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DRAFT 2009 NYS ENERGY PLAN

PUBLIC HEARING

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Date: September 24, 2009

Time: 4:00 p.m.

Location: Lecture Center 100
One Hawk Drive
New Paltz, New York

Before: Thomas Congdon, Chair
NYS Energy Planning Board

Robert Callender,
NYS Energy Research and
Development Authority

Judy Lee,
NYS Department of Public Service

William Little, NYS Department
of Environmental Conservation

Stanley Gee,
NYS Department of Health

Judith Enck,
Deputy Secretary for the Environment

MR. CONGDON: My name is Tom Congdon, the Chair of the New York State Energy Planning Board. I would like to welcome you all to our eighth public statement hearing on the draft State Energy Plan.

I would like to thank the other members of the planning board here with me today. At the far end is Bob Callender, Vice President of Programs at NYSERDA; Bill Little, from the Department of Environmental Conservation; Judy Enck, Assistant Secretary, Deputy Secretary for the Environment; Judy Lee, who is the Deputy Commissioner at the Public Service Commission, and I am Tom Congdon, again, I'm the Deputy Secretary for Energy and Chair of the State Energy Board.

For the past year and a half, the planning board has worked with staffs of 10 agencies and public authorities to develop the draft State Energy Plan.

The planning process commenced in April of 2008 when Governor Paterson issued Executive Order Number 2, which created the Planning Board and charged us with developing the draft plan.

On August 10th, the planning board released the draft plan on its website, www.nysenergyplan.com, and we commenced a 60 day written comment period and began the public hearing phase of developing our final

plan.

Written comments are due by October 19th and we will release the final plan by the end of the year.

The Plan's objectives are to ensure our energy systems are reliable for a 10-year planning forecast; to reduce greenhouse gas emissions; to stabilize energy costs and improve economic competitiveness in the State of New York; to reduce public health and environmental risks associated with energy systems; and to improve the state's energy security.

The plan modeled and considered various approaches to achieving these objectives and we have arrived at a number of strategies.

First and foremost, the plan identified energy efficiency is clearly a priority resource to meeting our multiple objectives.

Second, the plan seeks to develop in-state energy resources, largely renewable resources, and also in-state natural gas resources, in an environmentally responsible manner.

Third, the plan projects infrastructure needs both to support the clean energy technology of the future, and also, to ensure reliability.

Fourth, the plan identifies opportunities to capitalize on existing academic and research strengths in the state, and to facilitate connections between academia and industry to speed the rate of innovation in energy technologies.

The plan also identifies needs for clean energy workforce training and economic development strategies to help the existing energy businesses thrive in a carbon constrained economy.

Lastly, the plan recognizes that none of this can be fully achieved without working with other levels of government and communities to achieve our goals.

The public hearing today is an example of our desire to work with, and learn from, the community and stakeholders affected by energy decisions and policies.

This is one of nine public hearing sessions we are holding around the state to hear your comments, and our full hearing schedule is available on our website. The final hearing is Saturday in Utica.

My job here today is to gather information for the planning board to consider. Again, we are very appreciative of your attendance.

The process is very simple. Those who want to comment have been asked to sign in. Your name will

be called one at a time to speak. Please come to the microphone and speak directly into the mic.

A court reporter is here to prepare a verbatim transcript, and it is very important that there be only one speaker at a time. Please make an effort to speak clearly and slowly. It is also very important that those in attendance be courteous to the speakers so his or her comments can be transcribed accurately.

If you happen to have a written version of your comments, please provide one to the court reporter and she can use that to further ensure that your comments are transcribed accurately.

All speakers are asked to focus on issues that pertain to the draft energy plan. Your comments should be as succinct as possible so that we can hear from as many of you as possible.

To that end, we have set a five-minute deadline, and our colleague, John, is here with a timer, and that's going to beep after five minutes is up, and when you hear the beep if you can please wrap up your comments, that would be greatly appreciated.

Formal presentations, like Power Point, aren't allowed. Those who want to comment but do not want to speak publicly, or do not get a chance to do so,

can also submit written comments via the State Energy Plan website. If you decide to submit written comments, please do so as soon as possible so they can be carefully considered.

All public comments, whether stated at a hearing like this one or sent to our website, will be reported to the Energy Planning Board for its consideration. They all count equally regardless of how they were received.

So, before I call the first speaker, does anyone have any questions about the process?

Excellent, so, let us begin. Our first speaker today is Tom West from the West Law Firm.

MR. WEST: Thank you very much, Tom. I submitted full comments to the court reporter and I have got an abridged version to read today. We believe some of these messages are important enough to deliver personally.

I'm here today on behalf of Chesapeake Energy Corporation to talk about the economic impact that natural gas exploration can have, and has had, on states and communities across the United States, just like New York, and more particularly, the Southern Tier.

But before we get to the Southern Tier, let's

take a wider perspective and look at this nation's energy and environmental landscape. We enjoy a quality of life in this country that involves convenience, comfort and prosperity, and energy is a primary ingredient.

But concerns about carbon emissions, global warming, and scarce resources mean that lawmakers must strike a balance between affordably protecting our way of life and sensibly protecting our environment.

Natural gas is the answer. It is clean. It is the lightest hydrocarbon on the planet, emitting roughly half the carbon emissions of coal.

It is abundant. Record new supplies of natural gas have recently been discovered and technology has unlocked the production of unconventional shale gas.

It is affordable. Natural gas power plants are faster and less costly to build than coal fired power plants.

And it's American. It's found right here in New York State. The result is a treasure chest of new natural gas resources in North America, which can reshape the way we address energy and climate challenges in this country.

For those of you who do not know, Chesapeake

Energy Corporation is one of the largest producers of clean burning natural gas in the country. Chesapeake is the largest leasehold owner in the Marcellus shale, which stretches from New York to West Virginia, as well as the number one developer of shale gas in America.

In the State of New York alone, Chesapeake has an estimated one million acres under lease for Marcellus shale and other prospective formations. The Marcellus shale formation may well prove to be one of the largest deposits of natural gas in the nation's history. Indeed, Penn State University has recently found that the Marcellus shale region of the Appalachians could yield seven times as much natural gas as originally estimated.

Approximately a yield of up to as much as 500 trillion cubic feet of natural gas, which in turn, would mean an ability to meet the entire nation's natural gas need for approximately 14 years.

Now I would like to turn to economic opportunities presented by Marcellus shale. Shale exploration is happening across the country. A recent study by Navigant, an independent engineering and consulting firm, reports that shale plays, such as the Marcellus shale, are prolific enough to significantly

reduce our country's reliance on foreign oil, reduce gasoline prices and reduce pollution caused by automobiles by up to 50 percent.

As a result, New York is now uniquely positioned to help both America and itself reduce our reliance on foreign energy and stimulate the state's economy at the same time. While there is currently no Marcellus shale development in New York due to regulatory constraints, we can look to other Marcellus shale development in Pennsylvania as a model for future investment.

An exhaustive study completed in July at Penn State University provides us with specific economic impacts that arise from shale gas exploration and production.

First, let's look at job creation. Today and in the years to come New York, and as the nation fights to stay out of recession, there is no substitute for an industry that will create jobs. This industry will create thousands of jobs.

While most domestic industries have seen jobs disappear with technological advancements, the natural gas industry has proven to do quite the opposite. As technology has improved, and allowed us to explore with

a reduced environmental footprint, more American jobs have been created.

Chesapeake expects the same in New York, where we can do this while protecting the environment, typically the fresh water sources. Economic prosperity will create many good jobs in a region of the state that is today highly economically challenged.

The natural gas industry needs every level of employment from good, traditional blue collar jobs, such as well tenders and drillers; to high tech jobs, such as seismic analysts, geographic information system analysts, and geophysicists. And the industry is one that benefits a multitude of Americans and American industries right here from American soil.

The current and projected experience in Pennsylvania proves this. According to Penn State's study in 2009, 48,000 jobs will be created in Pennsylvania and 175,000 jobs by the year 2020.

I know my time is up so I will just sum up. We have submitted written comments.

I would just like to reiterate that natural gas is abundant, clean and affordable and is right here in New York State. And we believe that the Marcellus shale development in New York State can and will have a

dramatic impact on New York's energy future.

Thank you.

MR. CONGDON: Thank you, Mr. West.

We are pleased to be joined by Assemblyman Kevin Cahill. We are also joined by one of our board members, Stanley Gee, Acting Commissioner of the Department of Transportation.

Our next speaker is Assemblyman Kevin Cahill, the Chair of the Energy Committee in the Assembly, and he's been a terrific partner in advancing the clean energy in the State. It's been a tremendously productive legislative session, that's at least for key initiatives that help along the energy plan, including making the energy planning process statutory.

So, thank you very much for being here.

ASSSEMBLYMAN CAHILL: Thank you very much, Tom.

Having just come back from two days of hearings in Western New York, and chiding every witness not to read from their notes, you will be pleased to note that my notes have not yet arrived so I can't read from them. I will be submitting to you written comments to back up what I'm here to say today.

I just came, really, to extend a few very

general words. My written comments expand upon them and we are prepared in the future to provide more detailed information about it.

First and foremost, I would like to thank you and the members of the panel, the agencies who have gotten together to put the draft plan together. It is a remarkable step by New York. It puts us in the forefront of all 50 states in energy planning, and it provides the framework and the foundation for what the Governor signed last week, our statutory energy planning process.

That process will provide a context for making all energy decisions into New York State into the foreseeable future. It will give us a blueprint to work from and will allow us to make decisions in an intelligent, contextual way, in a way that no other states and many, many nations, most nations save three, are not able to do.

