all these people sitting in this room that say I've been fighting this for years. And thank God I have them to show me the way because our government isn't doing it, so thank you. Something else I want to talk about is the accessibility for this hearing. And I have some friends that use wheelchairs, I'm very observant of accessibility issues, especially on SUNY campuses, which are not all ADA compliant, mind you. Especially even this building, which is brand new. And the parking lot situation, you know. I mean it's going to be $15 for me parking here today, and I'm 23 and I have an organizer's position. Like, I don't want to spend 15 dollars to park to participate in a public hearing. That's ridiculous. I also don't want to have to print a lot of color pages so that my community can physically read the Energy Plan document. So if could you, please, this is a specific request, that you could put the document in PDF form without the

graphics so we can print it and get it out to our community. And I also think that the accessibility thing violates the open meeting law section 103(b) that states public bodies shall make or cause to be made all reasonable efforts ensure that meetings are held in facilities that permit barrier-free physical access to the physically handicapped as defined in subdivision five of section 50 of the public buildings law. And any parking, even the parking garage that you told us to park in, we called your office several times in the past three weeks, is located downhill making the location inaccessible to the elderly or/and disabled. So it's not like we had enough time to even file that because I read the rules that said we have to file before the meeting happens, but we didn't have enough time to do that. So even though this is an open meeting law, we can't do anything about it. I hope you notice that you're incompliance with the opening meeting law. And thank you for listening. And really I hope that you make the right decision that I can work for you on renewable energy instead of being the doorstep

demand banning of fracking. Thank you.

MR. RHODES: Thank you very much. Peter King followed by Rosalie Richter.

AUDIENCE MEMBER: Good afternoon. I'm Peter King. I work on accessibility with transportation in Syracuse with moving people, transportation coalition, but I'm here as a private citizen. I live in Syracuse. I agree with the bulk of the comments so far. Especially those concerning -- regarding natural gas impacts on climate, health and eventual depletion and as well as the nuclear concerns. I find the Energy Plan does acknowledge the effect of this disaster, especially in the urban center. However, as other comments have observed, the vision and basic data here seems lacking. The plan does also acknowledge the climate crisis. However, as many of the speakers have detailed, the plan lacks ambitious and measurable targets. And the current science regarding methane emissions from different kinds of hydraulic fracking, I agree that New York State's plan is cautious regarding the fracking revolution. And, however, as others observed, that the plan

fails to integrate public safety with energy planning, especially regarding methane from hydrofracking and nuclear expansion to meet the projected targets. The -- those risks are simply not worth our continued investments. I encourage NYSERDA to tap your networks and connect with the enormous potential for conserving energy and renewables while minding public health. I have emphasized conserving others merely efficiency, and as one example the potential -- there's something called the westernization health initiative on the federal scale. They have done a lot of this country-wide. And what they do is they combine a lot of streamline, a lot of federal aid to lower income residents with who have housing with aid is another concern. And so they -- those residents to do one-stop shopping so long as they can remediate it while also insulating their house in one stroke. So the state of New York has engaged in this. We can also greatly reduce dirty energy and greenhouse gas by improving our public transportation. Transit demand is getting increasing for the first time both in New York and national, an the world,

actually. Transit can greatly reduce greenhouse gas. And we need revival. You could expand electric motor focus to include public transit as well as in Syracuse, for example. We have a lot of natural gas busses, which probably -- and though I haven't studied this -- have the potential for a lot of leakage which contributes to ozone in an eventual urban situation. Our neighbors in Quebec City have recently converted to 100 percent electric transit, I understand. Electric busses could implement a meaningful and contagious change for clean, open way to get people to work. So I do urge NYSERDA to pursue the energy climate, science and public health and enlist the many citizen groups focusing on these challenges as many people have urged you to do so today. Thank you very much.

MR. RHODES: Thank you very much. Rosalie Richter to be followed by Alice Brumbach.

AUDIENCE MEMBER: Hello. I'm Rosalie Richter. I'm 70-years-old, retired school (Inaudible) and grandmother of four. I've worked also in hospitals. I have spent many years working in this state and other states in

the mid Atlantic and New England. I've had my fingers in environmental issues all these years. I have a son who is a farmer in this state And I feel very strongly about these issues. I've had the privilege of being a war baby and a child of the post-war era. But we have the critical word here is crest. We have private interest energy that is paying a -- that for which they're paying a huge price and the time is now to switch gears. Fossil fuels is a dinosaur of our time. It's time to move onto energy sources that are less dangerous to the environment. And we don't need the government supporting the dinosaurs. We need the government supporting moving into a cleaner more technological, enviromental sustainability resources of energy. The plan, the Draft Energy Plan, does state some admirable goals for reducing the climate damage. But, as some people here have pointed out, there are no teeth in this, in this draft. And it has not been informed by the many, many public and scientific responses to the draft for fracking. Legislation has not been informed by the hundreds and thousands of letters for the

fracking infrastructure that had been submitted to the state by the citizens here and from all over the state. Cannot believe that this document was put together without considering the mass of citizen comments that's already available to all of you. I would also share my concern about the lack of information about this meeting. I only heard about this meeting days ago. And I have to apologize if my comments are not organized because I haven't had time to put together a response to this. And it was difficult getting here. And there are some people who would like to respond. You have seen in the rallies that there are 2,000, 4,000 people who turn up to this. But this is not convenient. And as citizens we have a right to know when a citizen hearing for citizens is being provided. We shouldn't have to work to find it out. It should be in our newspapers. It should be telegraphed to all of us, okay. And, again, look at those regulations, they do not -- the draft plan, it doesn't address major threats to our environment. It leaves out so many. It has omissions, no terms of global concern,

financial concerns, state concerns, our local community concerns and our family, our children, our grandchildren. These things are not being addressed. First of all, the major threats of global warming, and this is something that is impacting the globe. I don't think I have to raise the statistics or anything, that's been well done by the people here already today. There's also the threat to our water supply. And I'm not actually talking about just the water supply in our fresh water, but also the oceans. Because we have a huge problem now with the sequestration of CO2 in the oceans, which is using it to acidify and it's already effecting the ability of plants and animals in the oceans to reproduce themselves because of the acidity. And also with such a small portion of the world water pollution threatening resources in this state. Again, the statistics have already been represented. And then there are all the collateral damage through pollution. And I'm not just talking about the pollution, the air pollution, the methane, all those that mix up all the chemicals that's going into the air.

But there's -- there's damage to the people who live right next to these things. One previous speaker said that 15 million people who live within one mile of these fracking wells. And we're -- and these -- and this plan would not prevent hundreds and thousands of gas wells in the state. It's the same problem. We know from research what it causes. That the emissions around fracking stations cause birth defects, they cause allergies, they cause -- they cause breathing problems and so forth, cancer and increase cancer risks and so forth. There's a great deal of collateral damage. I could go on and on. But that's the thing I want to bring up is that while we've been addressing all these issues with reasonable argument and statistics and scientific information, there's another huge price to pay is that the emotions that people are dealing with. I'm a Midwestern person, I'm optimistic, I'm very stable emotionally, but you can see where I'm at right now. I'm angry. I'm afraid for my children and their grandchildren. I feel a tremendous amount of fear of what happens to the planet and animals on it. I am

deeply cynical about the influence of the fossil fuel industry on this process of trying to regulate and manage our energy systems. I have a lot of sorrows. And I think that that -- those feelings are all on the negative side. But I'm telling you, underneath all those is a great deal of love for the planet. And that love that makes me stick to this fight and stand and, if necessary, lie down under some of those tractors and make them stop. I think it's time to put our lives on the ground for this issue. Thank you.

MR. RHODES: Thank you very much. Alicia Brumbach followed by Rachel Larson.

AUDIENCE MEMBER: I serve as the executive administrator for the New York Biomass Energy Alliance and the board of directors. The New York Biomass Energy Alliance is a coalition of 50 individuals, businesses and organizations working together to enhance support, understanding and use of sustainable produced farm and forest biomass as a source of renewable energy. ESF Department of Forest and Natural Resources Management is one of our members. We'll submit our formal comments at a

later date.

Our sustaining member, Re-energy, headquartered in New York owns and operates biomass to electric generation facilities in four states. Three of their facilities are in New York's north country, the Chateaugay facility in Franklin County, the Black River Facility at Fort Drum facility and the Lyonsdale facility in Lewis County. These three facilities have a combined name plate capacity of 103 megawatts, enough electricity to serve 96,000 homes. When all three facilities are operating, they purchase more than 24 million dollars of sustainable harvested fuel from local suppliers and support more than 500 direct and indirect jobs in northern and Central New York.

Our sustaining member, New England Pellet, owns and operates two state-of-the-art wood pellet manufacturing plants in Schuyler and Deposit. The two plants produce 170,000 tons per year of wood pellet fuel, sufficient fuel to heat over 50,000 New York homes and businesses and displace the consumption of nearly 20 million gallons of imported heating

oil. New England Wood Pellet employs 40 people directly and indirectly supports over 200 additional New York jobs.

In the past seven years these two companies have invested more than 95 million dollars in New York. Re-energy and New England Wood Pellet are part of a larger bioenergy industry, including ACT Bioenergy, Mesa Reduction Engineering and Processing, Curran Renewable Energy, and Cogen Power Technologies, among others, that has created and will continue to create permanent jobs and revenues in New York state.

We appreciate NYSERDA's recognition that the bioenergy sector is a critical part of the state's energy future. It is an important part of a diverse renewable energy portfolio. It reduces our reliance on fossil fuels, creates jobs, and enhances forest health.

Of all renewable energy choices, bioenergy offers the greatest long-term employment and positive rural economic impact. As a rule of thumb, each MW of biopower or biothermal supports almost five full-time jobs. One direct job in the facility and four indirect in

surrounding forests and communities. Rural areas of the state are recognizing the economic and enviromental value of biomass derived energy. For example, sustainability plans recently completed in the North Country, Mohawk Valley and Southern Tier all recognize and place a high priority on the use of sustainable sourced biomass for heating homes and businesses, electric generation and combined heat and power.

We agree with the draft plan's characterization of bioenergy as possessing some of the highest growth opportunity in the clean energy economy. We further agree with the plan's recommendation to establish smart energy technology hubs involving collaboration between various institutions in the research and development chain.

According to the draft plan, gigawatt hour contributions by wood based biomass electricity generators have decreased annually since 2008. The recent contract awarded to Re-Energy's Fort Drum facility under the renewable portfolio standard is likely to increase annual contributions. But continued RPS contracting

is critically important for the continued viability of biomass in the electricity generation sector. In order to address this issue, we believe that the state should focus equally on protecting existing resources as it does on encouraging the building of new resources. This approach is more cost effective as well. Existing generation does not face the risks and uncertainties intrinsic to new project development such as permitting and siting.

Biomass electricity generators are uniquely vulnerable to the current markets of low wholesale energy pricing. As is the experience with at handful of biopower facilities throughout the state when sufficient RPS revenues do not exist such facilities in the low wholesale market, facilities are shutdown. These facilities need an adequate market through the RPS to monetize the value of renewable attributes. Without continued support of existing facilities, the state's renewable energy goals will not be met.

