NEW JERSEY BOARD OF PUBLIC UTILITIES

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Energy Master Plan Update : Public Hearing

Transcript of proceedings taken on August 13, 2015, at 1:00 p.m. at the State House Annex, 125 W. State Street, Trenton, NJ 08026.

APPEARANCES:

Richard Mroz - President

Cynthia Covie - Chief Counsel

ALSO PRESENT:

Diane Solomon - Commissioner

MR. Mroz: Good afternoon, everyone. Good afternoon. I will call this public hearing to order.

Could I have your attention, please. Good afternoon, everyone. My name is Richard Mroz, I am the president of the New Jersey Board of Public Utilities and I am serving as the hearing officer for today's hearing on the Energy Master Plan update.

Pursuant to the Open Public Meetings Act, the New Jersey Public Utilities Board has provided notice of three scheduled Public Hearings to solicit comments for an update of the 2011 Energy Master Plan.

Adequate public notice has been given pursuant to the Open Public Meetings Act - notice having been posted at the Board's office and having been delivered to the Department of State and to newspapers of broad circulation within the state.

(Pledge of Allegiance)

MR. Mroz: We're here today to take comments on updating New Jersey's Energy

Master Plan which was released by Governor Christie on December 2, 2011. This is the

second of three hearings that the Board of Public Utilities will host. I may be joined by my fellow commissioners and I know Commissioner Joe ^ Talesso is here in the back room, Commissioner ^ use take lieutenants so maybe will join us here on the side, to go through this, but I will preside today as the public hearing officer and along with other staff people who are sitting up here as well.

Now, we're here today to take comments. We have to digest what is presented and said and we will welcome additional public comments.

Information on where to send written comments via email or regular mail can be found on the State Energy Master Plan Website, which is found at www.nj.gov/emp. All comments must be submitted by the close of business on Wednesday, August 24th, 2015.

The 2011 Energy Master Plan is a

strategic division for the use, management and development of energy in New Jersey over the following decade. The specific

recommendations in the 2011 plan focus on both initiatives and mechanisms which set forth energy policy to drive the state's economy while maintaining New Jersey's strong commitment to preserving and protecting the state's environment. We request that comments be focused on the specific goals and recommendations in the 2011 Energy Master Plan and/or regarding several other areas that have emerged since 2011.

The 2011 EMP contains five over-arching goals:

First, to drive down cost of energy for all customers.

Second, to promote a diverse portfolio of new, clean, in-state generation.

Third, to reward energy efficiency and energy conservation and reduce peak demands.

Fourth, to capitalize on emerging technologies for transportation and power production.

And last, to maintain support for the

renewable energy portfolio standard of 22.5 percent of energy from renewable sources by 2021.

In addition to the overarching goals, the 2011 Energy Master Plan contains 31 specific policy recommendations that fall into four general sections.

First, to expand in-state electricity resources.

Second, cost-effective renewable resources.

Third, promote cost-effective conservation and energy efficiency, and also to support development of innovative energy technologies.

New Jersey has made good progress toward achieving the five overarching goals and many of the 31 policy recommendations. Overall, New Jersey has lower energy costs, while at the same time advancing energy

efficiency demand response and renewable energy.

The State has fallen from a very high energy cost state. In fact, according to U.S. energy information administration's

ranking of state residential retail natural gas prices, New Jersey's ranking has plummeted from 17th highest cost state in the nation to 50 in 2010, the lowest cost state in the country. New Jersey's decline in the EIA state ranking for the cost of electricity, while not as dramatic as is with natural gas, has followed the same downward trend.

In 2010, New Jersey was ranked as the fourth highest average retail price of electricity for the residential sector. The state now ranks number 10 in EIA's most recent report. But while New Jersey's average residential retail electricity price ranking fell 6 spots, more needs to be done to bring down the price further for all customers in all sectors. The natural gas infrastructure in New Jersey has

allowed New Jersey to take advantage of low natural gas prices, providing residents and business with the benefit of lower energy costs. In addition to the lower cost for energy, the state's electric energy resource are diverse and cleaner. New

Jersey has recently ranked 46th in emissions from electric generation, despite being the 22nd largest generating state. This is a direct result of the state's current mix of nuclear and neutral gas and renewable resources. New Jersey continues to meet its renewable energy standards, portfolio standard which requires nearly 15 percent in electric by the year 2016 of all electricity consumed in the state to be recognized as coming from renewable sources three class one; class two, and SRECs. And with the state's total installed solar capacity surpassing 1.5 gigawatts, solar accounts for almost three percent of the state's generation mix. And according to the solar energy industry association's state rankings, New Jersey continues to be

ranked number three, as having the third highest amount of installed solar capacity behind only California and Arizona.

New Jersey has also had success in reducing energy usage through its support for demand reduction and energy efficiency technologies. New and changing challenges

need to be met to continue growth in the implementation of energy efficiency technologies in a market that is still growing, but reaching maturity. To this end, we have been engaged the electric distribution companies and (inaudible) in our efforts to assess the relationship between energy efficiency programs operated by New Jersey's clean energy program, and those run by the companies.

This analysis will help to inform the board's decisions on how to best coordinate energy efficiency efforts for the benefit of all rate payers. As was mentioned the other day by speakers at Tuesday's public hearing at Seton Hall Law School, construction codes play a significant role

in implementing energy efficiency technologies. The Department of Community Affairs in the State of New Jersey, is the agency responsible for the disposition of the construction codes and recently proposed adopting the international energy construction codes in June and will be publishing the notice of the final

disposition in the New Jersey register in September.

According to DCA these new codes will increase energy efficiency, in commercial buildings and residential dwellings by 27 percent and 16 percent respectively above current codes while overall there will be much progress on the implementation of the goals of the 2011 EMP. There is always room for improvement.

For instance, New Jersey is on target to meet its goals for new disputed generation, however, the (inaudible) of new combined heat and power being developed in the states is not on target to meet its goal. Since the release of the 2011 EMP,

New Jersey has suffered devastating damage from the impacts of Super Storm Sandy and other major weather events. The Christie administration has made it a priority to improve energy resiliency and emergency preparedness and response; therefore, we will address these high priority areas in updating the EMP. Potential policy recommendation in this new section would be

based on New Jersey's plan for action in the aftermath of Super Storm Sandy and may include the following:

First, protecting critical energy infrastructure; next, improving the electric distribution company's emergency preparedness and response; third, increasing the use of micro grid technologies and applications for disputed energy resources. And as well as creating long-term financing for resiliency measures such as those through the energy resilience bank.

Now, after today's hearing, before we hear, I'd just like to explain a few

matters that will help us proceed. We have quite a few people who are registered to speak and I expect others who are signing in now, who wish to speak as well, so if you do wish you speak and have not already done so, please sign in the back and indicate that you do wish to speak. To provide an opportunity for all to give their comments, I would ask you to limit your remarks to three minutes. Keeping

within that time, it will help ensure that everyone has an opportunity to be heard today. I understand this is a relatively short period of time to convey your thoughts, so I ask you to focus on the specific goals and recommendations of the 2011 Energy Master Plan and the emergency issues since 2011.

If there is a portion of the plan that you take issue with factually or as a matter of policy, please indicate that specific factual or policy concern and state your recommendation; however, I would expect that comments offered are factual

and objective, and that others respect the speaker's right to make such comments and they are not met with disrespect, animosity or other disruptive behavior.

In the event there is behavior that disrupts this hearing, I will adjourn the hearing immediately, until such time that we can continue the hearing with the decorum that is required of such a hearing.

If you have a written statement that will be provided to us, please give a

synopsis. There is no need to read the entire statement into the record, as the written statement will serve as your comments. For participants planning to attend more than -- as well as this hearing and the next which is our last, I would ask you not to repeat your comments at each of the next hearings. This will help us to make sure that everyone has an opportunity to be heard.

If comments made by a previous speaker reflect those that you wish to make, please indicate that and try to keep your comments

as brief as possible. We're here today to listen. No decisions will be made here today or at any of the public hearings. I will keep any questions to a minimum, limited to only those required for -- that I feel are necessary for purposes of clarification. We will post all comments made at the public hearing, this and the other public hearings on the EMP website. Once again that website, if you don't have it, is www.nj.gov/emp.

As for the next steps in this process,

we'll have one other public hearing which will be at Stockton -- Stockton University, on Monday, August 17th from 1 to 5.

As I mentioned earlier, written comments are encouraged and the deadline to submit those comments is August 24th. Now, following the written comment period, staff of the various agencies that compiles the Energy Master Plan committee, including my colleagues who include the commissioners of the DEP, the commissioner of the Department of Community Affairs, Department of Health

and Senior Services, DOT and the treasurer, will begin reviewing all comments received and the process of updating the Plan will go forward.

We will not establish a timeframe to announce the updates but we will do so after reviewing all of the public comments. We will need some time to digest the comments and have internal discussions regarding them. Once we have done that, we will provide a timeframe for finalizing the 2011 EMP update.

Now, I have a list of speak -- we can

proceed with comments of those that wish to speak. I have a list of those who have pre-registered and indicated they wish to speak and I'll call them up here to speak.

Michele Rossi is sitting here at the front, will help anyone with the microphone, I would ask you to turn on the microphone and you can identify yourself and if you represent any particular organization. And also before we continue on, I would like to indicate our other

colleague, Commissioner Diane Solomon also joined us as well. So let me indicate that the first several speakers that we will take. Order are Stephanie Brand, Rate Counsel. Mike Egenton from New Jersey Chamber of Commerce and Rob Gilbert from Direct Energy. First Ms. Brand. Good afternoon.

MS. BRAND: Good afternoon. Thank you for having us today. I'll try to speak as quickly as I can, but three minutes is a very short period of time. I did testify in Newark and I am not going to repeat what I talked about there but I did rush through

the second half of my presentation so I will probably pick up where I left off. I do want to say a couple of things.

First of all I certainly hope that there will be an opportunity for the public to comment in writing on any written update that comes out and that is complicated by the statute and we do think it's a very important part of the process and we appreciate the opportunity to testify now

while the state is considering what to put in the update, but we would also like the opportunity at least in writing to comment on that update.