There are many important aspects to the plan that's been proposed as the draft. There are many points that we would like to perhaps ask you to pay more attention to in the course of the next several weeks as you work your way toward a final plan.

But I would be remiss if I did not make this

the emphasis of my statement. My thanks and congratulations to the panel and particularly for you, Tom Congdon, as the Deputy Secretary to the Governor, for advancing so many important energy initiatives this year, and energy planning being foremost among them.

Not only did you advance this plan but you were critical in seeing that the legislation made it to the Governor's desk and secured his signature. So, thank you very much.

Now to the other part. I brought my own notes, but Connor, who should be walking in at any minute, has the actual notes.

It's important to note also that many of the recommendations in the draft proposal cover ground that's already been plowed by the State of New York. We have already gotten a good start on energy planning. This isn't just a document that says, let's do this in the future and making it very esoteric. It actually takes advantage of some of the many things that were done already.

For example, we have put our Green Jobs/Green NY proposal; the NYPA efficiency financing proposal; OGS alternative fuel procurement for green buildings; net metering; transmission intervenor funds;

universal/industrial partnerships, and green workforce development.

On those latter two points let me plug a commercial here for the Hudson Valley and Solar Energy Consortium for all the good work they are trying to do to make the Hudson Valley a hub of solar research and development and also manufacturing and distribution.

The assistance of the State of New York is critical to that effort for us to transform our local economy, and we believe it's critical for the transformation of our local economy to transform the larger economy of New York State and make us a leader.

Some very specific things. I know John is keeping time here so I'm going to be very, very brief.

I would like to see the draft plan include better guidelines and timelines for the implementation for the recommendations. I know that they will be included in the final plan. I wish that there was an opportunity for public input on those guidelines because I think the public would have a great deal to say about them.

Energy efficiency and distributed generation, we have many programs in New York State that contribute to those two goals. The SBC, the RPS, the EEPS and RGGI

should all be made permanent, they should be made statutory, and they should be brought on budget.

The innovative energy efficiency mechanisms in Green Jobs/Green NY can really go a long, long way, and we urge this panel to support and get the signature of the Governor on that law. I know with the Governor's great help and partnership in developing that legislation, the odds are very good that he will do so.

I think we have to improve our net metering laws, but we have a good, strong foundation in that regard. And I thank you once again for the Governor's energy apparatus and all that you are doing to make sure that we can come to some sort of way where we can make our net metering laws the best and the most useful in the nation. Thank you very much.

Energy planning codes, energy codes. We are working very closely with the Governor's office to expand our energy code, and we think that it's important that we do so as soon as possible and that we not rest once we do so. That we take advantage of the fact that this is an evolving area and we continue to try to improve upon the energy code in the State of New York.

We must do so in such a way that does not add to the cost of building or cost to consumers in the

State of New York unnecessarily and in a way that doesn't allow them to recover those costs.

The last speaker, speaking of Marcellus shale, I think it was brave and very important that you included Marcellus shale in the draft plan. In fact, Marcellus shale is one of the lynchpins to energy independence for New York.

And I think we need energy independence in New York and we are positioned better than any state in the union to achieve energy independence, partially because of this plan, partially because of the presence of Marcellus shale gas, and partially because of our forward leadership in the area of renewable energy.

We use -- the New York State consumers enjoy three times the national average of renewable energy. We are the most energy efficient people in the nation, and we could be more so. I think the idea of having a goal of 45 by 15 is laudable, but I think it could also be included in a larger goal of creating energy independence.

Not only will that give us leadership in the nation, but it will also provide for the security of this state; and in the event of a situation like we faced last year, insulate us from what happened across

this country when energy spiked across the world.

We can become energy independent. Marcellus shale is critical to that. We should also remember that the environmentally sound extraction of natural gas in New York State is something that we would all support and, in fact, insist upon.

And I would urge those that would oppose further discussion of this to remember that we are using a significant amount of natural gas -- 95 percent of our natural gas comes from other states where it is not necessarily extracted in an environmentally sound way.

We, as New Yorkers, should not leave our environmental bona fides at the state line. We have an obligation to do this and we will do it in a responsible way.

I know that the DEC has almost completed the regulations and the review of the Marcellus shale extraction, and upon the completion of that review I am confident that we will be able to move forward in that regard and bring us one step closer to energy independence.

Just touching on the other subjects very quickly, because I heard John's preliminary beeper go off.

Transmission and distribution, very important issue is the distribution system in New York State will determine the future of renewable energy and we should keep that in mind in our energy planning goal. Our energy planning laws should reflect that and our energy plan should reflect that.

Nuclear is a very significant issue. I would like to have it expanded upon in my remarks in written comments about nuclear. In brief, we must be very careful in proceeding with the movement toward returning to nuclear technology.

Cost, environmental health, safety, long term storage, a number of issues are not resolved now and have not been resolved since I sat in this very room taking courses on that subject 32 years ago. It's a long road to go and we should make sure that we are very cautious in that regard.

And the same goes for carbon capture and sequestration. That is not a science that is perfected to the point where we should be investing dollars that could be better used for such things as carbon reduction in other areas, and better used for renewable and alternative energy sources.

University/industrial partnerships, I already

discussed. Environmental justice, the emphasis in the plan is very important, and I think these policies are long overdue in New York State.

One other critical area is transportation and smart growth initiatives. What makes us the most energy efficient state in the nation is not that we are so good and frugal about turning off the lights when we leave the room, but that we have the best mass transit system that serves half the residents in New York State; that the largest urban center in New York State was fairly well planned from the start, and we must return to that sort of thinking and return to the pre-Robert Moses thinking of creating cities and villages, and creating smart growth patterns across New York State and then creating transportation systems that link those communities together, so that we are once again one great New York State.

If we do that and this plan plays a role in that, then we will all be able to pat ourselves on the back and tell our grandchildren that we participated in making us, once again, the Empire State for the 21st century.

So, thank you very much.

MR. CONGDON: Thank you very much.

Our next speaker is Ron Kamen from Earthkind Energy.

MR. KAMEN: Thanks, Tom, and thank all of you. At the end of a long process, I want to congratulate you all on a tremendous achievement. I know how much time, effort and energy you guys put into this. It was pretty incredible.

My name is Ron Kamen. I am Senior Vice President of Earthkind Solar, the state's leading solar thermal technology supplier who, with our joint venture partner, now have 40,000 solar systems installed worldwide.

I'm also the President of New York Solar Energy Industries Association, NYSEIA, which has 191 members across the state and we are working to build a solar economy.

And as per my remarks in Albany, I won't repeat or read this and I'll leave my formal statements, but first, excellent job. You guys basically touched on everything. It's pretty amazing. In my 30 some odd years involved with state government I don't believe I've ever seen a more dedicated group of individuals working together as public servants to actually put in place public policies that I believe can set the stage

for the next century.

Looking at the next century and looking first back at the last century, I just do want to recall again that 19 percent of our renewable energy goal right now is being met by hydro. And that was investment last century that the taxpayers and consumers of New York State made to own long term renewable energy generation.

The cheapest source of power in the state is what power for jobs provides, it's 19 percent of the first 25 percent goal, 30 percent of our renewable energy goal is, and a great benefit that is, as every other price went up, that hydropower provides a fixed price energy resource that never increases. And we own it.

That's one of the things that I believe the state needs to take a look at as we go forward is how we as taxpayers and consumers can own these resources and gain those long term benefits. While it costs us more up front, in the long term that's where we are going to see the tremendous opportunities and tremendous savings that will occur. As oil, gas and other sources of energy continue to rise, these fixed priced renewable energy resources stay here and will have long term benefits and help as well with the environmental.

In terms of the plan, you guys have heard me talk before about thermal. More than half the energy in the state is used to provide heat and hot water. In New York City, the densest concentration of electric power in the world, still the majority of energy in buildings in New York City is for heat and hot water. When you get outside of New York City the thermal component becomes even larger.

In all the plans, in all the proposals, we always focus in on electricity for a lot of different reasons, but clearly, thermal provides a clearer path towards energy independence, towards reducing carbon emissions, towards price competitive supply, and towards customers sited and on site sources of energy. That's one we need to focus on.

We urge the state to put forth an aggressive goal of 2000 megawatts of solar electric PV by 2020. We think it's achievable. We think that over the next ten years solar electric PV will achieve grid parity. We need to have a unified plan about how to get there and how to achieve those goals.

When you look at nuclear and the costs that have gone into nuclear, and compare that to the cost of, even today, providing solar electricity, an equal amount

of solar electricity is clearly an economic benefit. While some look at it as costly, in the long term it's a tremendous benefit to the state.

And of course, the same is even more true of solar thermal technologies, which are four times more cost effective currently than solar electric technologies, and they are an underutilized resource.

In addition, as you guys look to set your goals and set standards that we believe at this turn of the millennium is setting the opportunity for the next century, our ultimate goal really needs to be net zero energy buildings.

One of the leading examples here in the Hudson Valley -- and I think you'll hear from Jeff Irish, Hudson Valley Clean Energy -- is where a commercial office building has a combined geothermal, solar thermal, solar electric system in an energy efficient building that has net zero energy.

It's here. It's now. It's doable. It's achievable. And we can all have it if we decide that's our goal and that's what we want to achieve.