We are heartened that the Public Service Commission is currently considering a petition

to chance contracting methods for the main tier of the RPS and to guarantee more certainty in solicitation frequency. In order to ensure the continued viability of existing facilities, we feel that the adopted state Energy Plan should point to measures that herald New York's support of renewable baseload power, such as providing greater incentive-level predicability and project revenue certainty for existing projects in any such program as hallmarks of New York's commission to this industry.

The New York Biomass Energy Alliance is also heartened that the draft plan calls for reduced reliance on petroleum products for heating buildings and increased transportation alternatives. However, the draft plan does not adequately address the enormous potential for biomass to help reduce dependence on imported fossil heating such as heating oil and propane. New York homeowners and businesses export $5 billion of wealth annually by their heavy dependence on these non-renewable fossil fuels. Biomass fuels, such as wood pellets, chips, logwood and bio-based liquid heating fuels can greatly diminish this outflow of wealth and

support a strong rural economy. The draft plan does not acknowledge this.

In January Govenour Cuomo unveiled his Renewable Heat New York initiative in his State-of the-State address and plan. This high level recognition by New York's chief executive is symbolic of growing awareness of the roll that the biomass can play in helping New Yorkers to heat sustainable and affordable. We eagerly await the completion of NYSERDA's New York biomass heating roadmap which will chart a strategic plan on how to most effectively harness this resource to address heating needs in the state. The plan drafters would do well to review NYSERDA's roadmap when it is released in April. Thank you for the opportunity to come.

MR. RHODES: Thank you very much. William Huston followed by Dan Rapaport.

AUDIENCE MEMBER: Hi there. My name is William Huston. I live in Broome County and the heart of the sacrifice zone of fracking. So I just picked up on one statement that somebody previously stated, and that's glaring omissions. I agree with that. The two glaring

omissions that I can see also embodied in your implicit also call for more natural gas infrastructure. I also want to echo the comments that call this natural gas is really a misnomer. If we have to smash rock a mile under ground that way (indicating) in order to get the stuff, with high explosives, HDE is like one of highest explosives known to man, it's tipped with depleted uranium in the hydrofracking, that's not a natural process. That's an extreme process. What you're calling for is extreme energy. And it's a lot more unnatural than I think wind and solar. I think that that's been said today. I also want to briefly just comment about accessibility. You have heard that a little bit today. I had to walk a mile carrying about 40 pounds worth of equipment. And I'm like kind of an old guy, so I do live a sedentary life. Maybe I just needed the workout. You know, that's probably okay. I have a big problem with the accessibility of this hearing. I go to a lot of hearings and I haven't had to walk a mile in a long time. Public transportation is one of the glaring omissions. And I want to ask you

to look at that because this is a big switch in the first part of the earlier part of the 20th century. Where, in fact, you can even Google this. It was a conspiracy between General Motors and Firestone to actually buy up the light rail, you know, the town where Binghamton, New York where I've lived for about the last 15 years. There's still evidence of trolly tracks on certain roads in my hometown in New Jersey, trolly tracks paved over. We've ripped out, you know, it's -- that makes the United States less sustainable than, you know, some of the most, you know, rural third-world areas in Europe. So we're really backwards by ripping out light rail. Two glaring omissions, peak oil and global warming. Let's talk about that briefly. If we get to five degrees C -- I hope you're all taking notes and not like just writing a grocery list there. If we get to five degrees C, there are certain feedback loops that happen in the environment that can actually bump it up to ten degrees C. At ten degrees C mass extinction. 95 percent of all living beings gone. This is in the geologic record. So we are -- we are really at a crisis

movement. We need radical action from you all. And what we're seeing is more reliance on fracked gas, and it's really not acceptable. And like others have said, when mass extinction is on the horizon. There are a lot of people here, and I'm one of them, that will put our bodies on the line in order to protect present life and future generations. And I live down wind and down stream of fracked gas wells in my water shed. Fracking is prohibited in the proposed New York regulations in the New York water shed with a four thousand foot setback. I have -- I have 96 fracked wells in the middle of my water shed, my upstream water source right now. There are 400,000 New Yorkers that are downwind and downstream of hydrofracking operations in Pennsylvania. And this gas and these infrastructure projects that you're proposing is only going to -- I've seen the devastation in Pennsylvania. And you should come and see it for yourselves. Come to Bradford County where my family is from. Come to Susquehanna County and just see what it's like. So, please take this back. Have additional public hearings with greater

accessibility to give us more time to analyze this and study this. And we want a true renewable future for New York. Thank you.

MR. RHODES: Thank you very much. Craig Lazzar.

AUDIENCE MEMBER: Hello members of the planning board. My name is Craig Lazzar and I'm a graduate student working towards a master of professional studies degree from the environmental studies department here at ESF. I earned my bachelor of science degree here at ESf in 2008. In April of 2008 I was awarded the title of renewable energy scholar by a national campaign called Presidential Forum on Renewable Energy.

As a child growing up in Central New York I suffered from asthma attacks. And I know of the hardships and worries that living with asthma imposes on families. Empirical evidence shows a strong correlation between fossil fuel emissions from electrical power plants and asthma and other respiratory ailments for the young and old. The Draft Energy Plan acknowledges these impacts and even highlights the magnified impact that air quality has for

residents of New York City, yet the Draft Energy Plan dedicates New York State to the same old dirty energy technologies.

We have power sources available to us right now that don't burden the public and government with compound, chronic healthcare costs associated with breathing air containing fossil fuel power plant emissions. Healthcare costs associated with fossil fuels are a burden to the public and are a free, implicit subsidy to fossil fuel businesses. There is no regulatory structure to address this tragedy of the commons and we all suffer for it with every breath. Not only do we desperately need steep investments in renewable, low carbon energy, but we need to stop allowing fossil fuel companies to socialize the negative impacts of their business model. We need to end actual, legal and clearly unnecessary subsidies to the most profitable corporations to ever exist on earth. Part of that struggle is going to include an investment and development package for renewable energy that matches the preferential treatment that has historically gone to fossil fuel projects. This will begin

to introduce competition in the energy marketplace. Competition which has been absent for far too long harming the health and development not only of New York but the nation.

New York has not only the capability but a responsibility to lead the nation towards renewable energy. Over 60 percent of our electricity already comes from low-carbon sources. For New York, carbon neutrality or even carbon capture s low-hanging fruit. An 80 percent reduction target by 2050 is an embarrassingly inadequate goal. I'll be 65 and hopefully retired by then. I think it's safe to say that the members of the planning board are -- with maybe one or two exceptions -- are unlikely to ever see the fruits of such a plan. By 2050 it will be too late to do anything at all about climate catastrophe.

As the home of one of the world's most important global cities, New York has a lower opportunity cost and higher profile for developing and demonstrating the benefits of renewable low-carbon energy. The prosperity of every New Yorker is harmed by this failure to

jump at the opportunity for immediate and deep investments in wind and biomass power over the next decade. We need to be far more proactive than this to even begin to address any of the problems that are mentioned in the very last pages of the plan under the heading Impacts and Considerations. This last section of the plan is almost entirely a self-referential indictment of everything that comes before it. I have several professors that would no doubt fail me for presenting such a self-contradictory product as a class project, and they would be right to do so.

Most dismaying is that the Energy Planning Board has underutilized the resources available within New York State in drafting this plan. And that is a shame. Just in Central New York we have the nation's oldest environmental science university, ESF; the new Golisano Institute for Sustainability at the Rochester Institute of Technology; and Cornell University and Cornell Cooperative Extension, just to name a few. It would be difficult, if not impossible, to point to any other state in the union and find such a unique and robust

collection of enviromental scientists and wisdom as New York State has. And it's a shame that this expertise is not explicitly celebrated and utilized in the 2014 Energy Plan.

New York has a technical and policy development expertise within its own borders to lead the nation away from carbon intensive and increasingly destructive fossil fuel power. Right here at ESF there are pioneering and innovative solutions to harnessing energy from woody biomass. This is known colloquially as the Woody Biomass Program which concentrates on the cultivation of shrub willow due to its incredible inability to filter waste on marginal soils while maximizing harvestable biomass. ESF scientists have developed methods that promise higher energy returns than what we get when compared to a fossil fuel energy life-cycle costs. There is strong evidence that, however, that though biomass technology has its own unique limitations, just like fossil fuels do, it promises more value to New Yorkers. It promises us a better value in jobs and health and a cleaner environment and a

greater economy. It promises more adaptable infrastructure capable of merging with the existing grid without the enormous upfront investments required to expand natural gas infrastructure.

Wind power, likewise, offers New York the opportunity to address many ongoing energy issues. We need to double, and better yet, triple investments in renewable wind energy over the next five years. Offshore wind offers especially attractive aspects for New York City by investing in the ability to harness the power of offshore wind. New York City could circumvent the electrical bottleneck that exists in trying to move upstate energy to Long Island. The installation of offshore wind at suitable sites near New York City could reduce energy prices in the city, and even across the state, as the demand for energy is from upstate is reduced by offshore wind energy. All of New York would gain prosperity through cheaper energy. Wind turbines last for 20 to 30 years. Gas pipelines last longer but absolutely commit us to an already overexploited and chaotic natural gas marketplace where costs are only

likely to go up and fluctuate more severely.

MidAmerican Energy just announced that the State of Iowa approved a groundbreaking in November on a 500 megawatt wind farm. The largest single site in Iowa history. It calls for 218 wind turbines spread out over 70,000 acres. Dubbed the Highland Wind Energy Project, it's part of a 1.9 billion dollar expansion of Iowa's wind generating capacity. They plan to have the project completed by 2015. Not 2050. The one billion dollar green bank and 2050 carbon reduction target that is created in the draft of the New York Energy Plan is frankly, unfortunately, pitiful compared to Iowa's investment in infrastructure alone. I think that if Iowa can do it, then we can definitely do it. We have no excuses left. It might be a challenge to put a stock price on wind resources or shrub willow, at least at first, but the dividends paid back to New York through investments in a low carbon green economy and updated energy grid are real and they're waiting for us if we only reach out to seize the opportunity. Thank you.

MR. RHODES: Thank you very much.