I also want to comment on the view that New Jersey is no longer a high cost energy state. I don't think that's really accurate, but there are certainly ways in which New Jersey has reduced its cost along with the rest of the country because of falling natural gas prices, but we also are above average in terms of the electricity costs and our rankings have fallen mostly, not because our prices are going down, but because other people's prices are going up,

and that's something that is a great credit actually, that our prices have remained stable and that's a very good thing, but I think it would be a mistake for us to rest on any laws, and think we're no longer a high cost energy state, I think that they're a lot of ways in which we can improve upon that trend.

I am going to skip over, talking about

the (inaudible) issues that were in the notice because I talked about them in Newark, but did want to touch briefly on specifically the recommendations and goals that were in the 2011 Energy Management Plan regarding solar and energy efficiency. We're very supportive of the overarching goals from the 2011 EMP about driving cost down for consumers, promoting diverse portfolio of generation, promoting energy efficiency in peak demand reduction and supporting the use of renewable resources.

We also very much support -- well, it was actually something new in the 2011 plan which requires the rigorous testing of the net economic (inaudible) New Jersey rate

payers of all of these programs. So we totally support maintaining these goals, we think we have come a long way but we do believe that there is more to do.

With respect to solar, we think that -- we would recommend that while we maintain (inaudible) that there be no new financial commitments for New Jersey rate

payers. As you know, we have already committed quite a bit of rate payer funding to jump start the solar energy industry.

There has been $950 million dollars paid by New Jersey Rate payers (inaudible) $360 million paid for SPC charges related to the solar program. And another $480 million paid by for other legal (inaudible) and another $328 million of utility programs to support solar.

We think the solar industry has been jump started. We have a tremendous history of (inaudible) in this state in terms of solar energy, despite what some people may tell you. We're leading the (inaudible) and we have been for several years, we anticipate that we will continue to. Solar

capacity continues to grow in this state. Our insulations have increased twelve to sixteen percent, which is up for 2013. We're seeing a robust industry and solar is becoming more affordable for households and middle income and lower income customers in New Jersey.

We also have seen tremendous price drops in the cost of building solar and for this reason we don't believe that the industry needs additional subsidies. We're seeing tremendous cost effectiveness within the industry and we think that the commitment that New Jersey rate payers made to that industry have worked and are sufficient going forward.

With respect to energy efficiency, we do think that further work is required. According to the agency, we believe standards, we ranked twenty-six in the country, savings (inaudible) of retail sales. It appears that our (inaudible) consumption is actually close to the EMP target for this year but that there will be a growing disparity as we go forward with

those targets, so we need to step up our work in this regard.

We have been working with utilities and this office of clean energy to try to figure out the best way to design our energy efficiency program so we can provide

the best product and open optimize the delivery of services. As you know OCE is working on getting a single program administrator. We think that will be a tremendous help. We're also working on getting utilities to provide us with a better measurement and verification with more information so that we can really assess whether or not their programs are working as we want them to be, and whether or not changes are required.

In our view, we figure there needs to be a division between work done by OCE and the work done by the utilities. We think that the utility programs should not simply supplement what OCE is doing. We think they should be innovative and they should provide new approaches that (inaudible) and there are certain things that the utilities

are in a better position to do and they should focus on those things because we do pay a premium when utilities do that work. So we're working with both the state and with utilities in making that better. We

would also like to see more programs for low income customers, there was a recent study by (inaudible) that showed that the program failed to achieve expected savings and the exhibited weakness in the (inaudible) process. We would like to see that improved and we would like to see the recommendations given in the pilot program in the (inaudible) report, we addressed.

I'm glad to hear about the updated building standards. I would like to see updated appliance standards as well, we think they are tremendous bang for the buck, as they say, in terms of achieving energy efficiency.

And then finally I think we're working directly by (inaudible) power, we have not seen (inaudible) we thought would be there and I think it's important to our program so that we can figure out whether there is

interest and if so, how we can make the program better going forward.

MR. Mroz: Thank you very much for your comments and for the record, we do

have your written statement and I think it incorporates all of your comments and I'm sure you might make others, but we do have that as part of the record already.

MS. BRAND: Yes, you do, and we will be submitting written comments by the deadline.

MR. Mroz: Very good. The next commenter is Michael Egenton from the New Jersey Chamber of Commerce.

MR. EGENTON: Thank you President Mroz and members of the BTU for giving us the opportunity to provide input on the Energy Master Plan. I am Michael Egenton, Senior Vice President, Government Relations for the New Jersey State Chamber of Commerce. I won't be reading from my whole testimony so I will bounce around a little bit.

Energy is the life blood of the economy, reliable, safe, reasonably-priced

and environmentally sound energy supply is essential for New Jersey's economic progress. The State Chamber supports a

balanced approach toward achieving the EMP goals that doesn't depend on rely on one method, one technology, one fuel source, or overburden one segment of the economy or group of energy consumers.

We believe the EMP sets very reasonable and attainable goals in its blueprint for New Jersey's energy future. However, since the adoption of the 2011 EMP, New Jersey has experienced a number of events that have affected New Jersey's energy infrastructure in a different manner. To that end, I would like to recognize the State's efforts in adopting programs to harden the power grid in the wake of recent extreme weather events, like Super Storm Sandy.

The reliability and resilience of our energy, along with our other transportation systems, are key to our businesses and their operations in the State.

I would like to touch upon a couple of

key items in my testimony.

Reliable and resilient infrastructure;

The EMT should support further efforts to continue resiliency and infrastructure investment progress in the accelerated replacement of aging infrastructure and modernizing our electric system.

In-State Generation, the State Chamber believes that competitive wholesale and retail energy markets continue to deliver benefits to the State and that well-structured competitive markets will provide the best pathways to reaching the State's goals.

With regard to nuclear power, it is the most vital source of low cost, clean, carbon-free, base load electric generation in the State. Nuclear energy continues to be an important part of America's and New Jersey's diverse energy portfolio, providing reliable base load electricity around the clock. Nuclear generation provides nearly 20 percent of our country's electricity and accounts for 52 percent of our annual in-state power generation.

The continued operation of Salem and

Hope Creek are critical to the reliability of the system, particularly in light of the scheduled retirement of Oyster Creek in 2019.

With regard to natural gas, is that economically efficient and is a clean, safe, and a reliable source of energy. New Jersey is the least expensive in the nation for residential retail natural gas prices, dropping from 17th most expensive in 2010, according to the U.S. Energy Information Administration.

Shale gas discoveries throughout the Unites States, have enabled developers to bring significant new domestic natural gas supplies to consumers. As a matter of fact, Regional Greenhouse Gas Initiative Chairwoman, Katie Dykes, recently said at an event hosted by the Center for Strategic and International Studies in Washington, DC, that, quote, because we made such a rapid transition to natural gas-fired generation in New England, we have work to do to get gas pipeline infrastructure

developed to serve that gas generation. Just a little segue into the B.I. England Power Plan Renovation. I want the members of the board to know that the State Chamber continues to support this major project in South Jersey that will provide the B.I. England electric generation plant in Beesley's Point with the natural gas supply it needs, to stop burning coal, and pave the way for it become one of the cleanest power plans in New Jersey.

Under the plan, the plant will no longer operate on coal and oil. Instead, the project calls for re powering one of the plant's units with a state-of-the-art combined-cycle natural gas turbine and re powering another unit with natural gas. This will place it among the cleanest power plants in New Jersey.

With regard to energy efficiency, The State Chamber recognizes the importance of energy efficiency to achieve business and environmental goals. For businesses, using energy more efficiently saves, money, reduces operating cots, increases

competitiveness, and promotes job retention and creation.

With regard to renewal, Solar, New Jersey ranks among the top three states in the U.S. for total installed solar capacity. We have historically at the State Chamber, supported the EMP objectives to encourage solar development at sites such as landfills, brownfields, warehouses, and government facilities that provide potential for larger installations, improve economies of scale, and that would return unproductive or underutilized sites to societal use.

Several developers over the years have expressed interest in building wind farms off the coast of New Jersey. We believe the State must undergo an extensive analysis and evaluate the economic benefits of any proposed projects. We support the BPU's due diligence process to safeguard the interests of ratepayers, making sure that we avoid any undue economic burdens. We would further suggest that he State engage our local and regional changers of

commerce, particularly the ones along the Jersey costal area, when and if such projects are under consideration.

A few brief words on energy and the environment. Of the 13 states comprising the PJM transmission region, New jersey has by far the lowest CO2 emission rate from its power sector. New Jersey has already achieved the 2020 target for CO2 emissions set by the New Jersey's Global Warming Response Act. As we provide affordable and clean energy, it is important to note that the State needs to have at its disposal methods and tools available when regional cooperation and collaboration do not provide the necessary end results. The EPA in October 2011, granted New Jersey's Section 126 petition, to force dramatic reductions of air emissions from GenOn's Portland Generation Station in Northampton County, Pennsylvania. Sulfur dioxide mercury and many other contaminants emitted into the air from this facility were carried in the atmosphere across the Delaware River to communities in Warren

County and also negatively impacted air quality in Morris, Sussex and Hunterdon counties. This was the first single source 126 Petition the EPA has ever granted under the Clean Air Act. The first time it has granted a petition for a power plant bordering another state. We commend the State regarding the end result, the closure of that facility in Pennsylvania.

Very briefly, Energy and the Transportation Sector, I would encourage the Board to look at several reports as a member of the New Jersey Clean Air Council that we put together annually and we submit to Commissioner Bob Martin, the two most recent reports last year are Reducing Air Emissions Through Alternative Transportation Strategies and this year's report Air Pollution Knows No Bounds, which contain several suggestions to enhance the use of alternative fuel vehicles. One such recommendation is to explore public/private partnerships for charging/filling stations that include reasonable cost recovery

incentives such as tax incentives and State assistance with permitting and licensing.

Fuel Cell Technology is something that we support. The only byproduct of this technology is water. Because fuel cells have no moving parts and do not involve combustion. This technology has the potential to achieve greater efficiency. The State Chamber encourages the State to work with and support the research of New Jersey's academic institutions to pursue making fuel cell technology another viable option for our energy demands. And finally, last but not least, just a few brief thoughts on the Clean Power Plan.