So, I guess the four basic things I want to put forth is when we look around the world we see Germany as a shining example. Less solar resource than

New York State, equal sun to Juneau, Alaska, 25 percent less solar than the US, and New York State, and yet 200,000 solar hot water systems, massive amounts of solar electric systems, over a gigawatt a year. Not two gigawatts by 2020, a gigawatt a year installed capacity.

We would urge you to learn from the hydro example, capture the fuel, fixed price benefits, put in an aggressive PV, 2000 megawatts by 2020, solar thermal, 2000 megawatts by 2015. Market, education, transformation to have the public stand and embrace these technologies, and put forth a very clear long term goal of net zero.

Thank you.

MR. CONGDON: Our next speaker is Jeff Irish from Hudson Valley Clean Energy, Inc.

MR. IRISH: Good afternoon. My name is Jeff Irish. I'm the President and founder of Hudson Valley Clean Energy. We are an engineering design and installation firm for solar electric, solar hot water and geothermal systems operating between New York City and Albany.

I would like to congratulate you, Tom, and the rest of the board, on your draft energy plan. I think it's detailed, thoughtful and all encompassing.

Since I have only five minutes or less than that left I'll get to the point. I think it is deficient and light on its mention of potential for solar PV. In particular, I think it's what I would call static in its analysis. In particular, it's missing the point that the costs of solar PV are declining rapidly and will continue to decline rapidly.

Solar PV is, I would guess, is the only form of energy which is coming down in cost and that will continue to come down in cost very, very rapidly. I would say it's analogous to what I saw as a young engineer watching the personal computer industry emerge and grow; watching the cost of memory chips and other forms of semiconductors drop. It's similar to what we saw in cell phones and their costs drop in performance and see the same things.

So, I think that the plan should acknowledge that. In particular, it should encourage an extremely fast ramp up of design installation capability of solar PV in the State of New York; otherwise, the state will absolutely miss the boat.

Just to give you numbers, which I think I could do as an insider to the industry. Last year, 2008, the unsubsidized cost of PV was about $0.30 per

kilowatt hour over the 25 year warranty period of solar modules. That's without any state or federal subsidy, $.30 a kilowatt hour. Today, that is around $.20 to $0.22 a kilowatt hour.

All industry forecasts, given the supply demand of silicon solar modules, by 2011 will be down into $.15, $.16 per kilowatt hour range. And there's the new technologies that are coming on board -- thin film, organic PV and other technologies -- which will probably be commercializing. If you apply three or four years out you are going to see costs come down to around $.10 or less per kilowatt hour.

We are also seeing that happen not only from the cost of the modules themselves coming down, but improvements in labor productivity and inverter productivity and system design. So, there's multiple forces that are driving down the cost of PV.

What that means is that I think that within about three or four years, as soon as that, we will not need state support for PV. I think the cost will be down. I think the cost of alternative electricity will be up high enough it will be close to a no brainer to install PV on your home, on your business, whatever.

What we need in the State Energy Plan is

support for an aggressive ramp up in the capability of the work force in the state to design and deploy this technology. It is a home grown, local industry. It cannot be outsourced with the installation of these symptoms. We should support it here.

In particular, we have to fix net metering, but I think we already know that because we've been talking about that, but we have a thing coming up called the RPS. I think it's an opportunity in the RPS to have a dramatic shift from the main tier to the customer sited tier in order to rapidly deploy as much need as possible; create the demand for systems, which will create demand for trained labor; and help us create the work force so that three or four years out we don't need a state subsidy or incentives. The industry will be ready to deploy in huge volumes.

The nice goal that's being articulated by many people is to have an installed base of 2000 megawatts by the year 2020. I think that's absolutely doable. I think that should be articulated in the energy plan as well.

So, my conclusions are to ramp faster. There is an end game here. Many people in the state, including commissioners of DPS and people from NYSERDA,

funding solar is not something that's going to have to continue forever. I think we have got about three or four years left that we need to do that and then we won't need to do that anymore.

Since I don't think the buzzer's gone off, I will follow up on the zero net energy building. Our zero net energy building, which Ron Kamen mentioned, by the way, costs less to produce and operate than a conventional building. That's with today's technology.

What that means is if you put those extra costs to make a building zero net energy into the mortgage, the incremental mortgage payment is less than what you pay for the energy in this place today.

Thank you.

MR. CONGDON: I had a brief follow up question.

On the ramp up over the next three to four years, if we are going to see a point in time within four years when there won't be any state subsidy required, you said for solar system installations, why would the government subsidize that particular technology now when there are other renewable technologies that can be procured at much less cost?

And if the future is so bright for solar,

then wouldn't it make sense to wait until such time as costs come down significantly to do that?

MR. IRISH: I think if you do that then three or four years from now you will still have an infantile industry in the state which is not ready to exploit the cost position that the product is in.

I think what has happened in the last few years is NYSERDA, with help from DPS and others, has done a wonderful job starting to build an industry of trained, professional designers and installers, that are capable of doing safe high quality work.

And they started recently in the last couple years to ration down incentives as the cost of PV has come down. What I am asking is for that to continue, but with a heavier funding level over the next three or four years, so that instead of having 130 eligible PV installers, as we have right now, we can have 2000 in three or four years.

That needs to be in place. And those jobs and those skilled people need to be in place so that they can rapidly design and install this technology three or four years out. Otherwise, we will be struggling to do that while the technology is already there. It takes time to create a trained labor force.

MR. CONGDON: Thank you.

Our next speaker is Patrick Moore, Greenspirit.

MR. MOORE: Good afternoon. Thanks for the opportunity to present to you. My name is Dr. Patrick Moore. I began my career as co-founder and 15 year leader of Greenpeace back in the '70s and '80s. I have nearly 40 years of experience in the international environmental field and dedicated my entire career to the environment and sustainability.

Additionally, in this context, I serve as an advisor to New York Affordable Reliable Electricity Alliance, NY AREA for short, working with business, labor, environmental communities and citizens of New York State to develop an energy strategy for New York.

And I have reviewed the Governor's proposed plan. I have to say that we agree with virtually all of it. It's very well organized. It's been a long time since there was anything approaching a plan for energy for New York State. And so it's good to see that this has been addressed so thoroughly.

In particular, the green jobs creation, energy conservation and efficiency, and renewable energy, such as biomass, solar thermal, and, from my

point of view in particular, geothermal heat pumps, which are the heart of efforts to make buildings renewable and to remove fossil fuels from the need and the infrastructure. It's the key technology, along with solar hot water.

This will definitely reap benefits for New York's natural environment down the road. One exception that we are concerned about in this proposal, of course, is the statement in the plan that the plan wishes to see the Indian Point nuclear reactor shut down. In other words, its license not to be renewed.

My support for Indian Point is based on an extensive knowledge of science and the environment. And, along with a lot of other environmentalists, many years ago I also was opposed to nuclear power. I think we got caught up in the anti-nuclear movement concern for nuclear war. We were told during the Cold War we were all going to be fried.

We concluded, incorrectly, that everything nuclear was evil. There are, in fact, beneficial uses of nuclear technology, one of which is nuclear medicine. The other of which is nuclear energy. There is no doubt, for example, that between the two of them, hydroelectric and nuclear, produce over half of New

York's electricity without fossil fuel.

This is why New York is the third lowest CO2 per capita emitter in the country is because of the benefits of nuclear and hydro. Nuclear itself produces over half of the clean energy in the state at the present time. At a national level, nuclear energy produces 75 percent of the clean energy in the United States. So, already, nuclear energy is playing the largest role in reducing what would otherwise be a need for base load fossil fuel electricity, coal or gas, of any technology that exists to date.

In particular, the Indian Point reactors produce over 90 percent of the clean energy in downstate New York. Shutting down Indian Point would basically rip the heart out of clean energy where most of the people in this state live and breathe the air. And for why? We don't really understand.

We do see, though, there are five objectives to the Governor's plan. To maintain reliability. Shutting down Indian Point would go against that.

Reduce greenhouse gas emissions. By the report's own admission shutting down Indian Point would increase greenhouse gas emissions with at least 700 megawatts of new gas.

Stabilize energy cost. By its own admission, the plan says it would increase costs of electricity to shut down Indian Point.

Reduce public health and environmental risks. Shutting down Indian Point means dirtier air, increasing risk to public health.

And improving energy independence. It's hard for me to see how shutting down a domestic, 2000 megawatt clean base load power source would do anything but reduce energy independence.

Part of the success of the Regional Greenhouse Gas Initiative, from New York's point of view, is the Indian Point and other nuclear plants and the hydro plants in this state. It's possible for New York to work successfully in this plan as a result. Shutting down Indian Point jeopardizes the ability of New York State -- would jeopardize the ability of New York State to comply with this.

The reasons given -- to conclude -- the reasons given in the report for favoring shutting down Indian Point are safety and environment. On the safety front, you probably know that the Nuclear Regulatory Commission has already passed Indian Point on a safety perspective. In other words, Indian Point nuclear

reactor is safe compared to the 103 nuclear reactors in the United States, and there is absolutely no reason stated by the NRC to consider Indian Point as a safety problem.

On the environmental front, the only thing mentioned in the draft energy plan is the impact on the Hudson River. Everyone who works in energy knows that thermal plants, such as nuclear, coal and gas plants, that discharge slightly warmer water back into the receiving body, that this enhances aquatic life in the area of the discharge.

Everyone knows that. Fishermen know it. Biologists know it. Nuclear plant operators know it. There is no evidence of damage being caused to fish stocks. As a matter of fact, since the Indian Point reactor was constructed, the health of the Hudson River has done nothing but improve the health of its aquatic life.