AUDIENCE MEMBER: Thank you for your time. I used to be one of those folks that was -- wanted to go to meetings. I wanted to go to public meetings. I graduated with a planning degree. I went out into the world and I got my hundred thousand dollar grant for bicycle and intermode transportation. And it was funded improperly and I could never sign my name again on another grant from the federal government. For me, personally, I wouldn't do it because my grandfather set the tracks for honesty in business. He was a senior agriculture advisor to the White House. I'm embarrassed for myself. I embarrassed for what has happened. I have worked in mergers and acquisitions. I'm not going to reiterate what everyone said. Fact is, these guys have billions of dollars to waste. And you know we've got a moratorium and we're fleecing them. We're fleecing these companies because we're not -- I don't see it happening. How could -- with all this. How could we not be fleecing these companies. Sure, we'll maybe do it. We'll maybe do it. Oil and gas, we'll -- when you got one propane guy saying I'm improvished with propane, we ned

it now. Freeing cold trailer parks. And I'm embarrassed to say I've done the research. That's -- the majority has not been heard. I don't know. I mean I bowed out of this. I tried to bow out of the -- this fully. And the next thing you know I was surrounded by a SWAT team and called an terrorist. So I have to lay low. But I told you my experiences in the mergers and acquisitions from 2008 and onward. I know what it's like to have Chesapeake Bay come up here and say we are going to quadrant off an area to get these people to -- simply these people do it and we're getting $5,000 commission a lease to do it. So thank you.

MR. RHODES: Thank you very much. Renee Vogelsang followed by Carol Chock.

AUDIENCE MEMBER: Hello. I have a couple difference statements to read. I hope to get it in five minutes. My name is Renee Vogelsang. I'm with the organization New Yorkers Against Fracking. I'm actually from the Syracuse, New York region, currently living here in Syracuse, New York. I was going to red a statement from Jean Kessner, Councilor-at-Large for the City of Syracuse.

she couldn't get here because she couldn't find a parking spot and she has trouble walking up here and she was here on a lunch break, so she was extremely disappointed that she couldn't make it up here. I would like to reiterate that the accessibility of this location was extremely poor, the parking was extremely poor. As community organizers we host events that have parking lots right next to other events and handicapped accessibility and so on so that people can come and participate. I just want to reiterate about that. But her statement goes as far as -- and I'm here speaking on behalf of and I will read. "I am Jean Kessner, Councilor-at-Large for City of Syracuse. I'm here today speaking on behalf of elected officials from every county in New York State who are united in advocating to continue the moratorium on fracking until and unless health studies prove that fracking will not be harmful to human or environmental health. EOPNY will file a longer statement separately to further explain EOPNY's view of the state energy plan which, in a word, we find lacking.

While setting forth and admirable goal of

80 percent reduction in greenhouse gasses from 1990 levels by 2050, the plan lacks a strong roadmap for how we get there. It sets no benchmarks or clear steps. Inexplicably, the plan forecasts only anemic growth in renewable energy sources and instead promotes the widespread expansion of natural gas. It actually describes natural gas as a, quote, "Clean fuel." Natural gas is a fossil fuel. Burning it contributes to climate change.

Clean fuels are renewable, like wind, hydro and solar. According to this plan's own documentation, New York State more than doubled power generation from wind and solar between 1990 and 2012. That is a far bigger gan than from any other power source. Although there are some good initiatives in the plan relating to renewables, we need more specific and more significant commitments to expanding the role for renewable.

Contrary to this, unfortunately the plan predicts that natural gas production in New York State will triple by 2030, intimating that New York's moratorium on fracking will be lifted. It indicated that production may well

be even greater in the state if permitting difficulties are reduced. Further, the plan promotes increased infrastructure for gas transmission and distribution, a misguided use of our state's resources and investments.

Fracking is not clean. A significant and rapidly growing body of science shows that fracking poisons water, air, land and contributes to climate change. It releases methane, a potent greenhouse gas, which brings me to my next point.

Just what are our goals here? Again, the plan reaffirms New York's goal of reducing total greenhouse gas emissions 80 percent from 1990 levels by 2050. Yet this plan only commits to measuring one greenhouse gas, carbon dioxide, before 230. This ignores methane which is 34 times more potent greenhouse gas over 100 years and 86 times more so over 20 years. Significant amounts of methane are leaked during the gas drilling and fracking process and transporting natural gas.

New York needs a plan that charts a course for the future, that sets aggressive targets for production of renewable energy and for

greater energy efficiencies economy wide. A plan that tightens building codes and ups standards on appliances and aggressively enforces the rules. We need to set our sites high and lead the nation away from its dependence on fossil fuels. This will set us on a brighter and healthier path for the future and it will create for more jobs than continued reliance on dirty fossil fuels. And thank you, Jean Kessner on behalf of EOPNY. Once again, over eight hundreds elected officials in the state.

MR. RHODES: Sorry?

AUDIENCE MEMBER: Jean Kessner. J-e-a-n K-e-s-s-n-e-r.

MR. RHODES: Thank you.

AUDIENCE MEMBER: So I want to just read my own personal statement, so I hope that is allowed.

MR. RHODES: It's not a problem, we understand.

AUDIENCE MEMBER: So, once again, my name is Renee Vogelsang. I work with New Yorkers Against Fracking and Frack Action. I'm from Camillus and I live in Syracuse, New York. I

don't want to reiterate too much. You know, we're against the gas infrastructure bill in New York. We're against gas production in New York, importation of gas into New York due to the effects of methane on our climate. And we want the government to take bold steps in renewable energy. But we're -- you know what I want to say right is natural gas is a transition fuel monitor that's been manufactured by the gas industry who has a monetary relationship with the present administration and the mainstream media. We can't afford to look away to the fact and science and the personal stories of people suffering from natural gas fracking and transportation across the country. Those who work at the head of the gas industry will only think about their timeline and don't care what consequences are being made or are in total denial. As leaders we're calling on you to do your job and lead. Something my colleague Julia Walsh, who is here and has lived through her work, is that it takes a village to raise a nation. And that's exactly where we are in New York. It's going to take New York State to

raise this entire nation. I understand that we need the politics for renewable energy. I'm telling you today that we are working on it, but we need you to meet us halfway. We can't do it without you just as you can't do it without us. And, finally, I would like to say that we need the heart for human lives and planetary survival back in our government and in our community leaders. I'm calling on every young person, female person, male person, all other persons who actually care about our survival, to run for office and other leadership positions. Because of this planning board, if this administration is not willing to do the right thing, than we're going to do the right thing.

MR. RHODES: Thank you very much. Carol Chock to be followed by Thomas Starkey.

AUDIENCE MEMBER: I'm Carol Chock, a legislature from Tompkins County where I represent 7,550 constituents in District 3 mayor election term residential areas adjacent to Cornell University. I chair the planning energy and environmental quality committee where we are actively involved in

multi-projects to reduce greenhouse gas emissions in our county, encourage production and build energy efficient housing and former chair the facilities and infrastructure where we built lead equivalent facilities, install solar (inaudible.) I'm also voice chair of our economic develop committee where we look at economic impact of energy decisions. Thursday night the Tompkins County Legislature passed this resolution providing comments and recommending important revisions to the 2014 Draft New York State Energy Plan. It came out of the bipartisan committee. Passed the legislature ten to four with the only difference of opinion on our legislature percentage by which methane CH4 is responsible for greenhouse gas emissions that contribute to climate change and CO2. So we were unanimous in most of what we passed. We all agree we'll not be able to achieve our own over New York State's target in greenhouse gas reduction on the current course. We were unanimous that New York State must get serious about finding another path. Point of agreement, 80 by '50 target. 80 percent I think by 2050 as a target

is a good idea. All carbon equivalent must -- we must change methane and other emissions as well as set the bar for our regulations. Please see the recent research from Cornell University and other places, Jacobson, Jackson Morris who wrote about -- who is here who wrote about New York renewable standards and what was cited in our regulations. There must be interim targets. A resolution point that New York State requires us, when we apply for grants, to have an achievable target when we receive funding. For example, for New York State, only a cleaner, greater community plan. But it didn't include such targets for itself. The name plan for this document says is regulations is pretty much a misnomer. We say it more politely in the resolution. While it establishes some admirable goals and makes some predictions based upon a continuation of business as it has been, it is not a new plan in the modern sense of words in which future direction is set and alternative directions are made that would depend upon implementation of the new set of initiatives. Our resolution calls for a final plan that would be worthy of

that name. Tompkins County is not alone in deciding that energy policies are worthy of our time. Elected officials at all levels and in our municipalities and in other counties across New York State are looking at not only fracking but wide energy decisions. Tompkins County council definitely has a sustainability energy task force. There's now elected officials net worth consisting of 800 and some elected officials at levels throughout the state. 200 municipalities have rewritten the plan using control thinking about energy use and looking at that energy decision effect not only our energy but our economics. Bipartisan elected officials study policies, institute clean energy programs on local levels. And emissions market concludes that fossil fuels, including natural gas infrastructure, are not good for our economy. Like the numbers don't work. Damage from an extreme storm cost us in Tompkins County over 500,000 this year. And if you count the recent salt and storms, I think we're probably getting closer to a million probably. Tax income doesn't cover increase set costs for public safety for some of the

things that we're talking about. Services, it doesn't cover the cost for additional services for public health, ensure public health in our community. We face uncertainty and pricing. We just encourage you to read our resolution and create a final plan in the spirit in which planning has been taken into consideration in this great State of New York. Thank you.

MR. RHODES: Thank you very much. Thomas Starkey followed by Jackson Morris.

AUDIENCE MEMBER: Good afternoon. My name is Thomas Starkey and I'm a junior here at ESF. I believe that the New York State Draft Energy Plan has the potential to be a great document. It could put the state on the right track to lead the right energy development, and it could. Due to the underlying motifs of the plan, it could be less conflicting. Makes it hard to determine an appropriate middle ground for everyone that everyone will agree upon, especially when it comes to the upcoming role of natural gas. According to the EPA pound for pound the comparative impact of methane on climate change is over 20 times greater than you carbon dioxide over a hundred year period.

If we release carbon emissions by increased carbon methane, we'll be back to square one of the fastest way to increase natural gas consumption for New York would be through hydrofracking. The long-term negative and environmental consequence of hydrofracking far outweighs the short-term economic advancement. 30 percent of methane emissions come from natural gas and petroleum. That is the result of this process. Look at Onondaga Lake. That's a -- that's a federal funded toxic waste site. New York has so much clean water available. We don't want to have to be going through the same process of cleaning up our mistakes from this path in the future. These emissions will only get into the future and they will still be confronting the same environmental issues we have today further done the road. Let's make the right decision and ban hydrofracking. Thank you.

MR. RHODES: Thank you very much. Jackson Morris followed by Kim Michaels.

AUDIENCE MEMBER: I'm showing my age that I'm not reading off my phone, I have paper. Good afternoon. My name is Jackson Morris.

I'm a senior energy and climate analyst at the Natural Resources Defense Council, an international nonprofit enviromental organization with our headquarters here in New York State. NRDC has more than 1.4 million members and online activists, including more than 110,000 in New York State. Since our founding in New York 1970, our lawyers, scientists and other environmental specialists have worked to protect the world's natural resources, public health and the environment. NRDC's top institutional priority is curbing global warming and building the clean energy future.