While we at the State Chamber are still analyzing the overall impact, we are concerned that EPA's proposal could hurt our state and the progress that we have made in reducing carbon dioxide emissions. New Jersey should be recognized as a leader. We need to make sure that all states are held to the same standards that New Jersey has set for our power producers.

Our members have made the cost commitments to install state of the art equipment at

their facilities. In the end, we only truly benefit if our regional neighbors and the rest of the nation follow our lead.

Again, thank you. I appreciate the opportunity to comment and like I said, our written comments are more detailed.

MR. Mroz: Thank you very much. Our next person to comment on the pre-registered list is Tom Gilbert from the New Jersey Conservation Foundation.

MR. GILBERT: Good afternoon. My name is Tom Gilbert and I am campaign director for energy, climate and natural resources with the New Jersey Conservation Foundation.

Since 1960, we have saved more than 130,000 acres of land from sprawl development. Today we're fighting a new sprawl, from (inaudible) to energy infrastructure. Simply put, pipelines, transmission lines and transfer stations now threaten thousands of acres of land.

Nowhere is it more apparent than the current rush to build more gas pipelines in New Jersey. The PennEast pipeline alone

would cut through 3,300 acres of preserved land, fragmenting forests and farms, and impacting dozens of high quality streams and drinking water supplies. There is a better way forward.

As we see it, the Energy Master Plan's focus on energy efficiency and renewables is right on the money, but there is an urgent need to invest more and move mch more quickly in these areas.

The best kind of energy is energy we don't use. Energy efficiency and conservation will save land, save consumers money, reduce emissions and create jobs.

For example, California's landmark energy efficiency programs have reduced personal electricity use by 40 percent below the national average and resulted in $56 billion in household energy savings. By creating 1.5 million jobs with a total payroll of $45 billion.

According to the national Association of State Utility Consumer Advocates, with or without the Clean Power Plan, states that pursue renewables and energy

efficiency will see smaller increases in total electric costs through 2030 than they would with any other investment strategy.

The plan can and should do more to promote energy efficiency and renewables. They represent a true win-win for the environment and economy.

Unfortunately, an over-reliance on natural gas runs the risk of locking the state on the wrong energy path, especially the expansion of natural gas pipelines that are designed to last for decades, while we need a rapid transition away from fossil fuels to renewables and energy efficiency.

There have been several new gas pipelines constructed in central and northern New Jersey over the past few years and three more are currently under review by the FERC or BPU.

These pipelines impose huge cots on

our environment and communities, from damage to preserved lands and natural resources to impacts on landowners, public health and safety. And there is much debate about whether the gas to be carried

by these proposed pipelines is needed in New Jersey, or is just the Marcellus tail wagging the energy dog.

A recent analysis conducted by Labyrinth Consulting found that the proposed PennEast pipeline alone would result in a 53 percent surplus beyond current demand in Pennsylvania and New Jersey, and concluded that the gas is bound for other markets, including export overseas.

We have been surprised to learn that pipelines are currently considered in isolation with no single state or federal entity looking at the bigger picture to determine if all this gas is really needed, and whether better alternatives exist. It's like letting corporations build toll roads wherever they want without a

transportation plan.

The BPU could have an important role to play here if it had a mandate and capacity to develop a comprehensive energy plan for the state.

This is a new era for energy in New

Jersey and nationally. And we at a fork in the road and we need to decide if we are going to build a much longer bridge that relies on natural gas for decades through an expanded network of pipelines, or we lead the way in the transition to the new energy era through renewables and efficiency.

We urge you to take the right road, and catalyze a rapid transition to renewables and energy efficiency as the best means to meet the state's energy needs and to lower carbon emissions. And we thank you for the opportunity to comment.

MR. Mroz: Thank you for your comment. The next several speakers, so you know who will be up here that are

pre-registered are Amy Hansen also from the New Jersey Conservation Foundation and then Andrew Kendry from New Jersey utilities Association and Jack (inaudible) from the Sierra club. Miss Hansen?

MS. HANSEN: Good afternoon, I am Amy Hansen, policy analyst with New Jersey

Conservation Foundation. We do appreciate the opportunity to comment. Our state's energy policy in New Jersey has the potential to provide solutions that decrease the threat that climate change poses to our land, our clean drinking water, tourism, recreational opportunity, wild life habitat and historic, scenic and cultural landscapes.

New Jersey's energy policy has quite a potential to place in the right direction and decrease our climate change impact. The 2011 Energy Master Plan must be updated. We urge the state to create a new EMP that truly reflects the world we live in today and protects our children and provides future generations with a clean

energy legacy of which we can be proud.

How are we going to accomplish it?

First, by increasing our use of the best type of energy possible, energy conservation and efficiency. We agree with the EMP as it states, the best way to lower individual energy bills and Collective energy rights is to use less energy.

Reducing energy costs through conservation, energy efficiency and command response program is lowers the cost of doing business in the state, enhances economic development, and advances the state's environmental goals. However, we have yet to fully tap into these benefits. The EMP should increase its goals for energy reduction to, at a minimum, of 30 percent by 200030, and more, going forward. We already have a mechanism in place to fund clean energy and efficiency programs - the Societal Benefits Charge which must be permanently dedicated and not diverted to other uses as it has been for years.

Enacting an energy mission see resource

standard is much more important. New Jersey conservation applauds the EMP's clear recommendation that preserved farmland and open space remains protracted in perpetuity. It is also critical that additional productive farmland, forests and open space be permanently preserved and that renewable solar facilities be located appropriately on rooftops, abandoned

shopping centers, parking lots, brownfields and landfills that are located near existing infrastructure. The EMP does not support the use of rate payer subsidies to turn productive farmland into industrial solar facility. This is an excellent policy as we should not be using green fields for development, nor forests, not even renewable energy development given the numerous more appropriate locations available. Another great benefit of energy efficiency, is that it protect New Jersey's large investment in preserved land. We need to ramp up our renewable portfolio standard from 22.5 percent so that at least

30 percent of our power comes from renewable sources by 2020. New Jersey can achieve this incredibly important goal by investigating more in solar and wind and clean technology. Renewable and efficiency are becoming cost competitive with natural gas, and programs to be the low cost energy source in the near future. The advanced energy economy, a consortium of leading businesses recognizes that solar will

continue to grow based on declining costs. We see a very bright future, one accomplishes an even more aggressive goal of an 80 percent RPS by 2050. Our state boasts many excellent colleges and universities, and we need to tap more fully into these resources.

The EMP calls for more capitalization in emerging technology such as energy storage. We support more funding for research in this field, one example importance of keeping solar systems operational in resilient in times of grid failure, was seen during Hurricane Sandy

when Advanced Solar Products' arrays attached to a diesel generator at a school in Bayonne, enables the school to function and an overnight shelter for those without power in their homes.

Finally, New Jersey is missing out on millions of dollars, as well as the job creation enjoyed by the other states still enrolled in the regional Greenhouse Gas Initiative. All our residents would benefit if we re-enrolled in that

successful program. New Jersey which could fund stewardship plans and salt mash restoration for carbon sequestration purposes. Auction proceeds would be a boon for these and other programs that could help create robust and innovative partnerships with the other RGGI states to achieve aggressive energy reduction and decreased greenhouse gas emission goals. Major clean energy investments are urgently needed in response to global warming and should be made instead of further commitments to natural gas and its

infrastructure. We will all benefit from these actions. Thank you.

MR. Mroz: (Inaudible) I want to apologize to Ms. (Inaudible) because I skipped over. She was on the pre-registered list. So Sarah Bloom from New Jersey Business Association.

MS. BLOOM: Thank you, Mr. President. The (inaudible) represents twenty thousand businesses in the state of all different sizes and we're an active player in energy policy, development within the State. We

recently convened a couple of working groups with our members to tackle some of these issues and we will be giving you more extensive next week, but we have been looking at our overall investment in infrastructure and the need for New Jersey to stay competitive, and having these investments and I think one of the things that we have really been focusing on at GIA (inaudible) is that we can't look at just one sector of investment in infrastructure. And we need to be looking at more of a

comprehensive long range plan so it's not just electric or gas or water or transportation but how do we look at all of these? And be able to achieve a long term plan that has efficiencies and cost reduction while also maintaining improving our infrastructure, so that's one of the things that we've been committed to at GIA in looking at solutions in that respect and we're still working on that I think within the different departments of state government so that we have coordination between BPU and DEP for the permits, and

DOT when it comes to the roads, that we may be replacing or having to pull up, and look at how we can coordinate all of these different actions together, and I think right now we're on a shorter term plan where we may not go beyond five years but we're really looking at ten, twenty, thirty years. Because there is quite a bit of investment to make, and as we balance that with rate payer facility to observe some of this, this is some of the things that GIA

is looking at. I think one of the immediate areas we look at, too, is (inaudible) benefits charge and that we need to revisit that and its impact on rate payers, too.

But more pressing at the moment right now has been many of the different federal policy impacts, and another areas that are out of our control, whether it be PERC or (inaudible) or most recently the EPA Clean Power Plan, and how those are going to be impacting some of our planning here in New Jersey, too, and taking that into account.

(Inaudible) very familiar with having

to deal with regulation on all levels and I think as we're trying to make these plans, it's imperative to see where the potential impact could be coming from and we were disappointed, from the association side, that we didn't give any credit for our good work from 2001 to 2012, under the EPA's plan and looking at how our (inaudible) for energy compares to the rest of the country, and how we really have had been a leader

and how we have had lower emissions, (inaudible) we have been able to have a nuclear suite that has provided (inaudible) without emissions and looking forward at how we continue to be there even in these challenging circumstances where we are being penalized for being good leaders.