And even Riverkeeper and Bobby Kennedy, Jr. himself have stated that publicly, that the Hudson River is the best fished river north of the equator on the East Coast in terms of the stocks of fish that are in it to date, because it has been rehabilitated from when the chemicals were being dumped in it during the '60s and

'70s when we weren't looking after that.

The environmental movement can take credit for having cleaned up the Hudson River, but it's certainly not Indian Point that is causing any damage to fish stocks there, which are generally very healthy.

Just in terms of the safety of nuclear energy for people, the Columbia University study published in 2004 of 53,000 nuclear plant workers at 16 different sites in the United States showed that they live longer, have lower rates of cancer and less disease than their counterparts in the general population.

In other words, it is safer to work inside a nuclear plant every day than it is to be a member of the general public. Seems to me that that puts to rest much of the concern about safety of nuclear power in the United States. In fact, it is one of the safest industries in the US and the world today.

So, in conclusion, I recognize the work of the panel, the planning board, the Governor, in producing an excellent piece of work which will help guide the future of energy development in New York State, but with that one exception: Shutting down over 90 percent of the clean energy in downstate New York, where most of the people live and breathe the air every

day, doesn't make any sense to us at all.

Thank you very much.

MR. CONGDON: Thank you.

Our next speaker is Al Samuels from Rockland Business Association.

MR. SAMUELS: Good evening. My name is Al Samuels, I'm President and CEO of the Rockland Business Association. We are an organization of 1,069 businesses in Rockland, Westchester and Orange Counties. I thank you for the opportunity to come here tonight, especially before an old friend. Just so you folks know, Tom and I wrote legislation a long time ago.

The issues of energy and environment are very important issues for us here in Rockland. We have embraced a forward looking agenda that supports sustainability at every level. Our Green Council helps REA members realize the bottom line benefits of going green and empowers members to find a sustainable solution that is best suited for their business.

We host an annual green seminar devoted to furthering the development of the new generation of green collar jobs.

In reviewing the plan that you put forth in August, there are a number of points on which we

absolutely agree. First and foremost, we are so gratified to see that the proposal includes new support for a new power plant siting law modeled on the expired Article X. Enactment of such a proposal would help expedite new generating facility and construction throughout the state, and would be particularly helpful in North Rockland, where I reside. Not only that we lost Lovett facility, but we never realized the construction of Bowline 3.

Secondly, the decision to tap the vast resources of the Marcellus shale will not only facilitate new economic activity, but also result in the development of new base load energy produced in New York for New Yorkers. More supply will bring about lower energy costs for consumers, while moving our state further towards energy independence.

There are a number of other points on which we also agree with. These include: Utilizing right of way for new transmission; developing a new Smart Grid; supporting new renewable energy; R&D; encouraging greater energy efficiency and conservation.

These will result in a more reliable and stable energy supply, will create new jobs and will facilitate new investment throughout the state.

There are, however, a number of areas of concern. For the members of the Rockland Business Association, they have made it clear that the issue of utility costs remains one of the most important issues in growing their business and keeping their business in New York. It's a pressing issue for the business community.

We are a border county with New Jersey. We have a unique perspective on the need to embrace the business friendly environment. Just yesterday we had the privilege of meeting with Dennis Mullen, the new Chairman of Empire State Development, and we made the point that we must have retention initiatives and incentives to match the attraction initiatives and incentives of states like New Jersey. Lower energy costs will fulfill that, as well as being an attraction incentive.

That's why we believe that the final plan must provide a mechanism to lower utility costs. Energy efficiency and conservation alone we fear will not do this. It will help. Over a period of time we will gain more and more appreciation as a people for conservation but, unfortunately, it's not going to deliver to us in the immediate near future the savings that we need.

We believe property tax reform, elimination of the gross receipts tax, reduction of utility fees are also needed, and we do implore you to make these part of your final plan.

Secondly, the August plan places the need for more reliable base load power secondary to the need for greater energy efficiency. As I have just indicated, we think that needs to be reversed.

The Independent System Operator forecast that energy demand will rise for New York even with conservation and efficiencies factored in, and renewables, simply cannot make up for the loss of base load power. We ask that you reevaluate this focus in the composition of your final plan.

Thirdly, there is the issue of Indian Point. Your plan calls for the plant's closure and we do strongly disagree. From the business standpoint, shutting down Indian Point's 2000 megawatts of safe, clean power would have a serious impact on our entire regional economy.

Our colleagues at the Business Council of Westchester did a study not too long ago and found it would impact more than 10,000 jobs. It would foster a negative economic impact on the neighborhood of $1

billion.

Indian Point is even more than an economic engine. More than half of our state's electricity is produced from virtually emissions free resources, such as Indian Point. It's a key reason why New Yorkers achieved the distinction of holding the third lowest per capita carbon emissions rate in the nation, and why our state is able to lead the way in capping greenhouse gas emission through the regional greenhouse gas initiative.

It would take a minimum of four fossil fuel burning facilities to make up for Indian Point's base load power. Frankly, we can't see how Indian Point would be favorable to four fossil fuel burning plants. We just don't think that's the right way to go for the environment.

The plan also cites safety concerns regarding Indian Point. As a North Rockland resident, I live in Garnerville, I live within the ten mile radius of Indian Point. And it is reassuring to us that the federal government continues to keep safety concerns paramount in their decision making process, and that the NRC's independent assessment stated that Indian Point can safely operate for another 20 years. I think that that actually rebuts the case against the facility which is

made in the proposed state energy plan.

In closing, I would like to offer some praise: To the Governor, to an old friend Tom Congdon, to the rest of the members of the Energy Planning Board. You have performed a valuable service and you kept an open line to the public. We do appreciate it. You have acted in a transparent and dignified manner. And for that, the members of the Rockland Business Association thank you.

MR. CONGDON: Thank you very much.

Our next speaker is Robert Freeston, New York Solar Energy Society.

I would like to remind our speakers that the beeping sound you hear behind you means that your five minutes is up, and when you hear that beep if you could please wrap up your comments so that we can make sure everyone gets a chance to deliver their statement. Thank you.

MR. FREESTON: Thank you. I left a piece for the members of the group. It was developed for Congress but a great deal of it is relevant.

First, I would like to agree with Jeff English who spoke before about adding the energy profile to the mortgage system. I'm with New York Solar Energy

Society. We're a state chapter of the American Solar Energy Society. It's 55 years old and many of its members were pioneers in solar.

So, first, we support the Vote Solar plan for 2000 megawatts of PV by 2020. Needs about $.82 per month support per residential electrical customer. With the legislature's long delay in passing commercial net metering, we have fallen out of the top five in installations and out of the top ten per capita.

We recommend the feed in tariff, unlike 21 European countries, high at first, step down over time to zero.

Specifically from the plan, the efficiency section, page five, achievable by 2015, end use space heating projected reductions of one percent residential, one percent commercial, zero industrial. Water heating, one percent commercial, zero industrial. Outdoor lighting, one percent residential, one percent commercial, zero industrial.

We think we can push way beyond these percents. Retrofits with geothermal and now residential and commercial air source heat pumps have had big impacts. Europe has commercial equipment far beyond what is available in the United States.

GE is just now opening a factory to produce heat pump derived hot water from ambient air. LEDs are applicable with all lighting situations with 80 to 90 percent reduction in power.

Under natural gas, "Few new or innovative uses for natural gas and few envision." This is contradicted elsewhere in the plan, and rightfully so.

Gas based cogeneration has huge potential via conventional efforts, microturbines and fuel cells. Efficiency is doubled. We think market speculation has to be addressed by government.

Back to efficiency. New initiatives to overcome financial barriers. First, the power purchase agreement model is becoming much more common. Up front financing is contracted as payback over time from power production.

Second, Babylon, Long Island has a model tax base operation. Municipality issues bonds for efficiency improvements, residences are upgraded and the bonds are paid via tax attachment to the building. The homeowner is cash positive via energy savings.

We would like to see a requirement for energy audit on sale of a building. This is a time to upgrade. This is already done in Britain.

Under renewables. Geothermal and Act Depth in Western New York, more than a hundred degrees Farenheit source of heating and commercial process heat, not electricity.

We urge you to look at the purecycle equipment of United Technologies that use a closed cycle steam system to create power in this temperature range. This is a commercial equipment used in the western United States.

We would like power company incentives to retrofit ground source heat pumps to buildings with existing central air conditioning. This would reduce summer loads by 40 percent while increasing winter loads to the advantage of the power companies.

We urge you to require that sub megawatt hydro be allowed on the grid. It cannot be excluded. Perhaps the limit could be 100 kw. We note the addition of utility scale solar thermal by FPL in Florida as a supplement to existing generation station. It's much less efficient than in the desert but also much less expensive because the existing infrastructure is in place. We support the use of fly wheel storage and regulation as proposed for Stephentown.

Overall, the plan is very comprehensive and

diverse. We feel solar needs more emphasis as it approaches peak grid parity.

Thank you.

MR. CONGDON: Thank you very much.

Our next speaker is Joe Karas from Empire State Regional Council of Carpenters.

MR. KARAS: Good evening. My name is Joseph Karas and I am a council representative for local 11 of the Empire State Region Council of Carpenters. I want to thank you for the opportunity to share our views on the Governor's proposed energy plan.

The proposal as written undoubtedly offers progress towards our shared goals of energy efficiency and energy conservation. In fact, the draft report specifically lists these two goals as principal focus of the plan. There are clearly progressive goals, certainly befitting the community we now stand in today.