For two decades NRDC has worked to scale up renewable energy and energy efficiency in New York State as the key strategy for fighting global warming, protecting public health, lowering New Yorker's energy bills and creating jobs. As the result of efforts by many stakeholders and policies adopted by the state, New York has scaled up its clean energy efforts considerably. A decade ago New York had just 48 megawatts of wind power, today, after a decade of our successful renewable portfolio

standard program, we have a 1.8 gigawatts of wine. More than 37 times more than we had with some of the largest projects located right here in Central New York. Just four years ago New York had minimal amounts of solar power installed. Today, after the first phase of New York Sun Program, not counting the many installations that occurred in 2013, we have nearly 200 megawatts and are finally in the top ten states for installed solar. And yet we have far to go before we realize our full potential for clean energy in New York State. And the aftermath of Hurricanes Irene and Lee and Superstorm Sandy, we understand more clearly than ever how high the stakes are in the struggle to move away from fossil fuels to clean energy. So the conversations that we are having through the State Energy Plan process are crucially important as will be policies that New York State adopts moving forward.

I appreciate the opportunity to comment on the 2014 New York State Draft Energy Plan today. My testimony is broken between four parts. At the outset, we would like to thank NYSERDA for their efforts to produce a solid

draft plan that synthesizes a lot of useful information about New York's current and projected energy mix and includes some thoughtful recommendations. However, moving forward, we urge New York State to include more explicit comments to specific clean energy goals and policies. These will be needed to meet our emissions reduction, clean energy and environmental and public health goals. In particular we strongly urge that the final plan include a 2030 modeling run that captures a vast energy efficiency and the renewable energy potential the draft itself references. A full 43 percent of electric demand from energy and comparable numbers from renewables. Doing so results in a starky different energy mix than currently projected.

One: The draft plan includes a laudable long-term emissions target. An 80 percent reduction in greenhouse gases by 2050 but needs interim goals/mile markers to ensure we get there.

New York should establish near and mid-term targets for 2018 and 2021 to help achieve the year-over-year economy-wide

greenhouse gas to meet Govenour Cuomo's long-term goals. For example, a 2018 target of a 14 percent reduction from 2011 levels and 20 percent by 2021 would ensure the state is on the appropriate glide path to reach the 80 by '50 goal.

In addition, targets should be based on actual carbon dioxide equivalent reductions, not carbon intensity as stated on Page 28 of Volume One. Instead, goals must be set in terms of actual tonnage reductions of CO2 equivalent to provide an accurate measurement of policy performance.

And carbon should be clarified to refer to CO2 equivalent. Other greenhouse gases such as methane are significantly more potent than carbon from a climate forcing perspective over shorter time periods. And the prevailing science has illustrated that a comprehensive approach to greenhouse gas reductions is necessary to mitigate climate change. Thus, we recommend that the final plan incorporates that change in order to ensure adequate attention is paid to mitigating those high impact greenhouse gases in addition to carbon dioxide.

Two: Extending and expanding programs for clean renewable energy efficiency will play a central role in meeting these ambitious but achievable greenhouse gas goals.

Energy efficiency in the draft plan includes a state commitment through 2020 to energy efficiency programs, which are currently set to expire in 2015. While this time horizon is essential to ensuring certainty for utilities, building owners, contractors to invest in energy efficiency, this commitment must be coupled with targets and dollar budgets to capture all cost effective energy efficiency. Based on historical performance and various analyses, a goal of meeting roughly 20 percent of forecasted demand in 2025 through energy efficiency, should be included in the final plan along with comparable programs targeting end use natural gas efficiency. Programs should also be designed to target sectors such as affordable multi-family housing that have traditionally been undeserved and represents a vast reservoir of cost-effective efficiency, a sector in which the value proposition for energy savings in heightened

low-income families can spend up to 20 percent on their income on energy, compared with only four percent for the average household.

Building codes and state appliance efficiency standards must be updated more regularly as well as aggressively enforced. For so long this area has suffered from lack of funding and political will to follow through on stated commitments. As buildings account for the lion's share of energy demand in the state, 72 percent of primary energy use in 2012, strengthening codes and standards will spur economic growth by reducing overall energy expenditures, create jobs and reduce emissions. The final plan must build on the draft's mention of standards as a priority by including more specific action items and metrics to ensure the state follows through on that commitment. Specifically, the codes council process for adopting 2012 IECC/ASHRAE 90.1-2010 for both residential and commercial buildings has slipped repeatedly and should be a top priority for the administration to complete. We also urge full participation by the state in the EIC model code setting process, including

attendance at key IECC meetings. Finally, the state should also be active in promoting stronger energy efficiency standards at the federal level as these will result in substantial additional energy savings.

Renewable energy. The final plan must scale up renewable energy. As with energy efficiency, the draft plan includes a state commitment through 2025 to a renewable energy portfolio. While this -- sorry. While this is positive, the final plan should direct the PSC to issue an order by the year end 2014 that targets meeting half of the state's electricity demand with renewable energy in 2025. Further, many customers who pay into the RPS are unable to site solar, wind or other renewable technologies where they live or work due to infrastructure constraints. To address this barrier, the final plan should include a directive to pursue the regulatory and/or legislative changes necessary to allow customers to aggregate their demand and subscribe to an off-sight renewable project that would offset a portion of their demand from the grid that is already being implemented

in states such as Colorado.

Franking. NRDC is pleased that the state energy plan appears not to contemplate new high-volume hydraulic fracturing within New York State. NRDC remains opposed to any new fracking New York until the potential risks to human health and the environment have been fully evaluated. Given that important new science continues to be advanced, particularly with respect to health impacts, we support an on-going de facto moratorium on fracking n the state.

In the meantime we are aware that the state's continued and projected increased consumption of natural gas from other locations results in serious impacts in those places. Although NRDC and others continue to work to ensure that the most protective safeguards are put in place wherever fracking occurs, our top priority must be to move beyond fossil fuels as rapidly as possible. Consistent with other recommendations made in this testimony, NRDC therefore urges the state to take aggressive measures to reduce our dependence on all fossil fuels, including natural gas, and to ramp up

the use of energy efficiency and renewable energy as quickly as possible.

New York should pursue transportation sector greenhouse gas reductions. In 2012 the transportation sector accounted for 28 percent of New York's primary energy use and has persistently been the fastest growing sector year-over-year. New York should build on its Charge New York initiative to continue investing in electric vehicle infrastructure, make the necessary regulatory changes at the PSC to remove barriers and create incentives and education programs to accelerate EV adoption.

The governor must also ensure New York plays a lead role in fulfilling the recently signed state zero emission MOU and explores mechanisms that can track the carbon intensity of the state's liquid fuels, which are on a path to get dirtier as tar sands-derived fuels potentially enter the state's market.

There should also be additional goals and implementation details about the proposed initiatives on increasing transportation system and location efficiency and coordinated

infrastructure investment through integrated energy, transportation, land use and sustainability planning, all of which will yield reduced emissions, reduced transportation costs, greater economic growth and a higher quality of life for New York's residents. Thank you.

MR. RHODES: Thank you very much.

AUDIENCE MEMBER: My name is Kim Michaels.

MR. RHODES: Hold on. So the following person will be Tyler Cook.

AUDIENCE MEMBER: I'm sorry.

MR. RHODES: I'm just naming the person who follows you.

AUDIENCE MEMBER: I've heard a lot of comments today and it seems that people are seeing this as either natural gas or clean green renewable energy. My issue with this whole deal is that they both come out of the same hole and they both involve nuclear energy and radiation as found in our shales. Our shale contains natural gas, shale oil, high conservation of rare earth which is used for clean renewable energy, so-called clean renewable energy, of which residents suffered

horrendous health and environmental degradation. They have cancer villages, issues with skyrocketing birth defects. This has been -- there's been a huge attempt on the part of China in keeping this covered up. And one particular story that I had heard about was a journalist in China, and they were providing them with private email information, he ended up getting nailed for it. But, you know, and he was, I think, I believe settled out of court. 107 of these people ended up with ten year jail sentences. It -- it's just one thing I wanted to mention. But I'm asking all of you, if you hold the United States up to the same standards as we've held other countries, this would require that you put on hold not only this energy plan but the entire budget recent amendment and recent changes as far as law that's put into effect. Because all of it, not even just so much of it, all of it pertains to mining issues. In mining -- in mining, for the rare earth, they all, in addition to the fact that they're totally interlinked, which radioactive material which has -- and they have to be separated from each other. They use

intense heat, extreme toxic gases. In addition, more recently, they have begun creating organisms. Microorganisms are to be created to withstand intense extremes in heat, temperature, radiation, toxic heavy metal, toxic gasses. All of the things that we would typically use to destroy harmful bacteria. The magnitude of this, I can't even describe. Because if something like this got out into the environment, and I fear it may already have, it would be uncontrollable. You would sit here and picture an ordinary invasive species of a plant or animal that you can actually see and think of how far different it is to eradicate something like that. And in this situation you're trying -- you're trying with something that is so small, you can't even see it. Some of this is difficult to see if even with a microscope. And those bacteria, it's actually bacteria, yeast, mold, fungi, all of which have the ability to reproduce repeatedly, to evolve rapidly and also to transfer their genetics into other microorganisms. They can destroy existing microorganisms in our environment. And they can also just overtake it. The human

body has more microbe cells, they have a major role in every form of life. Just to give you some idea of the issues that we're dealing with.

Now I will go with to the plan. There are great men in our history who fear for American's future, all of them due to radiation and nuclear power. Between them, the additional grave concern due to cover-ups threaten alliance between government business and (inaudible.) Those men are Albert Einstein who is the greatest genius of all time. Dr. Carl J. Morgan, known as the father of nuclear health physics, an admiral and the father of nuclear Navy, it is my concern that our governor and president, with the help of others, have effectively declared an unofficial war on their own people. A war involving economic, psychological and biological chemical radioactive war and to slide into fascism. The same thing is happening in other country to create a world government which would effectively ensure fear. The same resources an technology used to create the damage would also be used to mitigate it by the same group of

businessmen with political clout. No, sir, this needs to be opposed, the energy plan in its entirety and all recent changes, or at least put on hold while my claims are investigated. Such a request may seem extraordinary, but upholding this request is not only reasonable but imperative. If the people in our state and our country, as well as the people of other countries, are to be protecting a group of treasonous, internationals with political clout by danger will more actually and comparison this group (Inaudible) of unprecedented mining reliefs after use of high radioactive and toxic material as found in the shales and mitigate genetic microorganisms and be able to alter and engineer a climate and geological event --

MR. RHODES: Ma'am, I'm sorry, you have gone over your time. If it's written comments, you can --

AUDIENCE MEMBER: The other person before me spoke for quite a little longer, I believe. Well, I would like to say is that the people that the -- did that, the investigation, that the investigation include Govenour Cuomo,

President Obama, Robert F. Kennedy, Jr., and as it appears the UN discharged, and his associates with an advantage point now known as advantage point capitol partners, James C. Kennedy, Al Gore and Major General Charles R. Henry who seems to be the one benefiting the most. It's involvement with the national venture business corporation deserves some attention. I think it's unfortunate that you don't want to hear the rest. I mean if you truly want to make a good --

MR. RHODES: Ma'am, we have other speakers.