And I think that some of the other areas that an association member brought up has been more of the basic and one of the things that we have been looking at is energy efficiency. How to tackle the commercial office space. And I will be having more comments for you there, too, but a lot of this comes back down to is

basic education and one of the things GIA has fought for four years ago is the office of (inaudible) but also looking that within the energy efficiency market and we have had some members tell us that, you know, they don't really understand how CHP can benefit, (inaudible) They know what it means that the lights turn on, but they don't necessarily always connect, how can

we become resilient, what are some of the programs we can take advantage of, or some of the issues right now surrounding tenant versus landlord, and who's the (inaudible) and how can we do energy efficiency through the state and being able to look at maybe some additional training for brokers, (inaudible) negotiate, but how can we factor in some of the energy efficiency upgrades and the potential there (inaudible) for the future.

We have also talked extensively with our members about the energy natural planning. Other areas that we could be going and really looking at some of the technology advancements and how they're

impacting on our energy market.

We're big supporters of the pipeline development here in New Jersey, looking at how we can (inaudible), looking at how we can expand our nuclear fleet as well, but then recognizing, too, that we do have the chance to develop our alternated fuel vehicles on the commercial side, natural

gas fleet, are a potential option. We think that's another area where the clean energy program can be opened up, whether it's for the installation of fueling stations or (inaudible) retro to fit some of the fleets, so that we can have the emissions reductions, as well. And being able to also partner, I think, with the EPA in some of their programs. (Inaudible) energy has a very recognized name and the BPU in the past has worked with BIA and PPA to reach out with some of their commercial challenges and we would like to see more of that going forward, too, I think they are (inaudible) tenant's energy program, too, and I think in terms of the overall best practices to be able to share that among

some of our utilities, our government entities, that may not be necessarily regulated by the BPU and try to figure out how we can all work together so that we can have a more resilient state, we can keep the lights on more, we can hopefully manage our energy costs, too (inaudible) and some

of the electricity. So we're very active in that and we look forward to giving you even more of our comments in the written format.

MR. Mroz: Thank you, we will look forward to your additional comments. Now, Mr. Hendry from the New Jersey Utilities.

MR. HENDRY: Thank you, Mr. President and commissioner. My name is Andrew Hendry, I am the President of the New Jersey Utilities Association. We represent the (inaudible) in New Jersey, including the electric distribution companies and the natural gas distribution companies. We submitted written testimony but I am just going to provide some verbal highlights of that testimony today.

On the resiliency (inaudible) a lot

has happened since 2011, whether you are aware of that or if I need to repeat the various forms that we (inaudible) in this state. In recent years our companies have sought approval for billions of dollars in investments to strengthen the energy

distribution systems in case of severe weather and to make them more resilient. In fact, I appreciate your comments in the nominating committee this morning where you talked about some of the benefits of those investments. It's estimated naturally that the average cost of power interruptions is between 18 and 33 billion dollars a year and that's an average year. As you know, we've seen some years that have been out of the norm recently. So NJUA is critical that the board look at the cost of not making critical infrastructure investments on ruling on whether utility infrastructure petition should be approved. And we think the EMP should reflect any (inaudible) when determining the value of investments versus their costs.

In addition we feel the EMP should

encourage the board to consider these (inaudible) alternative cost recovering mechanisms for critical infrastructure investments by utilities. What do I mean by this? Things like (inaudible) systems

that are potentially forward looking and not just tied to a past test year (inaudible). We have taken some steps along these lines in New Jersey that are very positive, for in example (inaudible) for water, the accelerated infrastructure program that was initiated last decade in all times of the economy, and there is a lot of examples from other states, and we've included sites in our written testimony so that you can take a look at some of what is going on in some of those other states. A very recent example that we're still looking at, so recent that's it's not in (inaudible) in our comments Minnesota just adopted a law in June that would establish a multi-year rate making process, with components (inaudible) for utilities. We're taking a look at how that's going to be implemented and we

encourage you to do the same. (Inaudible), create jobs and enhance resiliency. We appreciate the focus be placed in the last memo on the hearing today, on protecting

critical infrastructure and I just want to mention two things.

First to thank you, President Mroz and past president Solomon for initiating the discussion that we had on cyber security with (inaudible) and with various agencies that have purview in that area. There has been a great collaboration that's ongoing. And also, if you're not aware, we're actively engaged in updating the security best practices for the industry, that is physical and cyber, and that's a partnership with the Department of Homeland Security and BPU for liability stats. Again, an ongoing positive collaboration.

One issue I wanted to be put on the record is as being concerned that we believe we need to talk about is what is more commonly being called the net meter and cost shift. I predicate this by saying you know a number of our companies are

leaders in renewable energy deployment and supporters of the sufficient limitation of renewable energy. I think PSE&G just

announced that they deployed the one hundred thousand solar panels throughout the state, so that is a given, I think, at this point.

In the 2011 Energy Master Plan references the problem of the cost shift, although not by name. Recently there was an MIT study that came out that we site in our hard comments, and we strongly encourage you to look at and those comments say that the cost shift issue is a real issue that needs to be addressed.

(Inaudible)in their comments they say that network cost (inaudible) solar penetration on the contrary (inaudible) to each kilowatt hour as a result, has to increase. The consumer with solar systems are responsible for both the reduction in solar hour sales and the increase in network costs, avoid a state portion of the cost. On the other hand, customers without those systems absorb the impact of higher

(inaudible) and they say quote (inaudible) so on this front we would just like to see

the Energy Master Plan more explicitly recognize this problem and encourage the board to work with State boards and try to get ahead. That will help avoid conflicts, I think down the road and help to ensure smoother and equitable deployment of renewable energy.

Let me summarize by saying it's been more of a focus (inaudible), we would like to see the Energy Master Plan emphasize the need to have the utilities at the table, the development of those micro grids, to help address safety issues, regulatory policies (inaudible) with the standby targets. As you know, many micro grids combined (inaudible) at their core, so I can transition to our support for the expansion and re-enforcement of energy transition systems in the state, whether they be high power lines or natural gas pipelines, we feel they help to lower rates and enhance reliability. The 2011 Energy Master Plan states that additional pipe

lines would help strengthen New Jersey's

existing infrastructure and we agree and we would like to see the EMP provide some more explicit support in that area for (inaudible) pipelines. And finally, just a couple words on energy efficiency. Again, a number of our companies offer a full portfolio efficiency programs, many also support promotion of the clean energy programs statewide and all the (inaudible) and have been involved with state holder groups at the board to help advance the program and improve it.

We feel that it's important though for the EMP to recognize that there is still an inherent financial disincentive for utilities to promote conservation and energy efficiency and this of course is through the interactions of need more sales, and the traditional rate structure involving (inaudible) recovery methods we have. As you consider the EMP, we would like to see this disincentive recognized and the need to drive implementation for appropriate rate design and or financial

incentive for utility participation and alliance with the goals of the EMP.

We feel this is important because the utilities, frankly, can bring a lot to the table when it comes to developing and implementing energy efficiency.

That's all I have. Thank you, Mr. President.

MR. Mroz: Thank you, Mr. Hendry, thank you for your comments. Next speaker is -- Jeff Pittel.

MR. PITTEL: I am here representing our 20,000 members and 60,000 supporters in New Jersey, but also (inaudible) because what happens here in New Jersey has bigger affects, not just in our state, but nationally.

I am here to talk a little bit more about planning because I think that this is -- I'm talking about the Energy Master Plan -- there are some things in it from the last plan that we have some concern about but there are also some things in there that we support. And one of our concerns was that a plan without implementation is

so even though the old Energy Master Plan standards, they're still not in place. You know, fifteen years after (inaudible), we still don't have the ERS, or EPS, you know, promoting (inaudible) wind and we still don't have the wind mills in place and it may be awhile. We talked about the use of our clean energy fund, and half of that money gets exported every year for other purposes. And so that's where I wanted to start out.

The other part that I really want to talk about is that the major shifts in the 2008 to 2011 plan was a lot of hot air, where we cut back our goals for efficiencies renewables and replaced them with natural gas and given New Jersey's climate crisis and (inaudible), oh we need to start shifting it back. But as we shift it back, you know, New Jersey right now in many parts of the State are under siege with pipeline after pipeline, (inaudible), power plants and we need to really start thinking about plans for infrastructure when it comes to energy.

Right now in different parts of New Jersey either on the boards or have been approved, there are eleven different natural gas pipe lines, at least two oil pipe lines, so instead of being in a crossroad of the revolution, New Jersey is headed to the crossroads to the pipeline. We also see power plants being built in places that maybe we shouldn't be building, like in the middle of Newark or couldn't be built because we don't have the criteria to fight them anymore, (inaudible) we had many years ago or in a flood plain, which is the (inaudible) rebuild issue and many others. We don't even plan to know if we need anymore power plants or one of the concepts that president Solomon has sought when they were promoting (inaudible) and it would also get rid of some of the dirtier plants in the state, and that hasn't really happened. We still have the (inaudible). By having the gas plants come in. That hasn't happened. We still have the Jersey City plant and we still have the Hudson plant. Do we really need to do a better

job of planning. Do we really need to have all these pipe lines. Of New Jersey are here to be supported (inaudible). We, you know, sort of agree that we don't have to -- we try to limit putting solar on farm fields, but you can put a power line through that same farm field, put a power plant on it, put a pipe line through it so we want to protect farms from solar, which are the most (inaudible), but we're not there to try to protect and preserve farms from (inaudible) something is wrong with that dynamic.

We talk about wind (inaudible) but power lines have been killing the birds. By the way, windmills are down by twenty -- climate change is the biggest killer and that's why we have (inaudible). So again where is the planning? We're promoting developments in the wrong places and we're not promoting them in the right places, and that's something that the Energy Master Plan needs (inaudible) we should have criteria and we should have -- not first

25 come, first served -- (inaudible) for

1 service pipe lines or anybody can build a
2 power plant, but we really should have a
3 rationale reason for it and a needs
4 assessment for it and making sure we site
5 things in the right places. We try to do a
6 little bit with the power plant, we're
7 trying to move some of them (inaudible) but
8 is there is no criteria.
9 The other area that I wanted to talk
10 about briefly is the need to change, you
11 know, the dynamic on how we fund utilities.
12 We give people incentives for using more
13 power, but we do not give people incentives
14 for saving power. We do not allow
15 (inaudible)recoveries to utilities who
16 actually put in programs to reduce energy
17 use, so they, therefore, don't have the
18 kinds of incentives they need, and the
19 consumer will make out in the long run.
20 We also have use, as an example, met
21 with one of the utility heads about we need
22 pipes and I said well, think about the
23 extra gas you'll get to sell if you fix

those pipes and the response was, well, that will passed along to the consumers.