Additionally, there are a number of additional proposals contained in the proposal plan that offer us hope. Support for a new modernized grid is long overdue. Further investment in alternative energy research and development, particularly towards storage, holds great promise for the state's economy.

Additionally, I applaud your clear,

unequivocal support for a new power plant siting law. We need new power and we must fortify our existing base load supply. This new law should be given priority status during the next legislative session.

I would also like to point out where we differ. The Empire State Regional Council of Carpenters and its members support the continued operation of Indian Point. This has been publicly stated in the past and I'm here to reaffirm our support presently.

The facility produces 2000 megawatts of affordable, reliable base load power and is directly responsible for millions of dollars in direct economic impact for our region. It's also responsible for hundreds of well paying union jobs, which is a matter that is close to my heart.

From an environment standpoint, Indian Point produces its electricity in an emission free manner. This is good for our air and our water and lowers our rates of child asthma and other ailments that impact our communities.

But from a personal standpoint, I ask you to consider the fact that I live in Buchanan, home to Indian Point, and have seen the progress made on the Hudson River, a fact that I take great pride in. I've

been a resident for 18 years in Buchanan.

I see the fishermen along the shores. I am a fisherman. I see them in Rockland, Westchester and in the Buchanan area, northwest in Peekskill and southwest in Croton. I see the children playing in the parks along the river. I see the boaters enjoying their time sailing and cruising along the river, and the fisherman's catch.

If there were any true environmental concerns about Indian Point, my hometown of Buchanan would be feeling the effects presently. What I described to you would not be the case. Take the word of someone who actually lives there: Indian Point is safe and has been a good neighbor.

I ask that the final energy plan support the continued operations of Indian Point. Thank you very much.

MR. CONGDON: Thank you for your statement.

Our next speaker is Eric Spomer from Catalyst Renewables.

MR. SPOMER: Thank you for this opportunity. I'm Eric Spomer, President of Catalyst Renewables. We develop and operate geothermal power projects in California, and biomass facilities in New York.

The draft plan is thorough and thoughtful, but we ask that footnote 55 of the draft energy plan be deleted. The footnote states there are environmental impacts and health risks associated with the combustion of biomass and biofuels that are the subject of current and ongoing investigation.

This footnote, as public policy, is unacceptable to our industry, as it is not factual and in its tone implies negative environmental and health effects. In fact, the opposite is true.

Facts supported by hard data from reliable sources show the following: First, biomass is the only energy resource that can actually reduce greenhouse gases. Second, ground level health effects from deficient biomass to energy projects are negligible. And third, sustainable biomass fuel harvesting practices significantly improve forest health and ecosystems.

Myth one, biomass to energy is no better than fossil fuels as far as greenhouse gases are concerned. This is patently false. While some greenhouse gases are emitted from the stack during biomass combustion, it is far better to efficiently combust waste from forest products, activities and other sources for energy production than to allow the material to decompose.

Rotting wood will emit approximately 50 percent methane and 50 percent CO2, with methane being 20 times as damaging as a greenhouse gas than CO2.

According to numerous studies, which I will provide to you, biomass power generation reduces CO2 equivalent greenhouse gases by as much as 50 percent.

Myth two, and quoting the footnote, there are health risks associated with the combustion of biomass. This is common argument, not based on current science and data. Biomass has effectively no SOX or mercury emissions, which are common with coal and oil generation.

Biomass combustion does emit some particulate in NOX, but as a result of significant investment in design improvements by companies like Catalyst, new state of the art facilities like our Onondaga project in Solvay, are incredibly efficient.

To put this in perspective: A single fireplace has 25 times the ground level impact from emissions as the Onondaga facility. That means that for the same health impact as your fireplace we can operate 25 Onondagas, providing enough energy to power and heat over 700,000 homes.

A single certified home pellet stove has

three and a half times the ground level impact of Onondaga. Clearly, an Onondaga type biomass plant is a much more efficient way to provide heating than burning your own.

Further, Onondaga will emit less than half the particulate of NOX than the combined cycle natural gas plant it is replacing. And on a BTU basis, has approximately the same emissions as the most efficient combined cycle gas plants.

Myth three, biomass harvesting has negative impacts on forest health and ecosystems. I will provide you with the Sierra Club's biomass guidance, which effectively states that the biomass waste must be gathered or harvested in a sustainable manner to avoid negative impact on forest health. Further, they are concerned that a biomass plant might resort to unsustainable methods if fuel is in short supply.

We agree completely. Catalyst formed TreeSource Solutions to provide biomass fuel aggregation services to users in New York for this very reason. The New York RPS requires strict compliance with standards based partially on Catalyst's practices at Lyonsdale.

Further, we have commenced a dedicated fuel plantation program in conjunction with SUNY College of

Forestry to ensure adequate supply.

The Sierra Club also provides guidelines regarding fuel farming. TreeSource's fuel plantations meet all of the Sierra Club's concerns.

And finally, regarding our effect on ecosystems, I would simply refer you to the Audubon Society's Wildlife and Forestry in New York's Northern Hardwoods study which describes the benefits of sustainable forest management.

In closing, energy efficiency and conservation are clearly the most effective ways to reduce environmental effect of power generation. However, we cannot eliminate generation completely. There is a limit to how much wind the electric grid can handle.

State of the art utility scale solar in Arizona currently may work at $.12 a kilowatt hour, but in New York that same technology would require about twice that and would provide very little generation during New York's winter peak.

Barring the construction of a lot more nuclear capacity, combustion will continue to provide a meaningful portion of New York's energy needs.

Biomass is superior to any generating fuel as

far as greenhouse gasses are concerned. Biomass is comparable to natural gas for ground level health impacts. Sustainable biomass harvesting improves forest health and ecosystems. And biomass has by far the largest economic impact of any fuel source, with good paying jobs and every fuel dollar being spent locally.

I urge you to consider the facts and delete footnote 55 of the energy plan and recognize the value of New York's abundant biomass resource.

MR. CONGDON: Thank you very much.

Our next speaker is Fred Zakman from SunEdison and the Solar Alliance.

MR. ZAKMAN: Good evening, Tom and the other members of the State Energy Planning Board. Appreciate your willingness to listen to my comments tonight.

As indicated, I am the Director of Regulatory Affairs with SunEdison. We're the nation's largest solar energy services provider. I'm also here commenting tonight on behalf of the Solar Alliance, with 30 of the nation's largest manufacturers, developers and financers of solar and PV equipment.

Having done state energy planning myself in a former life, I really appreciate the analytic rigor, the balancing, the difficult balancing of interests, and

your receptivity to public input that has gone into this process. Particularly noted the recognition of the significant benefit streams afforded by renewable energy development and solar PV in particular.

The ability to create high paying, high quality jobs that can't be outsourced; solar PV's contribution to reliability and energy security, and perhaps most importantly, the ability of renewables of solar PV to make the significant down payment we need to help stabilize the climate for future generations.

I think where I would like to spend the bulk of my comments is: In spite of the recognition of the benefits of renewables and solar PV in particular, I think what the current version of the plan lacks is the ability to translate that potential, to realize that potential into actual benefits.

And where I think the plan falls short is it really lacks a bold, coherent, comprehensive, specific strategy for solar PV. Kerry Holland, the President of the Solar Alliance, testified in Albany. She outlined a six point platform to create a world class solar PV marketplace in New York. I don't want to reiterate that. I just want to high light a couple key points in that platform.

First off, as has been mentioned previously, what the State Energy Plan needs is to create a long term vision for the solar marketplace in New York. Set long term goals. We support, consistent with our speakers, a 2000 megawatt by 2020 target. Really what the State Energy Plan is all about is setting a vision and putting in place policies and programs to get there. And unfortunately, all the plan does at this point is reiterate the renewable energy task force goal of 100 megawatts by 2011.

First of all, we need to lock that goal in. The renewable energy task force report came out in April of 2007. The Public Service Commission is still considering whether to ratify that goal and to commit the resources toward the realization of targets.

So, that's a necessary but insufficient step. We really need to go beyond 2011. For companies like mine that are looking where to invest resources, where to hire people, invest in modules, and deploy capital, we need some long term visibility. We need to know where the market is going to be not next year but five years, ten years out. Unfortunately, in New York, we just don't have that predictability or visibility.

Secondly, as had been mentioned by prior

speakers, it's important for the state to commit the resources towards realization of those targets to set a stable, significant and sustained incentive program.

Unfortunately, New York's PV program has been prone to fits and starts. Funding is allocated for periods of a year that meets pent up consumer demand, and then uncertainty about where the marketplace is going from that point forward.

So, the better functioning programs create a long term incentive stream for a period of a decade or more. Those incentives can come down, but the goal again is market transformation. Want to achieve grid parity, accelerate grid parity, reach the point where solar PV is cost competitive with conventional resources. And right now, solar PV is slightly more expensive, so it's really the role of incentives to accelerate that drive to grid parity.

Lastly, there is a need for a greater diversity in the program. Current incentive program is capped at 80 kilowatts. Effectively that means support for a handful of residential and small commercial projects around the state. Where you really drive scale and meet significant targets is where you provide incentives for systems up to the net metering target of

two megawatts.

Again, appreciate the opportunity.

MR. CONGDON: Thank you.

Just for the record, the 100 megawatt target recommended by the renewable energy task force by 2011 may be achieved through a number of different vehicles, not just the customer sited tier under the RPS, but also under the Power Authority long term contracts.