AUDIENCE MEMBER: Fair enough. Fair enough.

MR. RHODES: Please come back at the end of the que. Thank you. Tam.

Tamra Cook followed by Darren Suarez.

AUDIENCE MEMBER: My name is Tamra Cook and I'm from the Akewsane Mohawk Nation and I would like to commend everyone before me that has spoke. And a lot of what they said I really hope that when this is done and over you actually take the time and not only effect your whole -- a whole system in the ways that you

actually have to think about this, but about it also grows to your heart. Right now, as one of the speakers said, they would give their life. That is the one thing that we Akewsane people are still here for. We're here to protect this earth. We still exist to protect our Mother. That's our responsibilities. We were not made extinct. You could not get rid of us. And we're not going anywhere. We'll stand on the line, we'll stand on the frontlines and we'll put a call out to our warriors, and they're all across the whole United States, they're all across the world. We have, I don't know, more that actually stand in the frontlines. Not just here, Canada, China, all over the place. Right now we have our brothers and sisters up in New Brunswick that are there constantly, constantly on a daily basis to stop any of this, any of the destruction that you guys are trying to do, that the outsiders are trying to do, that those oil companies are trying to come in and extract these natural resources that are supposed to make our living life so much easier. We're supposed to respect her, we're not supposed to destroy her. And right now,

and I have to say that unfortunately he couldn't have been here, and it would have been great for him to actually be here, was Mr. Dennis Bank. And I tell you, after watching him and listening to him, he said that sooner or later you're going to actually have that reason to stand up and to say what you need to say. This is that reason. This is that time to actually stand up and to tell you that we're not going to go away. So I would hope that if that decision lies when you -- that you're the one who can decide whether or not we've this allowed here in New York State, that I would ask that you please let New York be the leaders that we're supposed to be and show everyone else that we're not afraid to say no to ban fracking, something that you're not afraid to say no to. That protects your future, your grandchildren's future, protects your water, your land and your air. That that is something that you hold more valuable than a dollar. One thing is that before, just I don't know if you guys understand, that the whole two (Inaudible) but what it does for our people is it represents a thousand years of democratic

principals that we shared with our brothers and sisters. Even the new ones, including Thomas Jefferson, Ben Franklin who openly acknowledge in speeches and writings our contributions form the basis of the constitution. We shared our belief that our leaders should represent and serve the people. We shared what we call the great laws with the natural laws of human dignity that preserved an underlying all other laws. And it is important to the pursuit of all happiness that we, the people, now means and continues to mean we all of us who are Americans. So I ask that you listen to at least the people on this. This is why you sit where you sit. This is why our government sits where our government sits, because we the people chose you. Now we're asking you to back us in what we want. Because, like I said, we're not going to go away. We'll stand on the front lines and those calls will be put out.

MR. RHODES: Thank you very much. Let's take a quick recess.

(A brief recess was taken.)

MR. RHODES: Darren Suarez to be followed by Dorothy Pomponio.

AUDIENCE MEMBER: Well, thank you to our stenographer for a small break. Good afternoon. I'm Darren Suarez, director of government affairs for the Business Council of the State of New York. The Business Council is the leading business organization in New York State representing the interests of small and larger firms throughout the state employing our 1.4 million people.

On behalf of the members of the Business Council of New York State, I would like to thank the members of the New York State Energy Planning Board and their respective agencies, commissions and authorities for the development of the 2014 Draft State Energy Plan.

There are numerous items that are contained in the 2014 Draft State Energy Plan that the members of the Business Council support from overachieving goals like improving energy affordability to initiatives like a commitment to support infrastructure improvements to encourage increased use of alternative forms of transit. Additionally, the Business Council strongly supports the draft plan acknowledgement of the power of

private sector to provide and improve our energy system's ability to meet the goals of the people of the State of New York.

The Business Council's written comments on the draft plan will provide a more comprehensive review and constructive comments on the Draft Energy Plan. Our comments today will focus on a few items of concern. Specifically our comments today will address the benefits of the wholesale markets, transmission upgrades and climate change benefits of natural gas.

In reviewing the state's energy needs to ensure that it is important to recognize that what has worked, and then take steps to preserve it and duplicate its successes where applicable. The final state energy plan should recognize that New York now has a dynamic and competitive energy market where capital costs and associated risks for conventional projects are borne directly by private developers rather than through public subsidies.

It is important to note the market is explicitly structured to provide price signals for new conventional generation construction,

repowering and continued operations where such actions are cost-effective and appropriate tod maintaining reliability.

In large part due to New York's energy market design, New YOrk electric customers have benefited from cleaner more reliable energy end generation as well as historically lower electricity costs.

Additionally, market based solutions have met state-wide reliability. Location based price signals provided by New York's wholesale electricity markets have traditionally encouraged investments in areas where there's demand for electricity.

Like all markets, there are opportunities to review and provide minor adjustments to ensure efficient market outcomes that deliver reliable cost power to consumers. One area where the state can facilitate a more efficient wholesale market is improvement of pipelines and power lines.

New York's current energy infrastructure, which includes 10,900 miles of high voltage transmission lines, tens of thousands of natural gas transmission lines and 500

generators, is the system that generates the life blood of New York's economy. Without heat, light and power, we cannot operate or maintain the businesses and institutions that provide New Yorker's with goods, jobs and homes. And many communities directly benefit from the continued presences of the economic benefits of power generations. New York's existing energy transmission infrastructure represents one of the most cost-effective means to meet the demand of the 21st century. And well-designed transmission upgrades will ensure that future load and generation needs are addressed in New York.

The Business Council strongly supports elements of the Draft Energy Plan that support the expansion of the current energy infrastructure. Upgrades and improved transmission lines and pipelines provide economic benefits for New York energy consumers through relief of the most congested elements of the transmission system, integration and expansion of additional renewable energy resources on a non-discriminatory basis, along with congestion relief. Additionally, new

electric transmission lines support existing generation resources that are challenged by transmission congestion, thereby helping to secure existing capacity to aid in system reliability and support the existing vast fuel diversity in New York, one of the most fuel diverse states in the country which protects consumers from commodity price volatility as recent cold weather has shown.

Our membership in various forms has committed significant time and talent to addressing the myriad of public policy issues surrounding climate change. We are concerned the draft state energy plan does not focus enough on the development of upon climate policies with co-benefits, and instead focuses upon one-sector command and control mechanism which has not been proven effective at addressing CO2. Additionally, we believe that it is unwise to focus climate policy merely on carbon dioxide to the exclusion of other human influences on the climate system. In fact, early action on a wider range of human influences on climate could be timelier and less costly.

The Business Council supports the adoption of climate policies with co-benefits. We support the adoption of climate policies that provide near term, concrete, politically attractive benefits that additionally address climate change. Thus, the primary rationale for the policy goals is to improve the quality of human life, enjoyment and health, economic advancement. Additionally, each of these policy goals would have co-benefits to reduce the scale of humans on the climate system.

This draft energy map should be amended to include a specific initiative dedicated to the advancement and adoption of more LNG usage in New York State. It is time that fear and emotions be put aside and for the state to embrace facts and hard science.

LNG is beginning to be used in rural areas as an alternative to propane and oil heat. Additionally, LNG can meet the demands of New York distributed energy needs.

The Business Council of the State of New York believes that the state plan should commit to address our energy needs through advance mean of sustainable improvements.

And, finally, we support and believe that the state energy plan should be specifically committed to the promotion of economic liability of our nuclear power generation and low-carbon nuclear energy that provides numerous attributes including round-the-clock production of large amounts of electricity to help stabilize the electric grid, clean air compliance, forward electricity price stability, fuel and technology diversity and high-paying jobs at facilities that can withstand extreme natural and man-made events. Thank you.

MR. RHODES: Thank you very much. Dorothy Pomponio followed by Anthony Guarneri. Okay, Anthony Guarneri to be followed by William Huston.

AUDIENCE MEMBER: Hello. I'm Anthony Guarneri with ASI Energy. I'm here today to speak about the technology combined Heating and Power and Mirco Grids and their installation that we're working with, specifically with the multi-owner situation. I'm here from Northeast Green Heat and Power Initiative.

This overview of what I would like to

present is of combined heating and power in microgrid. I would like to speak about the Program Energize Ithaca Mirco Grid. I would like to address Initiative 3 regarding implementing building codes and standards that will support energy efficiency and clean energy. And then a request for policy development for microgrid and the interconnection thereof to make it easier with codes and interconnection a requirement. Some specific micro interconnections is simply we want to help get clean, and that is what I'm going to end this presentation on.

So my business partner Herbert Dwyer and I own ASI Energy and ASI Renovations. An Ithaca based CHP developer. We are a designer build finance operate firm working with energy efficient technology suited for the individual building needs of a building. So we work in a public situation. We don't represent technology.

Combined heating and power is a technology that burns a single fuel to produce electricity and hot water. So basically you scale down a power plant to fit in a boiler room. Natural

gas is burned to boil water and spin generators to produce electricity. Instead other exhaust gas is being vented into the atmosphere. It is captured and used to heat water and the water is distributed to heat the local building. You can think of this technology as a big boiler that captures the exhaust gas to spin an alternator to produce electricity locally. We can also cool with this hot water by running it through an absorption chiller which, in a nutshell, produces chilled water for hydraulic cooling so your cooling is not using electricity, which is more efficient. There's actually a CHP being used in this building on the first floor. I happen to come across that.

I would like to talk about microgrids. A microgrid is a small scale version of the centralized electric system. A microgrid is electricity and hot hater, in this case generation energy and load consumption that would normally operate connected to the traditional centralized map, how far it could stand upon itself. This single point of common coupling with the microgrid can be disconnection in a microgrid can function

alone. So when Superstorm Sandy hit, and everyone lost power and buildings were black, when the buildings did actually have power, the majority of them were combined heating and power. So this is what I'm speaking on. CHP power and microgrid make multi-owner systems easier to install from a building component interconnection standpoint.

I am here speaking on behalf the Northeast clean Heat and Power Initiative. The organization functions across seven northeastern states and New England and New York as a volunteer association for the past decade. We are a 501C6 non-profit. We are a business league which shares a common interest in developing favorable situations for the technology as a whole to be implemented.

Top page of Page 3. So the board wanted to invite panel members and general audience to an annual meeting on May 13 at the Empire State Plaza. Google search it and it will probably pull up the rest of the details. NECHPI is interested in having a table discussion where we can speak on behalf of policy and lend different opinions.

After reviewing the New York State Energy Draft Plan, which is an excellent plan and we are very excited about the many strategies outlined in the Draft Energy Plan that harmonize well with CHP. We support this plan and look forward to its implementation. We also look to NYSERDA and Govenour Cuomo for the incentives and support of CHP technology that we have recently achieved in economic incentives of over 100 million dollars in the next three years.