Well, we should not be a pass along. We should be monetized and given an incentive to stop the waste and so I think that's part of some of the things we need to grapple with, with this plan coming forward.

And finally, I just want to end that we have to move the state forward when it comes to financial crisis. New Jersey, more than of the states that have been impacted by climate. We have a state that is one of the most vulnerable because (inaudible) infrastructure and power plants, (inaudible) we can make plants more resilient, but we don't deal with climate change and (inaudible). We need to move the state forward because we cannot build dykes high enough, we cannot built seawalls high enough and we build homes high enough to deal with the climate rise and the sea level rise. We need to at least put a 80 percent renewable by 2050. We should go

back to the goals of thirty percent renewable by 20/20. We need to do at least 30 percent energy efficiency by 2030.

Those are not out of the reach goals. Those are things that can be easily done. We have the technology. We have the companies that are willing to invest. We need to make sure that we have the critical will and that's what the Energy Master Plan should be moving New Jersey forward into the 21st century and embracing clean energy and not the possible (inaudible) of the past and by the way, I just want to respond to something by good friend (inaudible) said, under the (inaudible), energy plan, actually helps New Jersey quite a bit because it reduces more pollution from those out of state sources and it directly affects New Jersey businesses.

Under the Clinton power plan, New Jersey reduces about twenty-three percent in greenhouse gasses and states like Pennsylvania are well over thirty percent (inaudible) and so we need to embrace the

future. We need to support the present clean power plan. We need to retire all, we need to create more clean energy jobs. This state needs the work. We need

(inaudible) five hundred. We have companies waiting to invest on (inaudible) and so we need to put plans back into the Energy Master Plan, thank you.

MR. Mroz: Thank you, Mr. Tittle. The next several speakers are William Brandes from RDC. Joan McGee and Klaus Ritrtenbach from Client Action, New Jersey. So, William Brandes.

MR. BRANDES: Good afternoon. I appreciate the opportunity to talk to you today. I recently retired from the Environmental Protection Agency where I spent 30 years working in the Office of Solid Waste, now called the Office of Resource Conservation and Recovery. And I was the first chief of energy recovery branch in that office. I don't represent the agency here, but my comments are going to be similar to the many times when I did

work for the agency. I'm currently a consultant to the energy-from-waste industry. My last part of my career was focused on how to change from a national strategy on waste to figuring out how to

make these commodities more sustainable. We also focused on ways to support increasingly critical carbon reduction efforts to reduce the efforts of greenhouse gases. From particularly from waste management but also from energy generation. And my key point to you here today and I will provide you with the written comments as well, is that I urge the board to include the energy -- in the Energy Master Plan actions that promote the use of municipal solid waste as a renewable energy source. They work in the draft 2011 plan. Such actions support an integrated solid waste system, and must play a more prominent role in achieving New Jersey's goals in increasing renewable energies and reducing greenhouse gases.

So why do I say that? Well, New

Jersey generates and sends to landfills, 4.4 million in tons of waste. There are only two principle improvement options for our communities to dispose of this material after recycling as much as they can, and that is either land filling or energy

recovery. Today 75 percent of New Jersey's waste is sent to landfills because the current policies have continued to disadvantage energy-from-waste by rewarding landfills which is an inferior technology. The energy-from-waste is a proven technology that converts municipal solid waste into renewable base loaded energy. There are currently 84 such facilities and five of them are in New Jersey.

Energy-from-waste is widely recognized internationally, not only (inaudible), as a source of greenhouse gas mitigation. When I was at the EPA, we modeled, using department of energy models and our own models, to estimate that energy-from-waste reducing greenhouse gas emissions by approximately one ton of carbon dioxide

equivalents for every ton of waste processed, based on national averages. These reductions result from prevention of uncollected fugitive emissions of landfill methane, combustion associated with grid electrical production and fossil fuel and the recovery of ferrous and none ferrous

metals, that reduces the greenhouse gas emissions as well. We shouldn't have any policies anywhere, including an energy plan or a strategies that prolong land filling. What we need is realistic energy and carbon reduction strategies that reverse land filling, and I believe that energy-from-waste can and should be an integral part of state energy plans right now. State carbon reduction goals would benefit a small but reliable base load power source to be secure and local wasteful land filling would be an avoided.

Now, let me make a final point to conclude the things that have recently happened that (inaudible) EPA has just inexorably linked energy production and

carbon reduction goals with the rent release of it's knew clean power plant rule. The rule includes energy-from-waste as a mitigation tool that states can take advance tag of to meet the knew strict carbon reduction re requirements. I believe that that linkage that just created so powerful will withstand any legal

challenge even if specific aspects of that rule do not. Energy production needs linked to accompanying carbon emission I'm packets are our new legal reality, therefore, state energy plans from now on are by definition, carbon reduction plans. So any, with the emphasis on the word, any, energy source in such plans that can contribute to carbon reduction, must be supported and integrated into this plan. And I believe that energy-from-waste is one such power source. Energy-from-waste can help New Jersey produce renewable energy 24 hours a day, seven days a week near the source of energy consumption, while creating knew, high paying jobs, and

reducing greenhouse gas emissions and land consumption. So for these reasons, I urge the board to include in the New Jersey Energy Master Plan specific policies and actions that promote energy-from-waste. Thank you.

MR. Mroz: Thank you for your comment. Next speaker is Joan McGee. Miss McGee, no affiliation or (inaudible).

MS. MCGEE: Good afternoon, my name is Joan McGee, M-C-G-E-E. I am a resident of East Amwell Township, which is a very rural community and also Ship Bottom borough which is (inaudible). Listening to the speakers here today, I have a preliminary comment, which is that the terms of resiliency and infrastructure seem to be buzz words that mean many different things to different people and I think it would be helpful to the energy plan if they came across with some kind of definition so that everybody is on the same page or if they have different definitions, they can comment on those.

I want to address two different issues in the Energy Management Plan. The first one is Super storm Sandy and the second one is cost reduction to rate payers.

As far as super storm Sandy, the problems that have been in the notice and specified by the president today, claim that energy reliability, unreliability as a result of this, comes from the distribution problems, applications for distributed

energy resources and long term financing for resiliency. But I feel that the absence of electric and gas utilities during the storm was a direct result of the flooding of mechanical and electrical systems and the wind that knocked down utility poles, electric lines and trees that fell just about everywhere. This infrastructure problem, which is specified, had practically nothing to do with the supply of electric and natural gas in, my personal experience.

I assume that as soon as the mechanical systems were repaired, the

electric and gas went on, the propane trucks could get through, there was no issue about comments or problems or discussions from the utility companies about any shortages or any problem with distribution.

People in rural areas did not have energy because trees were down blocking roads, which is something, that BPU really has jurisdiction over -- trees that fall down or cutting trees before they come

down, and customers at the shore and (inaudible) because their local systems were flooded and that seams pretty basic.

Super storm Sandy cannot be used as an excuse to increase the supply of natural gas or electricity, and therefore there is little reason to increase additional pipe lines in New Jersey. All my issues are related (inaudible) on the pipeline as a result of super storm Sandy, too. There has been no shortage of energy in New Jersey.

The solution for flooding is to build

mechanical systems higher. The solution for being prepared for wind is to put utility poles underground or to make them so incredibly strong that they'll withstand wind. But putting utility lines underground is the best solution to avoid destruction and service. And solar energy is also one of the practical solutions. Solar energy is expanded, then people in their individual homes will be able to access energy readily.

The second issue is the energy plan

(inaudible) to reduce the cost of energy to New Jersey residents and businesses. The alleged reduction in cost based on natural gas importation is a (inaudible) argument. On page fifty-six of the energy plan it acknowledges the following facts that there are 2.9 million gas customers in New Jersey, ninety percent of whom are residential customers. The U.S. census states that fewer than four million residents in New Jersey exist and that the number of households that are projected by

the census are going to slow and are really not anticipated to be much beyond fifty thousand for the next several years and certainly within the next twenty years, not more than a couple hundred thousand.

In spite of this, numerous high pressure gas pipe lines are proposed throughout New Jersey as well as many increased transmission facilities for high pressure gas. This will not benefit New Jersey customers and will be past proof to benefit surrounding states who are also ramping up their high pressure gas pipe

lines to harbors, to shipping locations and to other markets throughout the area.

In the first filing within the last year and a half, the proposed penny pipeline states that it will provide enough energy going through New Jersey to reach 4.7 million homes. That is 800,000 more than currently exists and that's way beyond the maximum that the census anticipates being built in New Jersey. So obviously, ninety-eight percent of these homes that

are being supplied by penny will not be in New Jersey; however, New Jersey residents will have to bear the cost of this one billion plus dollar pipeline, because (inaudible) also passes through the infrastructure (inaudible).

The other pipes lines are similar. They'll in increase the cost to rate payers and I understand the jurisdictional issue between FERC and the BPU but it's time for the BPU, if its goal is to lower costs, to take (inaudible) process, they are an interested party just like the rest of us, even though I represent only myself.

Looking at the unit cost currently of natural gas and the myriad of statements that (inaudible) is cost-effective are lower, this will not be the case once these pipe lines and other infrastructure are built. They'll be built were into the rate system and we will without a doubt all be paying higher rates, and it will be residents, because most of the gas is used by residents. (Inaudible)

In addition on pages fifty-six through fifty-eight of the current energy plan, it must be rewritten to reflect the current developments that are anticipated in the energy industry. It states, and I am paraphrasing, that we get most of our energy from the gulf coast and it talks about, you know, coming (inaudible) whether it comes from Canada however that's not what is currently occurring at FERC. The FERC application (inaudible) shows that many, many of the major energy companies are requesting bi-directional pipe lines, they are abandoning pipe lines in certain areas going to different directions and

they're using Marcella Shale on what new pipe lines originated in the Pennsylvania, Ohio region and traveling through the rest of the country all over the place, so that having them come from the golf coast does not change the accurate going forward and the energy plan should reflect that.