To date, there is one RFP out from the Long Island Power Authority for 50 megawatts and there's another one in the works for New York Power Authority for 100 megawatts. So, between those two RFPs, we are hopeful that we will exceed the 2011 target that is outlined in the renewable energy task force report, and multiple by more than ten times the current installed capacity in the State of New York for solar systems.

To the earlier point, kind of ramping up in the short term as we hope to achieve grid parity. Anyway, I just wanted to remind the speakers that those efforts are underway as well, as well as the renewable portfolio standard ongoing with the PSC.

Our next speaker is Gabrielle Vincalette from the New England Task Force. Perhaps I mispronounced the name. Go on to the next speaker. Joseph Pollock from

Entergy.

MR. POLLOCK: Good evening. My name is Joe Pollock, Site Vice President for Entergy Nuclear's Indian Point Energy Center, which includes operating units 2 and 3.

First let me thank the committee for the opportunity to speak today and commend the Governor for reviving the state energy planning process. All prior State Energy Plans have recognized the importance of Indian Point. Today I would like to present to you the facts that warrant continuing policy embraced by the previous energy plans that acknowledge Indian Point as a critical resource.

Indian Point's 2 million kilowatts of clean power plays a critical role in meeting the regional greenhouse gas initiatives, known as RGGI. New York cannot meet RGGI without Indian Point.

Rather than single out Indian Point as a problem, the plan should embrace it as a solution for New York's energy needs and vehicle for realizing its environmental goals.

When concerns were raised about safety and security at Indian Point, Entergy listened and did something about it; and where concerns persisted,

Entergy brought in independent security and safety experts. And of course, the NRC is always reviewing safety at Indian Point.

Others also have conducted independent reviews focusing on Indian Point's role in providing electricity in New York. Let me cite the conclusions drawn by the experts who spend thousands of hours performing those independent assessments.

Closing Indian Point would result in the loss of thousands of high paying jobs and the loss of a billion dollars of direct economic impact. Closing Indian Point would immediately increase air pollutants and greenhouse gas emissions.

It is disappointing that the plan would ignore these facts and cite only the claims for opposing Indian Point; claims that pale in comparison to the large body of independently verified and corroborated evidence that supports Indian Point's continued operation.

For example, The National Academy of Sciences, with the support of Congressional funding, concluded that while replacing the plants was technically feasible, it would result in decreased electricity reliability, increased air pollution, and

significantly higher power costs for New Yorkers.

The New York Independent System Operator has consistently stated that the stability of the grid would be threatened if Indian Point was closed. In its most recent report, it stated, "Retirement of just one of the two Indian Point nuclear units would cause an immediate violation of reliability standards".

In addition to NYISO, a multitude of other independent energy experts and organizations have come to the same conclusion: As a practical matter, you can't shut down Indian Point.

Entergy owns and operates 11 nuclear power plants, several right here in New York. These plants provide a base upon which many of the alternative energy sources, such as solar and wind power, can be built.

Since purchasing the plants, Entergy has invested hundreds of millions of dollars in improvements. As a result, we have significantly raised both the safety and the operating performance of these plants. Today, Entergy's plants consistently get NRC's top safety rating.

Entergy has also raised the reliability of these plants to over 97 percent from a previous historic average in the 60 percent range. After 9/11, when

security at Indian Point was questioned, New York State Office of Public Security Director James Kallstrom lead a team of experts and conducted a far-reaching security assessment, working closely with the FBI. Kallstrom said, "Security at the plant is robust."

US Office of Homeland Security, NRC and others, have all conducted assessments and found Indian Point to be well protected and secure. Independent experts have also reviewed our emergency plans and noted they are among the best in the country.

In the comprehensive independent safety evaluation done in 2008, 12 panelists spent thousands of hours analyzing every aspect of plant operations. These highly respected individuals, from both the private and public sectors, have expertise in nuclear safety, engineering, operations, security and emergency planning.

Their findings were published in a report with the following conclusions: Indian Point meets the US Nuclear Industry's highest standards; operations are conducted competently and professionally; and Indian Point is safe.

I personally recommend to the panel that they review the report, especially the appendix, which

addresses in detail all the public concerns raised in the last five years.

In closing, I ask that you remove the language that suggests the state would be better without Indian Point. There are many independent experts who have spent thousands of hours reviewing safety and security at Indian Point and the critical role the plants play in providing clean and reliable energy.

I have provided copies of the report for your review. I ask that you review these reports with the same diligence as the professionals who dedicated themselves to getting to the truth about Indian Point.

I urge you to support the continued operations of all nuclear plants in our great state of New York. Thank you.

MR. CONGDON: Thank you very much.

Our next speaker is Kevin Sheen from EverPower Wind Holdings.

MR. SHEEN: Thank you. My name is Kevin Sheen. I am Senior Director of Development. We are a wind power development company headquartered in New York City, with offices in Portland, Oregon and Pittsburgh, PA. I appreciate the opportunity to comment on the State Energy Plan draft document.

We currently have four projects under development in New York, including a 65 megawatt powered wind project. We received a conditional use permit to begin construction -- we had hoped to begin construction in 2010.

We applaud the Governor for his commitment to clean energy to combat climate change, as evidenced by his support in various executive orders. We appreciate the work that the board has put into this draft State Energy Plan. And I would like to make a few brief comments that focus on renewable energy, and many of them will echo the comments that were made previously by the Alliance of Clean Energy New York, of which we are a member.

In the topic of renewable energy, we feel New York needs to continue its commitment to renewable energy and rededicate itself to maintaining the product investment that had made New York a leader in attracting renewable energy investment and contributes to energy security and supports economic development in state.

New York needs to continue to encourage renewable energy in many ways. Here are a few points that New York should consider. Continued funding for the RPS program and encourage agency permitting

coordination. Progress in meeting New York's clean energy goals has stalled, primarily because of a lack of funding for the RPS and ever changing permitting requirements at a state and local level.

The inconsistent nature of the RPS funding has caused a boom and bust cycle that is very difficult for developers like mine to plan for. New York needs to show that its commitment to the RPS program will be matched by sufficient funds to meet goals. Agency coordination will also help for the support for permits necessary for project development.

The marketplace needs a clear signal that New York remains committed to supporting the RPS goals. As one of the gentleman who spoke earlier, it's difficult to plan a large capital investment or deploy resources on six months' notice or a year's notice. When looking to deploy resources, we look a bit longer term than that.

New York should explore shifting the RPS procurement responsibility to load serving entities. PSC should look at shifting the central procurement model to the RPS, the one where purchasing responsibility is placed on the load serving entities, as in the case of most other states.

This could alleviate the problem of insufficient funding and delays in procurement; also, open up the market to new investors and enhanced market liquidity.

Establishment of a renewable energy tracking system should be also endorsed, has remained stalled in the PSC. It should accompany this. But mostly opening up a market based system really could enhance the private investment.

We also believe transmission and siting are two main issues and two problems in the challenges for private investors. New York should encourage investment in transmission infrastructure to ensure the use of clean energy resources. The plan should support increased investment in transmission, supporting full development of the state's domestic renewable infrastructure with cost share among beneficiaries and utility investment recoverable through rate base.

Transmission upgrades should include both high voltage lines for generation in wholesale market and distribution upgrades to accommodate distributed on-site generation.

We should also advocate for the creation of a one stop shop for streamline permitting for new

generation. The draft plan calls for a reinstatement of a siting board, but really provides no plan for implementation. The agencies that have a role in the previous siting board should discuss how to coordinate their permitting goals in a timely manner which could spur on increased development.

Finally, I would add some comments. As a New York City based company, EverPower is poised to make a significant increased investment in clean energy in New York. However, states like Pennsylvania, Michigan and Ohio are making it easier to invest and build renewable energy projects in their state.

In this climate, EverPower has no choice but to look elsewhere to put their significant investment dollars. New York can contribute to attract project investment, but only if it's able to remove the boom and bust cycles that plague the REC program at this point.

I will leave you with a small anecdote. Recently one of the largest wind power developers in the nation, a developer very active in New York, put on hold a plan to build 100 megawatt project for the state because of the words of the Town Supervisor. "I think they are finding out that doing business in New York State is the closest thing to hell outside of doing

business in California."

This company, like EverPower, is shifting significant resources to Ohio and other neighboring states, where the climate is much more favorable to wind power and other renewables.

I urge you to continue to foster renewable energy as a critical part of the state's energy plan and get rid of the boom and bust cycle nature of the RPS.

Thank you.

MR. CONGDON: Thank you. Appreciate your statement.

The next speaker is Jay Kooper from Hess Corporation, also representing the Retail Energy Supply System.

MR. KOOPER: Good afternoon. My name is Jay Kooper, I'm Director of Regulatory Affairs for the Hess Corporation, competitive retail electric and gas marketer in New York State; and the President of the Retail Energy Supply Association, a trade association of 12 member companies, many of them Fortune 500 affiliated companies who are also ESCOs in the State of New York.

RESA commends the State Energy Planning Board for recognizing the role that the New York State energy markets have played in the tremendous gains in power

plant efficiency, the support for renewable power, the stimulus for investment in electricity and natural gas infrastructure in constrained areas, and the incentive created for demand-side products and services.

The draft State Energy Plan clearly assumes that the markets in clean energy technologies that the State would like to encourage are best done with the competitive markets design as a basis.

RESA companies see the impact of markets and new products and services that they are providing every day. Our offerings include a great variety of pricing options, as well as energy efficiency and load control products and services, all working off the robust electricity and natural gas markets here in the state.

In our comments on the interim report, we offered three recommendations that we feel were essential for the state to reach its clean energy goals. RESA was pleased to see that the draft State Energy Plan also supports these concepts, and I congratulate you on the work you have done up to this point with the finish line certainly in sight for all of you.