Initiative 3; building codes interconnection. We want to connect multi-owners in microgrid by the Burrstone Project. They had some problems with this, so some of the policies we're interested in working with is the definition of at or near which was brought up in Burrstone. Making the possibility of all our power through the microgrid to consumers through purchase power agreement for other mechanisms using essentially transmission lines to purchase power, our own energy. We would like the process for interconnection multi-building -- multiple building owners to be alerted to this

sort of process. And that's it. The supplemental information is in the rest of the packet. Thank you.

MR. RHODES: Thank you very much.

So now I have three requests for second speaker opportunities. William Huston, Kim Michaels and Michelle -- Carol Chock.

AUDIENCE MEMBER: Can we make it four?

MR. RHODES: Sure. Keith Schue. It's just us now so we get to decide shall we stick with the five minute rule?

AUDIENCE MEMBER: I don't think I'm going to need five minutes.

MR. RHODES: Then we'll stick with the five minute rule, and if we need a little past that, we'll go to that.

AUDIENCE MEMBER: Thank you. William Huston, Broome County. One thing I would like to see in the Draft Energy Plan, and I need to do some actual more study of, which is why we're asking for more time, I think there's a lot people in the same situation that I am. I didn't see much having to do with energy conservation. I think that's an important, critical part of this. I would like to see

more on that. Out of the 15 initiatives, there really were a few in there that sounded good to me in terms of support for green energy, renewable energy. One troubling thing is the first one of the very first 11 goals of the first initiative is fostering economic growth. To quote Edward Abbey, "growth is a paradime of cancer cell." This is an obsolete and a failed world view and it doesn't match the realities of our world, which has to do with, of course, climate change. And the one thing that I wanted to speak about the first time I was up, and I'm grateful that you're allowing me a second time, is peak oil. So climate change really is the biggest problem, because on the horizon is mass extinction. So that's the most serious problem is climate change. However, peak oil, and very few people are talking about this but I'm became sure you're all familiar with peak oil, basically is used as a single gas oil. Follows a parabolic curve in terms of its production. And this guy called HC Hubbard became an authority on aggregate oil fields on planet earth that also is an approximate -- it's a parabolic function. So the idea is that

we're going to burn through half of the recoverable reserves and then no matter what we do after that point we're going to have a diminishing reserve. And I think that most people who have studied this problem, scientists, they weren't in disagreement about whether peak oil is true, but some disagreement with gas peak or shale gas peak or peak of various findings. The problem with being on the downside of the peak oil curve is that it's extremely serious, especially when our demands for fossil fuels, which is embodied in this plan, that's a fledgling point. I explain it as the second derivative over the first derivative. A positive slope to a negative lope. Yet the demand is rising. What we expect to see from this is much higher prices for those fuels. And the other thing it has to do with energy return on energy investment. So the ultimate barrier is one-to-one. That means in the old days they would spend one unit of energy and poke a hole down and you would get a hundred or two hundred units of energy back. Now typically in our fuel mix our EROEI is somewhere around ten to one -- I'm sorry, one

to ten or one to five. The ultimate barrier is one-to-one. If you spend a unit of energy to get a unit of energy, there's no reason to even go for it. And that's called the energy cliff. You don't want to reach the energy cliff. We need here -- what we need here, that is recall the point for you all, is that as we approach EROEI one-to-one, the practical limit for technical reason is higher than that. We're getting close to the technical climate energy limit of energy production. There should -- we leave it up to the free market. We're still going to -- we're going to take this, we're going to take this fossil fuel party to the last day if we're going to follow what the market is doing to the bank and the energy companies. We're going to take this to the last day. And when it runs out, there's going to be a human crash. What we need is a -- we need the regulators, that's you all, we need you to form policy that shifts us into the right direction before we hit that critical point or else we're going to meet with disaster. Thank you.

MR. RHODES: Thank you very much. I don't

see her, but for the record Kim Michaels? Carol Chock to be followed by Keith Schue to be followed by Lenora Monkemeyer.

AUDIENCE MEMBER: Thank you for this opportunity to speak again. I'm Carol Chock from Tompkins County Legislature. I will make a personal observation that the -- I think one of the reasons you're seeing such an eminent response from people to the nature of this plan is -- and to some of the energy discussions in New York State -- can be traced to the kind of observations that were made in Moreland Commission. Not the one that is -- has been in the news on ethics, but the storm report. And if you look there, I think it's on Pages 31 to 37, it might be in the 40's, about process, communication regarding energy decisions and access. That ultimate effect the rate payer, who are the consumers of that, which we're tying to do here, just addressing the process is -- needs to be part of any planning. So that's why, it's a personal observation from work that I have done as president of the rate payers an community interventors group on public service commission cases. I did want to

take time to go back to some of the stuff I didn't have a chance to talk about from the Tompkins County Resolution that was passed two nights ago, which you all now have copies of. I talk about our experiences with weather events. I would also like to talk about the ways in which we have already experienced and will, as communities across the state will experience, economic and social impacts from the changes in uncertainties in the energy supply mix and price structure for existing and new sources of energy unless there's advance planning. And one of the things that was referred to in the New York State Energy Highway Blueprints that didn't come out in the energy plans, and I think that's really important, is that if you look at the blueprints, many of other programs talked about they're now having those blueprints on the website that take you to an actual program. The ones that don't still is a common transition program. It was recommended to be established as part of energy blueprints and any plans made to establish bold solutions to new challenges -- this is now from the

resolution -- must meet these challenges with new solutions by making sure that new communities and incentives are available in the community that have built their employment and tax base on the older technologies. Renewable technology and incentives should be offered to companies to build in those communities like ours formally housing fossil fuels or nuclear fueled plants. As we go through, and this is back to me, you know, as we transition to new technologies in any field, when we close the clothing mills, the towns that didn't develop a plan about how to survive as new technology moved in to replace those were in trouble. And so unless a plan for New York State addresses that, we'll be in trouble. And we'll never get to that if we don't plan for the communities that will be hurt along the way and then that should be helped to implement green technology and profit from those. Other thing that we referred to in our resolution that we would like to see revised in the final plan, tougher building standards and energy efficiency methods require new buildings to achieve net zero use by specific target dates. The

potential energy generating capacity using available substance as renewable energy were referred to in several plans, now most noted the Jacobson plan from standards. There were 13 authors. Jacobson, two of them were Bob Howard and Tony (inaudible) was published and called energy policy issue 57 in 2013. And the numbers for New York State were updated and can easily be found and looked at a site called the solution project. Solutionproject.org. They have created a plan for every state. So please read that. Just a few more. Greater levels of detail about reduction in demand that could be achieved through demand requirements. There's no reason why, in our case, the new steel plant up in Auburn shouldn't be scaling back on the busiest times of the year. One more: Defined targets for clean vehicular transportation.

And just in conclusion, the draft plan emphasizes, and we agree with, market based solutions to our energy transition. We believe that the approach that includes the implementation of regulations and tax policies aimed at penalizing polluting energy sources and encouraging efficiency in renewable energy

will be necessary ultimately to dramatically change the market in favor of renewable energy and efficiency, especially in time to met the target date set. So we encourage you that we think it's doable. And we encourage you to address that in the final plan. And thank you, again, for this opportunity.

MR. RHODES: Thank you very much. Keith Schue to be followed by Lenora Monkemeyer and then Lindzee Powell.

AUDIENCE MEMBER: Thank you again for this second opportunity to talk. I appreciate that. I want to talk a little bit about how you -- a little more technical standpoint, how you calculate the impact, the climate driving impact, of methane and carbon dioxide. Because this has been talked about a lot today but I want to discuss it a little more. One thing that I see in this plan is that a forecast for -- if you do consider carbon dioxide equivalency, there's a forecast here that says by 2030 that you can get to 9 percent below 1990 levels. And on Page 14 of Volume 2, that is, it says New York forecasts total greenhouse gas emissions are anticipated to decrease by

2.4 from 2011 to reach about 2000 MMT carbon dioxide equivalent by 2030, or nine percent below 1990 levels. So your forecast by the year 2030 that you're going to be just nine percent below, and that's looking at carbon dioxide equivalency. The reason we have a big problem with looking at just methane is because, if I reconcile this with the other claim that's made, that you think you can get to -- you think you can get to 50 percent reduction of carbon dioxide only by 2030. That really tells you this nine percent versus that 50 percent how much you're not taking into account that's related to methane. So getting to 50 percent reduction by 2030 with carbon dioxide obviously isn't getting you anywhere close to what you need to be if you're -- that only means nine percent of carbon dioxide equivalency in the same time frame. Then obviously you have 71 percent left to go in the next 20 years after that. So there seems to be a real problem with that. So I would also want to mention that carbon dioxide equivalency itself, there's some defects in looking at that only. You mean the EPA acknowledges

multi-factors which is about 21 -- basically that methane has a climate driving effect that is 21 times worse than carbon dioxide. We know from the intergovernmental panel climate planning that number really is more like over a hundred years time frame. But what really matters is what happens over that 20 year time frame. So that 20 year time frame where we know that effect is 86 times worse. That makes all the difference. That has been said a few times here today. We don't have a hundred years to deal with this problem. 20 years time frame is absolutely critical. We have good science that seas, that oceans are approaching this temperature threshold by -- we'll reach two degrees Celsius increase. And when that happens, we're in a state where the climate can't be recovered thousands of years before we get back, so we have to very quickly bring our emissions up. The next 20 years is absolutely critical. So I would suggest that when you look at CO2, you need to look at something else. May be call it CO2 plus something that actually looks at what that impact is over the 20 year time frame. Thank you.

MR. RHODES: Thank you very much. Lenora Myers and then Lindzee Powell. And I believe another request just came in.

AUDIENCE MEMBER: Hello. My name is Lenora Myers. I'm an alumni of Syracuse University. The New York Energy Plan should include many more renewables because they're getting better, more efficient with design. A new design is a three dimensional one that is two times more than -- 20 times more powerful out than flat solar panels with the same base area. It goes like this: Tell me if you have seen the new solar panels? It looks this (Indicating.) How many have seen that? It has the shape of an accordion design. Has anybody seen that before?

MR. RHODES: Yes.

AUDIENCE MEMBER: Great. It's an accordion shape that rises vertically on the roof. The design picks up the sunlight early in the morning at sunrise and later in the afternoon at sunset and in winter, something that flat panels cannot do. MIT tested these panels on the roof with great success. From MIT news magazine 3-D solar. With innovation

such as these, one can see a grand opening into solar along, and it is an exciting time. I hope New York State Energy Plan studies this plan and other innovations and includes them in its energy plan. The New York Energy Plan should also assist DIY's, do-it-yourselfers, who wish to assemble their own solar or wind energy projects. Online could be a free website to assist homeowners to make solar panels, et cetera, for their home or duplex. The directions should be written simply for the non-scientists. Another example for heating innovation is a building we are in now. The -- they use wood pellets from Willows. It not only heats this building, but it heats adjacent buildings. Nuclear should be phased out due to the dangers of radioactivity. Fukushima is an example. And we have a similar plant in Oswego, New York of a similar design that could be potentially very dangerous. Fracking liquidated natural gas and storage tanks should be banned in New York. According to scientists, radioactivity from base water is 267 times the allowable rate. It can cause cancer and Leukemia. For your future plans,

let's invite experts from Europe to give lectures who can help us formulate our renewable energy plan and transportation plan. Let's have a great time and a great century in the 21st century in renewables and try to stop global warming. Thank you.