I realize again that BPU has no jurisdiction over FERC, but I would commend

you and hope desperately that you will take the entire picture of energy costs into account because FERC allows you to do this, your best intentions and your best efforts will not keep costs down in the state. Thank you very much.

MR. Mroz: Thank you for your time. Next is Klaus Rittenbach from Client Action, New Jersey.

MR. RITTENBACH: Yes, K-l-a-u-s R-i-t-t-e-n-b-a-c-h, I am a member of Climate Action, New Jersey which has about five hundred members and I'm also a member of another group (inaudible) which has about 11 thousand members worldwide.

First of all, I agree with the

recommendation of Jeff Pittel of the Sierra Club and from Monday's hearing, the recommendations of Doug O'Malley of Environment, New Jersey. I want to focus my comments on your number one over-arching goal and that is to drive down the cost of energy to all consumers. I also want to focus on the number three goal, which is to

reward energy efficiency and energy conservation and reduce peak demands.

Well, there is a way to accomplish both of these goals, more cost effectively than many of the other proposals that I have heard today and Monday, and that's by building and retrofitting our houses and our commercial buildings to a standard called the German Passive house standard. This is an incredibly energy efficient standard saving eighty to ninety percent of the energy needed in conventional buildings. That is much better than the proposed internationally construction standards, it's significantly better than even lead platinum. That meets goal number three by saving so much energy and at the

same time by implementing these standards we can drive down the customers utility bills likewise by eighty to ninety percent, so that meets your goal, number one.

The German Passive health standard is the fastest growing energy performance standard in the world. Over thirty

thousand buildings, both regular homes and commercial buildings have been built to this standard all over the world. It's becoming popular in New York City, the State of Oregon and other places throughout the world. It was developed in Germany and Sweden in the 1990s. It's so energy efficient that many passive houses only have small electric space heaters as their only source of heat. They have no central heating unit. Even in the winter, often no heat is required at all, just human body heat and the sunlight coming in the windows. That's sufficient to keep the house comfortable.

The German Passive house standard strength lies in the simplicity of its approach. Basically, you build a house

that is super insulated with an active ventilation system that recovers the heat of the exhaust. Now, you might think that a house like this would be very expensive. This is what surprised me the most. The total building costs are actually about the

same or only a little bit more than building a conventional house. There is also a similar passive house standard called the Erthit standard, that Erthit, that's almost as efficient and is geared for retrofitting older homes and buildings.

A very significant portion of New Jersey's energy usage is for heating and cooling. About fifty percent of our residential energy uses for heating and cooling, so if every building in New Jersey were built to the German Passive health standards or retrofitted to the(inaudible)standards, it would greatly help to meet our energy conservation targets by 2050.

Shawn Torbert who was here today, will be talking later, he is an expert on passive houses and he is going to go into

more detail. He is also formed a meet-up group to promote passive houses. So the bottom line is, in order to drive down the cost of energy for consumers to meet our energy conservation goals and to reduce

peak demands, I have three recommendations.

Number one, include the German Passive house standard and the Erthit standard in the EMP as important and highly recommended ways to conserve energy in New Jersey.

Number two, reward energy efficiency by including these standards in the New Jersey clean energy program and.

Number three, work towards revising the building codes so that there is a stream line process terminating process for houses built to these standards. Thank you.

MR. Mroz: Thank you for your comments. We're going -- we've been at this for an hour and a half, so let's take a break now, we will convene at twenty of three by the clock up there, so ten minutes. Thank you.

(Which time a short break was had).

MR. Mroz: Please take your seats. We will reconvene this hearing. The next several speakers are Holly Reed, Doug O'Malley and Lyle Rawlings. First is Holly

Reed, Ms. Reed.

MS. REED: Good afternoon, my name is Holly Reed, R-E-E-D, I am Vice President of Gabel Associates. I'm here today to testify on behalf of the independent energy producers of New Jersey, referred to as IEPNJ. First, we appreciate the opportunity to present our views and commend you for your efforts and continued work in this area. IEPNJ is a not for profit trade association and represents New Jersey's generators of electric power. IEPNJ members generates over 80 percent of the electricity produced in the state. Members include companies that sell electricity into the wholesale market for sale to the state's utilities which in turn sell that power to New Jersey homes and businesses. As such, members of IEPNJ are active participants in the region's wholesale power market and have a

continuing interest in assuring that there are adequate supplies of electricity to fuel the region's growth in an

environmentally and economically sound manner.

Since 1992, IEPNJ has been directly involved in shaping the laws and policy that affect New Jersey's power industry and has been an active contributor to the state's energy master planning process over the years. We support New Jersey's direction to create a cleaner more environmentally advanced energy industry throughout the consumption, transportation and production chain. The power generation industry is a vital component of this chain and generators are committed to continuous improvements in the efficiency, reliability and environmental performance of its plants.

In this regard, the one factor I wish to emphasize is that the most efficient way to New Jersey to achieve its goals is to rely on competitive markets and let them work. Competition forces market

participants to respond to competitive pressure by improving efficiency which in

turn reduces costs and improves environmental quality.

New Jersey's generation fleet has evolved and improved significantly over the years through this process. We recommend that you continue your good work in fostering the competitive energy marketplace. IEPNJ looks forward to continuing to work with New Jersey to promote policies that encourage the responsible development of generation resource needed to meet New Jersey's demand for power. In addition, we are always available to serve as a resource of information as you think through important issues. Thank you for your time.

MR. Mroz: Thank you for your comments. Next is Doug O'Malley from Environment, New Jersey.

MR. O'MALLEY: Good afternoon. My name is Doug O'Malley, D-O-U-G, O'M-a-l-l-e-y, Director of Environment, New Jersey, representing more than twenty

thousand members across the state, as well

as 50,000 supporters. I wanted to thank president Mroz, and commissioner Solomon and Commissioner Berkley and also sincerely congratulate you, Mr. President, for your confirmation this morning (inaudible)as well as commissioner. And I want to start off I am going to work off my comments from Tuesday. However, I do want to repeat the concern, also brought up by (inaudible) concerning the ability for the public to comment on the final process, not just the process but the final EMP that is created out of having these hearings and to allow some sort of public ability to weigh in on those findings.

I have been wanting to start off with some recommendations (inaudible) on Tuesday v -- I think it's very critical of the Energy Master Plan over the course of the last four years, (inaudible) finance analysis that we have seen, especially climate analysis that occurred here in New Jersey and specifically the work of professor Van Korkey's and professor

(inaudible) in Rutgers, New Jersey, (inaudible) expect to see in New Jersey in the course of the next thirty-five years, a foot and a half above sea level rise is expected, stronger storm surges especially in our back bays and our anticipated (inaudible). I also strongly encourage the inclusion of the (inaudible) national climate assessment released last spring in 2014. That climate assessment (inaudible) regard to impact of climate and one of the sites specific in J-1 that from 2007 and 2013, there is an average of four federally declared disaster areas in every county in the state, including nine in Atlantic County, and (inaudible) and (inaudible) stream specific of that exacerbated (inaudible) increase by more than seventy percent from 1958 to 2010. That is obviously an incredible percentage and we have seen that play out with the amount of federal disaster declaration we have seen in the state to say nothing about (inaudible).

And finally in terms of climate

impact, I think it is critical to also note the increase in heat, the extreme heat that we see especially in our cities, and is very important for places like New York. I wanted to note, too, part of the goal of the BPU right now is (inaudible) it's imperative of the BPU to include (inaudible) when we are discussing this, we obviously didn't want to be creating projects that ended up under water in thirty-five years, (inaudible), unfortunately under the DEP rules for coastal zone management that was just finalized last month, sea level rise, it was not included in that analysis, and I really encourage working with the utilities, not to repeat at that same (inaudible). I want to discuss a little bit something on some of the wording that seemingly every testifier, (inaudible) appreciate your comments professor Mroz regarding the need to meet those goals and research those goals as well with reference to the work EPA made on the building code standards, obviously still needs work on

(inaudible) encourage BPU to reach out and (inaudible) regarding a fuller analysis of the entire study looking at whether the program, especially low income (inaudible) and in New Jersey as far as some of the properties going forward, that's a true win-win for consumers especially for incentives as well as energy savings. I don't want to reference this importance we heard before of, you know, not only in meeting the energy efficiency goals of 2011, but (inaudible) in 2008 and some of the research that was provided in 2008 as well some of the testimony that you heard from (inaudible), clearly a lot of the states are leaping ahead of us in the score cards of having energy efficiency resource standards and we strongly encourage the board to reexamine this issue and the petition (inaudible) by the New Jersey Sierra Club, at least an energy efficiency resource that really can help New Jersey meet some of those goals outlined in 28 (inaudible) by a binding but there is obviously a lot more that can be done and I

would particularly (inaudible) about the loss of 11.5 billion dollars in benefits for consumers that because of the failure to include those 2008 recommendations.

I want to move on to air quality references, and really the importance of BTU (inaudible) reference air quality and specifically, the findings, year after year of American Lung Association, I (inaudible) this specifically for effective population on Tuesday. I did not reference the fact that (inaudible) counties, filled on ground (inaudible) those that are young or old are recommended not to go outside. You know, that is -- you know honestly, you know, the reality that shouldn't exist in this state, we should not be restricting the ability of our public residents to (inaudible) based on whether it's hot or not and obviously the governor himself understands this because when it was hot, he had an asthma attack because it was a hot summer day. I think it's also important to reference some of the testimony we have heard regarding

25 expanding fossil fuel generation in the

1 state, specifically gas generation in the
2 state. We have heard a lot of testimony
3 and a lot more earlier today and a lot more
4 earlier regarding the (inaudible) facility.
5 I am not going to go into all the
6 arguments, I will say, however, that by
7 re(inaudible) the facility, the gas
8 facility and running it nearly three
9 hundred sixty-five days a year, it will
10 become the number one (inaudible) in South
11 Jersey. And to say nothing of the fact
12 that (inaudible) the facility for those of
13 us that go to Ocean City on a regular
14 basis, I notice in the (inaudible) plan and
15 we are talking about resiliency to re
16 powering facilities that are in (inaudible)
17 plans right along the shore. (Inaudible).
18 In reference to the newer energy
19 (inaudible) is also in the flood plain and
20 the DEP estimated that (inaudible) has to
21 be decreased, so we are talking about in
22 the state, we have seen and we need to keep
23 the opportunities that are being impacted

by the DEP, it's exacerbating the impact for the energy center.