What we would ask is that we endorse a more explicit statement of these three principles or these three recommendations in a final State Energy Plan.

And just briefly, these three principles are: Number one, continue to foster competitive retail and wholesale energy markets. The wholesale and retail markets are directly linked. A workable, competitive wholesale market produces the appropriate price signals and hedging mechanisms that facilitate the deployment of new and innovative products, such as efficiency and demand response offerings, within the competitive retail markets.

Number two, New York should continue to expand the use of market-reflective hourly pricing for electricity as the utility to default service. As utilities deploy advance meters, their additional time-differentiated capability should be utilized to price electricity in New York.

The additional functionality will increase customer awareness of the value of the electricity they consume, and help drive changes in customer behavior that are essential to achieving the state's goals for energy efficiency and demand response.

And finally, New York should support an aggressive rollout of advanced meters and time-sensitive rates. Since the release of the interim report, much progress has been made toward the goal of integrating

wholesale and retail prices in real time.

The Public Service Commission has endorsed cost recovery for an approved series of Smart Grid projects to be deployed by New York State utilities with a total cost of about $825 million and ratepayer matching funds of approximately $390 million. The rest of the funding is being sought from the American Recovery and Reinvestment Act funding through the US Department of Energy.

These programs, along with those submitted by LIPA and NYPA to DOE, are a promising start to the adoption of time-sensitive rates as the rule, rather than the exception, in New York State.

RESA will continue to be in the forefront of offering new products and services to customers, and underlying value added products and services to customers of all sizes, and advanced metering infrastructure and other technologies that are being supported by the state and being pursued with the federal government. As long as they are being deployed and continue on that path, we will continue on that path.

Again, congratulations.

MR. CONGDON: Our next speaker is Paul Powers

from Empire Advocates and also representing Deepwater Wind.

MR. POWERS: Good afternoon. My name is Paul Powers. I'm a consultant to Empire Advocates and I'm here to deliver the comments of Deepwater Wind, it's a firm with which we do business and they were not able to attend today at the last minute.

I want to congratulate you. I know how rigorous this process is. We're in the home stretch. It's a wonderful job, well done. All the analysis and especially the openness of the process as it was conducted was really remarkable. Congratulations to you all.

Deepwater Wind, LLC is the US leader in offshore wind power development, and we are very pleased to submit these comments today to you all. Deepwater Wind is increasing American energy independence with large scale wind farms in deep ocean waters, where they are virtually invisible from shore.

As renewable energy developers, Deepwater Wind agrees with the fundamental conclusions of the draft State Energy Plan that the best plan for meeting the state's present and future challenges is through the development and build out of its clean energy

industries.

We also respectfully submit that the emergence of a viable offshore wind industry with significant environmental and economic implications, especially for southern New York State, has yet to be fully reflected in New York State's energy planning.

We understand the difficulty in trying to assess the contribution that offshore wind can make to the state's resource mix, given the many uncertainties that arise in developing this new capacity. However, we are confident that the draft State Energy Plan can count on 1500 megawatts of offshore wind over the next 10 years.

The draft cites the La Capra study from last year in assessing the practical potential for offshore wind, and that study predicts 534 megawatts by 2015. While we believe that this figure could be accurate, we see substantially more offshore wind coming on line over the 2014 to 2020 time frame, depending on federal and state permitting, equipment availability and other factors.

In particular, the existence of a very substantial wind energy resource just offshore of New York Independent System Operator load zones J and K

raises the possibility of generating significant amounts of electric energy to directly serve customers in New York City and Long Island, which are areas previously thought to be out of reach of large scale renewable generation.

So, we would like to offer the following information and recommendations and five points. The first point: Deepwater Wind commends the state for initiating processes leading to the acquisition of offshore wind, and we have submitted a response to the Long Island - New York City Off-shore Wind Project request for information.

Their response included a number of recommendations. I want to high light three of these here. Under the project, Deepwater Wind believes the request for proposal should include no prescriptive site selection for the project itself; no specified interconnection point, and award multiple power purchase agreements. They believe the process should leave a good deal of these factors to be developed by the applicant.

They think if the state adheres to these recommendations that the project should proceed at least cost to ratepayers.

Point two, Deepwater Wind believes that the state should further recognize the regional economic potential for offshore wind by adopting modifications to the renewal portfolio standard program that will help support this industry in a time of extremely volatile market prices and high regulatory risk.

In recognition of the higher value that offshore wind represents to the downstate region, the final State Energy Plan should recommend that the Public Service Commission amend the RPS program in order to directly support offshore wind projects that interconnect into zones J and K.

This support might take the form of an offshore renewable energy credit program that gives greater RPS value for renewable credits generated offshore; or in the form of an incentive return offered to electric utility companies that enter into long-term power purchase agreements with renewable energy facilities interconnecting directly with New York City.

This type of incentive is being adopted in other states and is supported by recent research conducted by the New York City Department of Economic Development. That study found that, of the alternatives investigated, offshore wind held the greatest potential

economic benefits by far, and that, although the technology's construction costs are also high, it deserves more analysis and deserves support.

Point three. Offshore wind, by virtue of its vast potential, is uniquely positioned to become a significant solution to the state's greenhouse gas control plan, not only in the production of electricity, but also in the displacement of fossil fuels used in powering the building and transportation sectors.

In fact, offshore wind represents the single largest potential source of renewable energy for the transmission-constrained region of Southeastern New York.

As advances are made in the field of energy storage and conversion, the tremendous potential for offshore wind stands poised to energize buildings and vehicles, helping to lower the state's carbon footprint.

Quickly, point four. With regard to transmission expansion, Deepwater Wind urges the state to consider the size of potential resources of renewable power, including offshore wind, before underwriting significant expenditures beyond what is necessary for reliability and what would otherwise be economic.

And point five. Deepwater Wind is pleased

that the draft supports the effort of the Mid-Atlantic Regional Council on the Ocean. We know that Governor Paterson was instrumental in the formation of this body, and we commend his vision for it.

Thank you very much for allowing us to provide these comments to you today. And, again, congratulations.

MR. CONGDON: Thank you, Paul.

Our next speaker is Anthony Campagiorni from Central Hudson Gas & Electric.

MR. CAMPAGIORNI: Thank you for the opportunity. My name is Anthony Campagiorni from Central Hudson Gas & Electric.

Central Hudson represents approximately 370,000 natural gas and electricity customers in the counties of Ulster, Dutchess, Orange, Putnam, Greene and Columbia Counties in the region.

Central Hudson is supportive of the plan's framework to reliably meet the state's future energy needs in a cost effective and sustainable manner. Central Hudson also supports the plan's five broad policy objectives.

Our company commends the planning board for offering specific recommendations to meet the plan's

goals, but firmly believes that a focus on the best recommendations needs a detailed implementation plan to achieve the required results.

Central Hudson has two overarching concerns with the draft State Energy Plan. One, there should be a greater role for utilities in achieving the policy objectives as set forth in the plan. And two, the plan must address how to realistically achieve the plan's goals in a very cost effective manner.

Currently, the plan does not incorporate utilities as a primary resource to meet the state's energy plan goals. We believe this is unfortunate, as utilities touch nearly every customer in New York State, enjoy largely the trust and confidence of their customers, and can best accomplish these goals at the lowest cost to customers with our skills, knowledge, and capabilities.

Second, the plan must detail in a realistic way the state's true cost to achieve many of its recommendations. The state cannot afford the continuation of existing policies and programs without commensurate benefits that may increase energy prices, thus driving additional businesses from the state.

The maintenance of a robust, reliable and

safe electric grid is perhaps the most critical component of our company's business. Central Hudson continues to make annual investments of approximately $60 million a year to provide reliable, safe service in a cost effective manner. Even so, the aging transmission grid will require further investment in the future.

In order to address some of these future challenges, Central Hudson views smart grid as a potentially cost effective tool to mitigate long term infrastructure needs.

Central Hudson has proposed several smart grid initiatives within the service territory. Our company has also submitted projects with the other utilities in New York State -- NYPA, LIPA and the NYISO -- for funding under the federal stimulus plan.

The statewide collaborative included the installation of capacitors at key locations across the state to improve the efficiency of the grid and the installation of phasor measurement units that will provide situational awareness and monitoring of the transmission network.

In addition, Central Hudson is engaged in an advanced metering pilot program that we filed directly

with the Department of Energy, with a match funded by the Public Service Commission. Studying the full benefits of smart grid will take some time before the cost-benefits analysis can be completed. Our company also recommends that the State Energy Plan support interoperability standards in the deployment of smart grid.

Central Hudson believes that the emphasis must be placed on energy efficiency programs, especially when they represent the least cost, fastest means of achieving one of the State Energy Plan's goal of reducing electricity usage by 15 percent by 2015.

Central Hudson commends the plan's recommendations that all state agencies, authorities and utilities that administer energy efficiency programs consistently measure and report results of efficiency programs. Under such a cost-benefit approach, customers can be confident of the best return for their money.

Central Hudson has recently initiated an energy efficiency program and we believe that it can achieve better energy efficiency results more cost effectively than NYSERDA, since Central Hudson has the most direct, consistent, and ongoing contact with its customer base, and can better penetrate that customer

base.

The draft State Energy Plan should also encourage utility-scale renewable generation investment in order to meet the state's energy and environmental policy goals. The draft plan should allow utilities to propose generation solutions, such as rate based renewable generation.