MR. RHODES: Thank you very much.

We have Lindzee Powell followed by Julia Wright.

AUDIENCE MEMBER: And thank you for taking the time to hear me speak today. My name is Lindzee Powell and I'm a New York State resident as well as a student at Syracuse University. I also worked on a hydrofracking campaign organization on campus. I'm an aspiring geologist. I want to see how earth works. I want to learn what the earth is made up of. I want to be educated as to be a leader. And I'm taking a stand for certain New York State residents to be a voice for those who don't know how to be or that they can be. You all have been appointed to act in New York's best interest. So why is fracking so controversial? Why does a dollar mean more than future generations than my generation, the

generation of my nieces and my nephews? Say no to air pollution. It's dangerous to New York State that has seen detrimental consequences all over the US, and just south of us in Pennsylvania. We do not have a water treatment plan to treat hydrofracking. I don't know if you all have families, but personally I would do anything for my family. As a one child of 14, I was born and raised to fight for what I believe in and I will wholeheartedly do so for my family. I have family who live in the southern tier who will be directly effected if hydrofracking is brought to New York State. Maybe my cousins will drink toxic tap water. I stand here before you today to take a moment and think about it. Stand for what you believe in. Hydrofracking pumps 800 known toxins into ground water and hundreds more of chemicals that are unknown. This is not just affecting one spot of New York State, but every single inhabitant of this state either directly, indirectly. We need to ensure a clean environment. That's why I'm here today. The State Energy Plan is supposed to shape our future, so why are we willing to bring

hydrofracking here for a few extra dollars? The impact of fracking on water and air quality is completely ignored. This is something that should be one hundred percent denounced in the plan. We rely heavily on natural gas, and hydrofracking will only increase our reliance. The state energy plan is supposed to protect New York's environment and to shape the future of the environment. What will happen in the next 10, 20, 30 years if fracking is allowed? Detriment, consequences and an unhealthy environment that's searching and driving for natural gas. I'm here today to please let me learn, let me become the geologist that I'm aspiring to be. Thank you.

MR. RHODES: Thank you. Julia Wright.

AUDIENCE MEMBER: I'm Julia Wright and I have been in Syracuse now for four years living and working in Syracuse. Before I get started, I would like to thank you for the opportunity to speak today. I would also like to thank the individuals that spoke before me and those that will speak after me. New York State's Energy Plan has focus and goals to achieve a clean environment in New York. The plan envisions

for an increase in natural gas use in New York over the next 20 years. A goal impossible to achieve. Relying on natural gas, especially from fracking, within New York, especially from fracking -- I lost my spot. Relying on natural gas, especially from fracking in New York or its borders undermines plan's achievement for natural gas production can be done safely and will bring forth a direct environment is absurd. All we have to do to prove this is look directly south of New York's borders to Pennsylvania. We've seen fracking down there and we've yet to see it be done safely. And, in fact, time and time again there have been again many consequences that are directly related to fracking. Fracking has resulted in diminished air quality, decreased property value. And the problem that most concerns is toxic tap water. Those impacts that I've just stated are completely ignored with the current draft plan. The state must look at all greenhouse gas emissions, not just carbon dioxide if we're serious about addressing a climate change. Most anything from fracking gas undermines any benefits of reducing carbon

emissions from other fossil fuels to natural gas. Furthermore, the state did not meet its goal of 80 by '20 under this plan. Depleting that gas industry as part of the EPA and New York State government believe within the current draft fracking significantly means emissions during every step of the process. I could stand up here for hours and tell you what I believe is in addition within the draft of the state Energy Plan because I'm sure there's plenty more. But I'm not going to. Fortunately, my allies have been here today, have spoken before me and have made an impressive job outlining the different issues within the draft. What I will tell you is that I've built a community of family in Syracuse for the past six years. I consider myself a New Yorker and that's why I've been at the front of the fight to ban fracking here. I will fight for the welfare of my community, family and friends as well as the well-being of many generations of New Yorkers to come. In your vision of the state energy plan, I urge you to turn away from fossil fuels like natural gas and turn to renewable energy resources like

wind and solar. I urge you to stop listening to special interest groups and instead listen to the public's interest as well as your constituents that have vowed to represent. Thank you very much.

MR. RHODES: Thank you very much.

So what we'll do now is take a break and see if we've more speakers showing up. We will be here until 7:00. So how about 4:30 we'll reconvene and see if we have more.

(A brief recess was taken.)

MR. RHODES: We'll start with Howie Hawkins followed by Peter Swords.

AUDIENCE MEMBER: Good afternoon. My name is Howie Hawkins. I live here in Syracuse. I was the green party candidate for New York State governor in 2010. I'm seeking the green party nomination again this year. I have six point, and I'm just going to briefly mention them. I have written up the testimony, I can leave with you.

The first point is, for me most important, the goal attempt of carbon envision reduction in the draft plan is the 80 percent below 1990 levels. The plan affirms Govenour Paterson's

executive order of 24 that was adopted in 2009. People like William (inaudible) and Kevin Anderson and his colleagues said that we need to reduce industrial areas like New York by six percent between -- between six percent per year in ten years. That's between 10 and 17 years. If we're going to avoid catastrophic climate change, we need to stay below the two degree Celsius rise in temperature, which is seen as the tipping. We go over the tipping point and climate change is accelerated beyond reversible. Fortunately we have seen a recent study by Mark Jacobson who said in New York we need a hundred percent carbon-free energy in 17 years by 2030. I think that ought to be the goal of the energy plan, that's where you should start. I should mention that the prediction in the Jacobson study for the economic impact is enormous. 600 billion dollars invested, four-and-a-half million construction jobs, 58,000 permanent jobs, payroll of 18-and-a-half billion per year on a construction phase and 5 billion per year during the maintenance operation phase after its built. So that is the most important

point, if I say. I hope that stays with you. The plan is having a lot of forecasts but it seems to be more adoption to these forecasts than a progressive plan specifically targeting a timeline. That's my second point.

My third point is, you probably heard this all day, natural gas is not clean. It may be even worse than oil and gas according to the reserve by Robert Howarth and Anthony Infraffea at Cornell. So there are alternatives. Ground source heat pumps, solar thermal panels and sustainable biofuels where biochar is put back in the soil and sequestered.

My fourth point is nuclear power. Plans seems to increase in the nuclear power in 2030 when two plants are scheduled to be retired. Before then we have a political leadership of the state pushing shutdown of Indian Points 1 and 2. Financial media reports that Fitzpatrick and Ginna should shutdown for economic reasons. So this is not realistic and I would argue that the plan should plan for the rapid phase out nuclear power and its replacement should be with a clean renewable.

Fifth point. Electrified transportation.

Transportation needs to be much more developed. The Jacobson study goes on how an electrified transportation would look. It would include the vehicle trucks and cars as well electrified ails for interurban mass transit, interurban travel. We used those interurban travel between 1900 and 1940 that served upstate cities and towns very well. And then, of course, highspeed rail, which is being discussed.

As the last point, energy efficiency, the cheapest and fastest source of clean energy. This needs to be much more flushed out with specific targets and timelines. I did see one target of 20 percent demand reduction by 2025, which is close to that or the Jacobson study which implies 37 percent reduction by 2030. But it needs to be flushed out. And I understand that -- or there's been a study of renewable energy initiative that's not been made public. I would love to see the study, so will you release that? Thank you.

MR. RHODES: Thank you. Peter Swords. Thank you for coming back, sir.

AUDIENCE MEMBER: Thank you for keeping

the hearing open today so that people like me who work can still participate. I've lived in Syracuse for 40 years, raised a family here, own a home. I still own a home and have worked as an automechanic and social worker, so I have some practical experience in how energy can be used to save and can become something that we have some input into the decision about. Thirty years ago in my home we still had solar energy tax credit, we built a solar greenhouse. It's still operating and helping to heat my house today. And I'm very grateful to NYSERDA and to all the renewable energy policies that had led to that short window of time in 1984/1985 when we were able to build a greenhouse. I would love to see those kinds of supports for renewable energy come back. If you think of how many families would be able to use that, even in Syracuse, even those -- we have a month or so of very dark skies, very cold weather, it still works. There's enough sunny days that this greenhouse is really working for me. So I would recommend that if we have more support for not only passive solar and solar heating, but also efficiency, people

insulating houses, getting rids of waste. I think we could save a lot of energy. Of course as people have said the cheapest energy source is efficiency. Speaking of efficiency. At the same time I've been living here we built additional nuclear plants up north. We discovered the cost overrun safety probably with nuclear waste. We also discovered that nuclear is not carbon free. Nuclear plants use the uranium which is mined using huge bulldozers and alike that burn fossil fuels and it's enriched using all kinds of very, very high energy processes. I was one of nine people in Oswego several years ago when the NRC came to town to have a hearing about possibly building a fourth nuclear plant, I was one of nine people t that hearing of 300 people, the rest of the people were obviously pro-nuclear, I was there when Steve Pend, who is a physicist and professor spoke up and asked the panel if they have ever done a study to compare cost of energy produced by a nuclear power with energy saved by efficiencies. You know what they said, the NRC guys said we don't study efficiencies, we don't know. That was really

amazing to me that it a government energy agency would not have that kind of information. I think that's something that we should make sure we have so that we can determine whether we can actually practically plan the kind of thing that this energy plan is outlining, which I think are very good goals. Because climate change is not only about the sources and the demands and how we tailor the sources and supply to what we actually use it for. It's very silly to use electricity for heat, important to use solar. It's very silly to use -- to try to use nuclear power to boil water to produce energy. And you know what we are stuck with is a lot of cost. New York State can be a leader in smart energy use. I would like to see us use the skills and resources of ESF, the efficiencies, the studies that have already been done at the Center of excellence downtown. I would like to see that information get added to the New York State Energy Plan so we have something that will makes sense and can benefit people like me who can -- want to continue to live here in New York State. Thank you very much.

MR. RHODES: Thank you very much, sir. So now we're going to pause and see if we get more speakers and comments. We will reconvene at 5:45. And, of course, if there's a need, because of time of day, we'll reconvene sooner. But Mr. Swords and Mr. Hawkins, I don't know if you're going to stay for my final remarks, but thank you very much for coming. It really is an important part of the process. I know you made a great effort, twice in one case.

AUDIENCE MEMBER: We appreciate your work. And hope to see it on the website if we can't hear the final stuff today.

MR. RHODES: Thank you.

(A brief recess was taken.)