Finally, I want to talk about a program I referenced, but really it's about a program that has had multiple success across the northeast region and that of course is the (inaudible). Was conceived of, quote, more than a decade ago. It was (inaudible) by the governor (inaudible) as well as (inaudible) the Massachusetts and through the work of (inaudible) and the program obviously took a long time to get it off the block but it has proven to be a remarkable success for those commissioners that were able to attend the meeting in Newark last month and the national association of regulatory commissioners, you may have heard or may have been (inaudible) research in (inaudible) looked at the programs in 2009 to 2011, to look at its benefits in the first three years and further analysis of the benefits from 2012 and 2014. And really (inaudible) document 1.3 billion dollars in economic value

provided by the (inaudible) for
the(inaudible), and an additional fourteen
thousand jobs as well as 450 million

dollars saved for the consumers and also
perhaps (inaudible) produced the
(inaudible) fossil fuels, imported fossil
fuels from outside of the region with a
savings of more than 1.27 billion dollars.
That's a lot of money to be left on the
table and the (inaudible) the study last
September estimating New Jersey will lose
close to half a billion dollars and
(inaudible) the program currently includes,
(inaudible) to the governors who indorse
our governor in his presidential run. That
being said, you know, the governor and the
DEP and perhaps a fit of intentional or
unintentional timing, announced that the
state was going to be officially pulling
out of the regulation (inaudible) the same
day the DEP (inaudible) was released. It's
unclear whether the governor is going to
allocate conversation (inaudible), that
being said the board of public utilities

should anticipate the potential benefits that (inaudible) program which obviously becomes more likely under a new governorship.

I wanted to just conclude by again reiterating the importance of a energy efficiency resource standard as part of this plan and a 30 percent reduction in our energy use by 2030. And one last note that I referenced (inaudible) there is a clear path forward for the board of public utilities (inaudible) on part of the (inaudible). I would strongly encourage for those programs to be update with the new time lines, obviously looking to make (inaudible) a reality in this state. Thank you.

MR. Mroz: Thank you for your comment. The next several commenters that were preregistered are Lyle Rawlings, Shawn Torbert and Markian Melnyk. Mr. Rawlings, first.

MR. RAWLINGS: Good afternoon and thank you President Mroz. Lyle, L-Y-L-E,

Rawlings, R A W L I N G S, And I represent the Mid-lantic solar energy industries association.

As I said, thank you president Mroz and commissioner Solomon and (inaudible)

for holding this hearing.

I am very confident that if not in these EMP hearings and if not over the next year or two, eventually, New Jersey will follow other leading countries and other leading U.S. States in concluding that New Jersey's energy future will be a renewably fuel future. Others here have and will testify about the urgency and necessity of adopting this change in course, so today I will focus on the technical infrastructure issues in adopting a high penetration renewable future.

(Inaudible) will submit written comments and along with that will be submitting the brilliant work of (inaudible) Dr. Mark Perez of Columbia University, as well as information on the annual experience of other countries who

are already well along this path.

In technical infrastructure terms we hear a lot about how renewable energy has a problem in that it is intermittent. And this is very true and it is a real challenge, however, the actual experience

of these countries, as well as the research of the doctors and others, have provided answers to this intermittency barrier and I want to talk about that a little bit.

There are several measures that can be taken to overcome this challenge. The first is the right generation mix and I mean the right generation mix of renewables. Solar, combined with wind combined with biomass goes a long way towards overcoming this intermittency. Solar provides for the people in the middle of the day, wind does more in the morning and afternoon and at night and there is also a very good match in seasonal terms between solar and wind and biomass, of course, in the steady -- throughout most of the year.

Just doing that, mixing the renewable sources properly can go a long way towards overcoming the intermittency, but it won't solve it all. Another extremely important element is the geographic mix. If we build high voltage DC transmission lines that cover different geographic areas, it has

been shown both in places like Germany and (inaudible) New York and New Jersey, that geographic diversity that will cause the intermittencies to cancel each other out. Going through this source answering that question. Another element that is needed, a third element, is demand management and load shaping. In the renewable energy future, it's going to turn on its head, the current reality where prices spike very high in the middle of the day, already in Europe it's turning out that in the middle of the day the price is cratering and even going below zero, that's because so much solar energy is being generated in the middle of the day. So in the future, we're going to incent people to use more power

when power abundant and less when it is not and that requires a great deal of coordination.

A fourth element that everyone talks about is the need for electric energy storage. We are going to need a lot of that, both in a large scale and distributed.

A fifth element that is coming to the floor recently is curtailment. We're going to have times in the future, when we are generating so much solar or so much wind, that we're going to have to turn it off or turn it down. So the ability to curtail solar is going to be important. It's already being done very widely in California.

And then sixth, we need much more complex capability to control the grid and to manage the complex transactions in what (inaudible) called the two way grid of the future. It's going to be a two way (inaudible) and also much more complex transactions taking place among dozens of

generators but tens of thousands of generators. That will be a challenge, too.

When all of these measurements are combined in the right quantities, and intelligently, the high penetration renewable energy future will be less costly overall once all props are properly accounted for and included. Less costly and an economic benefit more than a fossil

fuel (inaudible). But when we look at these six measures that it takes to make that happen, a curious thing arises. You notice that these particular measures like a generation mix of solar and wind, you still get companies, they are going to have a natural role in it, not all of it, private industry may take the bulk of it, but utilities have a nature role to build part of that.

You look at the geographic mixing and the need for this long distance high-voltage new technology transmission, that is a natural role for the utility company and a great investment, the PJM

study, says 8.6 billion by 2026 to get to the thirty percent renewables. We look at role shaping and demand management. That's a natural utility role that uniquely able to deliver that sort of demand management on a state-wide basis. You look at electric energy storage. Much of that can be done by private industry, but the large scale energy storage, again, perhaps a natural role for utility companies,

curtailment of renewables, the ability to reach across the grid and to find out what we want to turn down solar and turn down wind, that's a natural utility role. In fact, a necessary utility role. And you look at the more complex grid control and the more complex transactions that are taking place, again a natural utility role. So (inaudible) in the future that it doesn't work for renewable energy future to have utilities that are weaker and not as financially capable. These are investments that will require healthy and robust utility companies and we believe that

public policy and the direction we take must go in that direction, as Europe is finding out now. Their utilities have gotten far far weaker and lost, as I said on Tuesday, half a trillion dollars in value and they're now realizing that they need this infrastructure and don't have a utility community well enabled to provide it.

But overall we do all these things, we know that this renewable future is possible

and (inaudible).

I conclude, and there is one last element of this smart generation mix that I am talking about, a seventh element you can say, and that's if we're going to head toward a largely renewably fueled future, we're going to have to be very careful in the near term, right now, in how much fossil fuel infrastructure we build, because it maybe as it is now in Europe, unneeded useless in the renewable energy future, so we don't want to make too many (inaudible)investments right now and

furthermore, what type of Fossil generation are we going to build. There is new technology that is both more efficient and more enabling and more compatible with renewable energy for the future. That's an available in an extremely modest cost. If we build (inaudible) that would be incompatible with the renewable energy future, that would be extremely foolish. That concludes my remarks. Thank you again.

MR. Mroz: Thank you for your time.

The next person is Shawn Torbert from LEED AP.

MR. TORBERT: Thank you all for the opportunity to speak today. I would also like to thank (inaudible) for introducing the Passive House Standard earlier. He did a great job for the background on the standard.

As I said, my name is Shawn Torbert, LEED AP, as well as Certified Passive House Designer, and member of the Construction (Inaudible) Institute. I am also on the

Board of the New York Passive House, which is a non-profit that has been taxed with (inaudible) Passive House Standard throughout New York City and the region and work with New York City Council, (inaudible) 80 percent reduction by 2050 goals. And their (inaudible) City Plan.

So forty percent of our energy nationally, goes to built environment. Of that, approximately ninety percent is used to cool our building. In dense urban areas such as New York City or cities in New Jersey, that energy usage can be up to

seventy-five percent of our total energies and emissions.

So the passive house standard has a clear performance based goals that can reduce building energies usage by seventy-five to ninety percent.

Due to the super-insulated air tight building envelope combined with high performance windows, even without power, passive house buildings can maintain a safe interior ambient temperature for weeks to

sometimes months. This is essential for public safety and of course post Super Storm Sandy.

This is not a future technology. It's a past and present design standard that is proving to work and continues to work for the life of the building.

So some examples of the passive house standard working, in Brussels, 2001 Brussels was the worst performing energy wise and the most clean of any city in Europe. It made ambitious goal to reduce their energy usage and emissions by 2015 by using the passive house standard. They

have done that for all buildings both existing and new construction.

In New York City, as I mentioned, the Passive House Standards, specifically calls out as the stepping stone to the 80 percent emissions reduction by 2050 by Mayor DeBlasio's "One City:Build to Last," Plan.

Additionally here just across the river, in Philadelphia, Pennsylvania, the Pennsylvania housing authority, has called

out the passive house standards be used for all Affordable Housing, thereby reducing the tax burden of the citizen of Pennsylvania.

In San Francisco, the Passive House Standard has been used to streamline the permitting process, thereby speeding up construction and eliminating a lot of the red tape required in the permitting process.

Both here in New Jersey, my own house in Long Branch, New Jersey, (inaudible)Super storm Sandy was completely gutted and rehabbed using the passive house standard and it's now functioning with no

central heating or cooling. We were able to remove the gas line and completely run off electric.