Utility scale renewable generation, such as solar, for instance, is the most cost effective way to deploy solar technology and meet the state's goals for renewables. Allowing utilities to become involved in this renewable generation would benefit the greatest amount of customers in the most cost effective manner.

Utilities could site renewable generation to minimize the costs of interconnection, as well as minimize the system impacts on the reliability of the grid tied to the installation of larger systems on the distribution system.

Utility involvement in renewable generation could help the state meet many of its goals, including its environmental goals of purchasing more green, environmentally friendly power, as well as accelerating the state into a leadership position in renewable generation.

Central Hudson believes that in meeting the goals of the State Energy Plan, the plan must realistically address how to achieve its goals in a cost effective manner.

The plan should disclose the costs associated with meeting some of the state's goals, such as procuring 30 percent of New York's electricity demand by 2015, or reducing greenhouse gases by 80 percent by 2050.

There is a need to assess the current renewable portfolio standard, systems benefit charge, and the regional greenhouse gas initiative-funded programs to ensure they are streamlined so that a minimum amount of customer dollars are collected and then spent in the most cost effective manner.

To date, Central Hudson customers have sent payments of over $73 million through the SBC and RPS without direct, definitive success of these programs in its territory.

Central Hudson customers also pay for the regional greenhouse gas initiative indirectly through the higher costs of their commodity prices. These program dollars must consistently be monitored to assure the benefits of the programs.

Thank you for the opportunity to speak

MR. CONGDON: Thank you very much.

Our next speaker is Bob Seeger from the Millwright Local 740.

MR. SEEGER: Good evening. I would like to thank you again for the opportunity to speak. My name is Bob Seeger. I serve as the Business Manager for Millwright Local 740 based in Woodhaven, Queens. Local 740 covers an area of New York City, Long Island, and the northern suburbs of Westchester, Rockland, Putnam, Dutchess and Orange counties.

Union millwrights from my local install, repair and replace and dismantle the machinery in heavy equipment in many of the industries, including power plants. Our members are very highly trained and skilled professionals who work within tolerances of 1,000th of an inch, which is half the thickness of a human hair.

Millwrights are also very active in the debate regarding our energy future. With our experience and extensive knowledge within this field, millwrights, such as myself, are interested in building an energy future that is truly sustainable. This is one of the key reasons why millwrights, such as myself, have monitored the construction and release of the proposed

State Energy Plan.

I would recognize yourself and your Energy Planning Board for constructing a comprehensive energy plan, and for facilitating public meetings where interested members of the public can weigh in with their thoughts.

There is certainly much to like within the proposed plan, including the development of new wind energy, support for extracting natural gas from the Marcellus shale formation, supporting the reorganization of the power plant siting statute, and the list goes on.

The proposed plan is largely solid, and certainly benefits New York's reputation as a progressive entity. However, I do have some concerns that I would like to share with you.

First, the plan does not truly support the creation of new base load power generation, a concern of the millwrights, and an even greater concern when evaluated against the reliability of the grid. This concern is heightened in light of the plan's support for closing Indian Point. This proposal should be withdrawn immediately.

The proposed plan does provide support for nuclear power in general, and even supports the creation

of a new reactor in upstate New York. These are points that I would not argue with, but would rather congratulate you on.

However, the basis for which you ruled against Indian Point is not based in science nor is it based in reason, and that is truly unfortunate. The proposal to propose closure of Indian Point is under the blanket of safety and environmental concerns; however, the Nuclear Regulatory Commission in the past several weeks stated that Indian Point passed its own rigorous safety test as part of its license renewal.

If Indian Point was truly an environmental hazard, that would certainly come as a shock to the scores of fishermen, outdoor enthusiasts, and the recreationalists who utilize the Hudson River near the facility on a daily basis.

As someone who has spent significant period of time working at the facility, I know these facts firsthand. Indian Point is also a union workplace, with my union brothers and sisters involved in nearly every aspect of maintaining the facility.

During scheduled outages, skilled union trade representatives, such as the millwrights, are the ones called upon to modernize the facility's infrastructure

and keep the plant running smoothly.

And finally, let's use some common sense. Removing more than 2000 megawatts, a figure that can make up nearly one tenth of the state's total power supply, without having a clear plan for replacing this base load power, is a recipe for disaster. It will leave our grid vulnerable and place all New Yorkers at risk for another blackout. This is a prospect we cannot afford.

As you construct the final energy plan, I urge you to consider these arguments to fortify what is largely a positive plan. As a region continuously growing and demanding new power, we must do what is necessary to address these issues. Safeguarding our current base load portfolio, including Indian Point, is a critical part of this effort.

I would also just like to add one thing, and that is that a lot of people think that people in my position come up here because we're only interested in the jobs and the money. There are worse motives to have. That's one of them.

But I know the members of my local, and I know their families. I get to meet their kids at picnics. I don't want to go back to any wife and tell

them that something could have happened to their husband.

I have worked in that plant, particularly at Indian Point, since 1978. The plants that were built in the '70s are not the plants that are there in 2009. They have had an enormous amount of upgrades. They are different utilities. Particularly, Entergy owns them now and has spent lots of money to make them safe.

I, myself, live 16 miles from the plant. If I didn't believe that it was safe I wouldn't be here. I wouldn't be there.

And I just wanted to clear up the point that it is not just about money and jobs. The people that work in that place need to know that it's safe, and they do.

Thank you again very much for your time.

MR. CONGDON: Thank you very much.

Our next speaker is Steve Ludwigson from the Boilermakers.

MR. LUDWIGSON: Good evening. My name is Steve Ludwigson, and I am the Assistant Business Manager for Boilermakers Local 5. I am also a resident of Milton, which is about 25 minutes from here. My daughter attends school here and my second oldest was on

the Youth Symphony here for three years. So, I'm happy to be back here and it's not costing me any money tonight.

I would like to begin by congratulating the Governor and all of you for taking the step of actually proposing the State Energy Plan. No matter how you slice it, this alone is a positive step, and one for which you should all be commended.

Then there is the proposal plan itself. The plan itself has a number of items which are clearly worthy of recognition. In particular, I would point out the plan's support for using stimulus funds to develop a new generation of green jobs, as well as supporting the passage and implementation of a new power plant siting law is of particular interest to organized labor.

As you know, the absence of a siting law, such as Article X, had placed New York at a competitive disadvantage, and with energy demand continuing to grow we need a mechanism to fast track approval for new sources of power. A law such as this will do just that.

Additionally, your support for modernized transmission, construction of the Smart Grid, support of the Jamestown Oxy Coal facility, development of the Marcellus shale formation, and support for the third

nuclear reactor at Nine Mile Point, can and should be recognized.

I would also like to point out some concerns shared by myself and my fellow boilermakers. First, let's talk about energy conservation, efficiencies, renewable energy and renewable development. They are all important causes, but facts are facts, and you cannot replace the need for additional base load energy capacity.

Closing existing plants while the ISO projects increased demand, even with the implementation of renewable and conservation, is clearly unwarranted and ill-advised.

Secondly, we are extremely disappointed in the plan's support for closing the Indian Point nuclear power plant. If implemented, this would foster a devastating impact on our community, as well as for all New Yorkers.

Indian Point is a safe facility. The preliminary State Energy Plan cites safety as a top reason for opposing Indian Point's continued operation. A union's main purpose is to negotiate both good wages and a safe working environment for its members.

I am here to tell you that Indian Point has

consistently shown a rigorous commitment to safety of not only our workers, but members of the surrounding community. I've worked there. I know this.

Going off the script, I have one case and ex-Senator Hillary Clinton was there for a review with some of her aides. She was actually denied access because one of the aides was standing too close to her and I had an iodine injection which was radioactive, so as she went to go through a monitor it set it off.

A lot of places would just wave the person through because they are a VIP. Nobody entered that plant until it was cleared up. So, they are very stringent and they follow their procedures.

As Bob said, I wouldn't feel comfortable sending my people in there if I didn't think it was safe.

The federal assessment of Indian Point's license renewal application has gone on for almost two and a half years now. The Nuclear Regulatory Commission just issued its final safety evaluation and concluded that there are no concerns that would preclude license renewal for an additional 20 years of operation.

The NRC doesn't simply hand out favorable safety ratings. Indian Point has literally been put

through the ringer to prove it's safe. In 2008, the NRC devoted approximately 16,700 hours inspecting Indian Point, including seven major team inspections. Indian Point was rated "green" for performance, which is the best grade under the NRC system.

In conclusion, in addition to being safe, Indian Point is also environmentally friendly, union friendly, and a major economic engine in the Hudson Valley and New York's downstate region. The plant is responsible for more than 10,000 extended jobs and more than a billion dollars in economic impact on our region.

Allowing the closure of Indian Point would deny the conclusions of independent safety experts, overlook the commitment to safety by union workers at the plant, and would defy basic common sense.

Ladies and gentlemen: The proposed plan is largely solid and offers many strong proposals for securing our energy future, but like any proposal, it can be improved, and in this case, it must be. This is why I urge you to support the continued operations of Indian Point as part of the final energy plan.

Thank you for your time.

MR. CONGDON: Thank you very much.

Mr. Ludwigson was our last speaker on the

list, but if anyone else in the audience would like an opportunity to speak, feel free to come up to the microphone now.

Seeing none, that will conclude today's hearing. Our next public hearing is on Saturday in Utica, and that will be our last hearing.

I want to remind everyone there is also an opportunity to provide written comments and those are due October 19th.

Thank you all very much for your attendance today.

(Hearing concluded.)