AUDIENCE MEMBER: Thank you for taking my comments. This is a Jean Kessner. I asked Renee Vogelsang to read them because I didn't have an opportunity to. I want very much to be heard. I'm Jean Kessner, Councilor-at-Large for the City of Syracuse. My committee is neighborhood preservation and environment in that role, but more importantly in the role of Elected Officials to Protect New York. EOPNY. That's a consortium of more than 800 locally

elected officials from every county in New York State who advocate on the behalf of the continuing moratorium on hydrofracking until and unless health studies prove that fracking is not harmful to human or environmental health. EOPNY will be filing longer comments separately within the deadline. But I'm here today to speak on behalf the organization and I am coordinator of that organization. Our view of the State Energy Plan, which in one word, is that we find it lacking. While setting forth and admirable goal of 80 percent reduction in greenhouse gasses from the 1990 levels by 2050, the plan lacks a strong roadmap for how to get there. It sets no benchmarks or clear steps. Inexplicably, the plan forecasts anemic growth in renewable sources of energy. Instead it actually promotes widespread expansion of natural gas. It actually describes natural gas as a clean fuel. Natural gas is a fossil fuel. Burning a fossil fuel contributes to climate change. Clean fuels are renewable, wind, hydro, solar. And according to this plan's own documentation, New York State more than doubled it's output on renewables between 1990 and

2012, renewable in wind and solar. And that's a far bigger gain than any other power source in that same time. And although there are some good initiatives in this plan relating to renewables, we need to be more specific and we need more significant commitments to expanding the roll of renewable.

Contrary to this, unfortunately the plan predicts that natural gas production in New York State will triple by 2030. That's intimating that New York's moratorium on fracking will be lifted. It indicated that production may well be even greater in this state if permitting difficulties are reduced. Permitting difficulties for hydrofracking are reduced.

Further, the plan promotes increased infrastructure for gas transmission and distribution, a misguided use of our state's resources and investments.

Fracking is not clean. A significant and rapidly growing body of science shows that fracking poisons water, air, land and it contributes to climate change. It releases methane, a potent greenhouse gas. Which brings

me to my next point. Just what are our goals here? What are we trying to do? Again, this plan reaffirms New York's goal of reducing total greenhouse gas emissions by 80 percent from the 1990 levels by 2050. Yet this plan only commits to measuring one greenhouse gas, carbon dioxide, before 2030. This ignores methane, which is 30 times -- 34 times more potent as a greenhouse gas over a hundred years and 86 times more so over 20 years. Significant amounts of methane are leaked during the gas drilling and fracking process and in the transportation of natural gas.

New York needs a plan that charts a course for the future, that sets aggressive targets for production of renewables and energy and for greater environment efficiencies economy wide. A plan that tightens building codes and ups standards on appliances and aggressively enforces those rules. We need to set our sights high and lead the nation away from its independence on fossil fuels. This will set us on a brighter and healthier plan for the future and it will create far more jobs than continued reliance on dirty fossil fuels. Thank you.

MR. RHODES: Thank you very much. And thank you for your persistence in coming.

AUDIENCE MEMBER: Thank you.

MR. RHODES: I don't want to say anything disparaging about this nice young woman, but it was great to hear it straight from you. She did her best job.

AUDIENCE MEMBER: Thank you. I care deeply about this. I have four grandchildren.

MR. RHODES: We'll pause until we get speakers.

Don Hughes is next.

AUDIENCE MEMBER: Thank you everyone in attendance. This is a woman that taught both of my kids math (indicating.) I'm Don Hughes. I have been a resident of New York State for all of my life pretty much, except a very brief stint in New Jersey which we don't want to talk about that. But I'm here on behalf of myself and the citizens of this great state and as a leader in the local chapter of the Sierra Club. I want to thank you for setting up these hearings, what have been all across the state. Particularly glad that this hearing extended into the after work hours, otherwise I would

not have been able to present today. I want to talk mainly -- I want to address the goals which are shown on Page 20 of the plan. It says New York envisions a flexible and clean energy system that empowers residential customers, businesses and communities to achieve the reliability and affordability they value. To achieve this, we'll focus on the five on the following five areas, okay. So far so good.

Goal number one. Goal number one is -- must be to address the climate change. Must be. Time is running out, gentlemen and ladies. We have maybe 20 years to change the curve. 2013 we hit two benchmarks. One was that we have put more carbon dioxide into the air than ever before and the other is that we've hit 400 parts per million. Scientists say that 350 is a number that we can live with. We are now 50 parts per million past that. We're careening off the cliff here. 450, that's when the scientists say we're hitting a danger zone. 600, we're over the cliff. We're going two parts per million per year. Do the math. Speaking of math. We must decrease our

reliance on fossil fuels. I recommend to you issue priority number one has got to be decrease our reliance on fossil fuels 50 percent -- and I'm sure you folks know the numbers better than I do -- 50 percent of our electricity comes from fossil fuels. We need to make it a hundred percent of our electricity from fossil fuels free sources. We need to move to renewables. I know there New York State has some wonderful incentive programs in place to encourage solar power, wind power. Which is great and we're seeing development along those lines, we're seeing wind farms upstate New York. The reports talk about the charge increase, but we have to do more. There's the -- this human condition, human psyche of (inaudible.) I plead guilty myself. I've got natural gas heating my house. I've got a car which consumes gasoline. We need an all out campaign to convince people to change. We've got to change and we have to change fast. I would like to have a world that my kids can look forward to living in. I hear from parents about how their children are not having children because they're scared. They're

scared. It doesn't look good. We've got more and more storms, Greenland is meting, the North Pole is disappearing and we'll be open water in a matter of a couple decades. World government is already preparing for that looking for oil, looking for new -- the new military landscape because of movement of ships.

MR. RHODES: Sir, I don't want to interrupt, but I will. I know we have a hard stop time at 7:00. We just had another speaker show up. I want to make you aware of that.

AUDIENCE MEMBER: Okay. Duly noted. I also want to recommend to you that goal number two should be that New York State is independent. In other words, that it is self-reliant for power. We don't import power, we make our own power. So let's not import power from Canada, let's not rely on importation from Ohio, let's do it ourselves. And of course that means renewables, wind, solar. We've got to push that as hard and as fast as possible.

Number three, resilient flexible power grid. Great, do it, I highly endorse it. Thank you for putting that there. Give

customers more control over the energy. Again, great goal, keep it.

Aligning energy innovation with market demand. Not sure what that means. But I would add that we have got to consider nuclear power as something that is going to go away. It is just too expensive. It's not a fossil fuel source but it's -- those plants are old and they're going to phase out. And so, again, we need to ramp up and put in more wind, more solar. Denmark, Germany, great examples. The fate of Fukushima has decided to turn up the crank and they are going full bore on installation of full vortex. Let's do it here in New York. Let's do it here. Thank you.

MR. RHODES: Thank you very much, sir.

You're on.

AUDIENCE MEMBER: All right. Thank you.

MR. RHODES: Erin Carr.

AUDIENCE MEMBER: Yes, sir. Thank you for this opportunity. I know it's been a long day, I'm sure for you, so I will try to keep it quick here. I'm a student ate ESF. I'm studying renewable energy. And I see through the studies that there's -- there's a way to do

this that will work. We can get ourselves out of fossil fuels. The energy plan that you have is not -- does not change business as usual. We're not providing a path to clean energy. Instead, we're investing in a dying resource base. Wind has an amazing potential here in New York. Let's get on board with innovative stuff, such as Texas. They have a slightly better wind resource space, they're maximizing its potential, we can do the same. Solar is also a viable resources here in New York. New York City is full of rooftops and skyscrapers that can effectively use solar where it is most extensive to various buildings that attach to it. Again, maximizing potential. Biomass is also a good option. While some of my environmental counterparts may disagree on this, it's up in the air I'm sure, there's a way to maximize this resource as well. Energy crops can be done on marginal farmland. And our forest and subculture practices have improved, so why -- we can imagine our forces in a sustainability manner. When biomass is used it combines heat and power systems. It can provide high efficiency, clean burning

boiler systems. Another way to look at energy comes from carbon sequestered in the growing and released in the burning. I understand this is not necessarily carbon neutral, but it's a carbon cost as well. It is still much better than mined resources. Mined resources, such as fracking or tar, are a clear case of selling those projects as jobs and energy to the US citizens. When in reality the objective is to restore. While there will be some benefits for the jobs created, they're actually temporary. This benefit will dry up over the subsequent one to two decades. That leaves our children and subsequent generations with no benefits from this type of projects. Our brothers, sisters, neighbors, children and grandchildren are the people we should be considering when we plan our energy future. The proposed plan relies on more natural gas infrastructure, especially to heat our homes. The only way to provide this fuel source is to import fracked gas or begin fracking in our backyards. This industry is very dangerous and can be easily compared to the gold boom in the 1800s. For any boom, there is consequential bust which

equals busted towns and broken communities that mining has consistently left behind. The destruction to the earth and water where extraction is happening is devastating to the local communities which are effected. The scar this leaves on our state is irreplaceable. The 10 to 20 years worth of productivity will take hundreds of years to superficially repair. And the affects of those fuels to our atmosphere could be the tipping point in climate change. We are hovering on dangerous ground.

The energy needed to construct the infrastructure and extract the resource coupled with the eventual burning of said resource will be felt in our climate change story. The money and investment potential is much better suited to invest in sustainable use of renewable technology. Renewable energy may cost as much in energy terms as fracking. The difference is that the jobs are sustainable. The destruction left behind is minimal and the communities affected will benefit and strengthen for generations to come as a result of the infrastructure.

Our society needs to change the way we

think. Band-Aids and quick fixes are very short sighted and do not address the root of the problems. Our fossil fuel resources have an important role to play in the transition to renewable energy. Sooner or later we will have to switch. Fossil fuels are limited. Let's use these fossil fuel resources that we have, the infrastructure here right now. Don't expand it anymore. Don't bring more in. Let's use this efficiently as possible in direct relation to growing renewable energy, not danger those resources in irreplaceable ways. It's time to make responsible decisions about our energy future. Decisions that consider where we stand as a society and decisions that positively affect the future of our children and foster our responsibility as a race to care for our mother earth. Thank you.

MR. RHODES: Thank you very much.

So if there are no further speakers? Thank you from all of us to ESF. And thank you on behalf of the State Energy Planning Board, Jared, myself and our two colleagues who managed to stay here through six of the hours, mike Snyder from the Department of State, James

Bays from Ag and Market. On behalf of all of us, we thank you very much, you the commenters, for your comments. You have made excellent points and given us much to think about. We have undertaken the development of the draft SEP with great seriousness and it's important that we hear comments and questions like yours as we move to a final state.

Please remember that written comments can be submitted on our website until April 30th, Energyplan -- one word -- dot.ny.gov. Thank you very much.

(Whereupon, the hearing was adjourned.)

C E R T I F I C A T E

I, LISA M. MIRANDA, a Court Reporter and Notary Public in and for the State of New York, DO HEREBY CERTIFY that the foregoing is a true and accurate transcript of my stenographic notes in the above-entitled matter.

Date: March 18, 2014.

Lisa M. Miranda

B

C

F

G

H

I

M

N

O

P

Q

R

S

U

V