Additionally, (inaudible) to a technology for this year's department of energy (inaudible) competitor, issuing the passive house standard to design net positive (inaudible) positive home for the Jersey Shore, that will actually be

floodable and also generate enough energy to charge the (inaudible) grid.

I know the big question is what is this all going to cost and it actually shouldn't cost anything. For every one million, according to a study from Canada done from 2002 to 2012, every one million dollar that is reinvested in energy efficiency measures, creates fifty-seven jobs years. That's one job for 57 years or fifty-seven jobs for one year.

Additionally because the energy costs are so significantly reduced, it reduces the tax burden of New Jersey residents that are paying for affordable housing and government buildings.

Additionally, it reduces the public health costs associated with poor air quality and also makes renewable energy cost-effective feasible by reducing the amount of renewable energy needed and also to be a stepping stone to net zero energy buildings.

Lastly, it incentivize developers and

builders by streamlining the construction and permitting process. So, as you know, time is money, especially in construction and we have seen that in New York City where they just broke ground on the first twenty-six story high-rise passive house be (inaudible).

In closing, I would like to encourage the State of New Jersey to consider using the Passive house standard or similar as an alternate energy code compliance pathway to create local jobs, increase our resiliency, and improve the public health and safety for all of our citizens.

Thank you.

MR. Mroz: Thank you. Thank you for your comments.

Next is Markian Melnyk from Atlantic Grid Development Company.

MR. MELNYK: Good afternoon.

M-A-R-K-I-A-N M-E-L-N-Y-K.

Thank you very much, Mr. President and Commissioner Solomon. I'm the president of Atlantic Grid Development. We have a

project called New Jersey Energy Link. It's a transmission project here in New Jersey. Commend the Commission on its effort to revise the Energy Master Plan, it's a good idea to keep it fresh. A lot of change since the last (inaudible).

My comments here are focused on electric transmission and as I review the current plan, (inaudible) it's a little bit like and that's understandable because PJM, the (inaudible), is the entity that is principally responsible for transmission.

But transmission has a very large impact on New Jersey. PJM has stated in connection with explaining New Jersey's high electric capacity costs and in the (inaudible) zone, that transmission, that it's historically transmission constrained

and the PSEG zone has not attracted a lot of a new generation, that PJM as attracted.

In addition, the New Jersey Large Energy Users Coalition, has taken a position that higher energy costs in New Jersey are driven in large part by the

related problems of the state's congested electricity grid and the concentrated generation (inaudible). And as PJM has observed, the problems with transmission are typically significantly as they affect the PSEG zone. And that zone is the zoning state that includes most of the state's large cities, the population, industrials and commercial facilities. So it has a large impact on city ratepayers.

In recent PJM electric capacity auctions, the PSEG zone price was $95 per (inaudible) was higher than the rest of PJM, in real terms this translates into about three hundred forty-seven million dollars more that ratepayers in New Jersey pay each year than they would pay if the price was more even across New Jersey. So this problem is of interest to me because

our company has a transmission project to help alleviate that problem.

The New Jersey Energy (inaudible) and would connect southern New Jersey near Atlantic City with northern New Jersey and

it would provide a pathway to move a lot more energy and capacity (inaudible) with more supply concentrated competition (inaudible).

And I am not going to dwell on that issue. What we're interested in here is broader concepts to the master plan.

I started my remarks by saying that the he EMP was a little light in its treatment of transmission (inaudible) did not have the authority. But since that last EMP, PJM has adopted changes to its (inaudible) that gives the board much more ability, another level to deal with high energy prices in the state. It's particularly relevant because since the last EMP was adopted, before it went through protracted (inaudible) to encourage the construction of additional generation in this state and that was beaten back by

the courts. So this new authority that the board has, this new ability to effect transmission that's in the PJM (inaudible), is a new opportunity that needs to be

recognized in the plan. It's a new lever for the board to be use.

So the process that (inaudible) is known as a stated agreement approach and allows the state, any state, New Jersey in this case, to go directly to PJM and have transmissions built that advances important state policies, things like energy resiliency, addressing high prices, making energy more affordable.

So I will conclude by your urging the board to take this new power that's present in the PJM (inaudible) into account in the next Energy Master Plan and to take a more proactive role regarding transmission including (inaudible) projects like the New Jersey energy line. Thank you for this opportunity.

MR. Mroz: Thank you for your comments. At this point, on our list, we have come to the end of the preregistered

speakers, although I see Mr. Kringle, he -- oh, no comments? Okay, thank you.

And there is (inaudible) desire to

speak. And if not, we will move onto those that did not preregister, those that registered today as they came here and indicated they wanted to speak.

The first is Peter Schweinsberg.

There is no indication or affiliation or representation. Mr. Schweinsberg?

MR. SCHWEINSBERG: Peter, S-C-H-W-E-I-N-S-B-E-R-G and I am representing myself.

Scientific findings are more than just opinions. Justified opinions. If (inaudible) serious observations (inaudible) is a fallacy to then conclude the is the case, hence, science is not formal proving, however, through the process of inference and through testing (inaudible) by means of (inaudible). Science is the best process we have of making tons of observations and there is no warranted alternative. Global warming, climate change and (inaudible) resulting

from (inaudible) are extremely well supported by scientific findings. In the

present time, hardly a year goes by, that hasn't beaten the record for (inaudible) in fact, there has not been a warmer yearly average since the beginning of finding evolution. Winter is eleven days shorter than in 1970. Flowers are blooming earlier and earlier in the year every year. (Inaudible)has been reduced substantially. The length of the fire season out west and in Alaska has grown seventy-eight days since 1970 and hurricanes are now sixty percent longer and have 50 percent great peak winds than preindustrial science.

Moreover, global warming and climate change have accelerated at best. Previously, frozen methane and Arctic permafrost is being released in copious amounts. (Inaudible) also warming human kind has ever (inaudible) up to this point.

Loss of ice cover is warming the planet by reducing the heat reflected back into space. The warming of ocean water reduces (inaudible) carbon dioxide. Ocean

acidity reduces the ability of (inaudible)

to produce calcium carbonated shells thereby keeping plankton from holding carbon. Forest fires are reducing forest cover, releasing more carbon dioxide in the process. Hurricanes, too, reduce forest cover. Katrina and Risa in 2005 damaged more trees in Louisiana Mississippi than any recorded forestry disaster in history at that time. Warmer temperatures lead to the increase microbial activity in soils, releasing very large (inaudible) of carbon dioxide. It's amplifying (inaudible) being to show the urgent need to take more action. It's only a matter of time before global warming accelerates beyond our ability to stop it, if it hasn't already done so. Global warming, climate change and (inaudible) are mostly caused by (inaudible) and cannot end without eliminating fossil fuel use.

(Inaudible) as mentioned by Jeff (inaudible) at Monday's hearings and (inaudible) to exceed those proposals. Thank you.

MR. Mroz: Thank you for your comments. The next is Rita Yelda. Good afternoon, Ms. Yelda. If you could indicate whether you have affiliation or represent someone.

MS. YELDA: My name is Rita Yelda Y-E-L-D-A. And I am representing food and water loss. We're an international consumer advocacy organization that works for safe food and clean water. And today representing our supporters and members in the central New Jersey region.

So in considering addition to the New Jersey Energy Master Plan, we should be moving the state forward for clean energy, not (inaudible) investment into fossil fuel and its infrastructure.

New Jersey's energy future should be built on some water and wind generation and increase energy efficiency across the board.

The Energy Master Plan must set and meet ambitious goals for greenhouse gas reductions based on the (inaudible) with short and medium-term benchmarks

accountability measures to ensure that they are met.

The Energy Master Plan hasn't done enough. The plan promotes doubling down on fossil fuels and doesn't do enough to work toward energy efficiency and clean energy programs.

The Energy Master Plan unfortunately and strongly endorses the expansion of a fossil fuel infrastructure across the state by expanding gas pipe lines and fossil fuel power plants in our communities, so as some of the others have stated, there are numerous pipe lines that are either proposed or being built right now that go all across New Jersey, two of which are planned to go through the sensitive pinelands region in parts of South Jersey.

We need to consider all the ways that further fossil fuel developments will hurt our communities so that we don't continue to make the same mistakes. We need no more fossil fuel pipe lines, no more oil trains that threaten our water sources, no more offshore and relief facilities, no

(inaudible) which has already come into the state and no more fossil fuel power plants in our neighborhoods like the New York energy center. The BPU should not be extending the life of old pollutant fossil fuel power plants or building new ones. Any effort to keep these plants operating should be very short term or there will never be opportunities for the entrance of new technologies. Instead of doubling down on fossil fuel, the BPU must create incentives for energy efficiency and clean energy that meet strict carbon molds.

The Energy Master Plan should also prioritize community owned and shared efficiencies and renewable projects so that we can gain collective control over our energy choices, ensure local jobs and keep energy dollars in our own communities. (Inaudible) as well as pathways to clean energy ownership, must be open to all New Jersey residents, not just some, not just homeowners, but everybody, not just the people who can afford it.

The transition from efficient

renewable energy system should be (inaudible) and just. State sponsored clean energy programs should be designed to delivery job creation, cost savings and health improvements for individuals and communities that are most in need of these (inaudible).

Our new energy policies must reverse insecurities of low income communities and address the pollution that disproportionately burdens communities of color.

The Energy Master Plan (inaudible) and under minds clean energy and (inaudible) it does not go far enough. This plan will continue to (inaudible) and money our of New Jersey, adding more pollution and hurting our public health. With careful planning and fossil execution, New Jersey's Energy Master Plan could really break new ground and bring New Jersey less carbon emission, cleaner energy, more jobs and healthier communities. Thank you.

MR. Mroz: Thank you.

Just to return to the preregistered list. Please come up.

MS. HUTTER: S-I-A-R S-A-X H-U-T-T-E-R.

I am speaking for myself, but I am on the board of the local Washington Crossing Aubudon society. I mostly want to encourage you to speed up the transition to renewals, to encourage energy efficiency and encourage plus energy use such as light parking lots, street lights, office lights, whatever we can do, particularly at night when they're empty, not needed. I want to also -- what I would really like to emphasize is not relying on natural gas as a heavy crutch, get it through transition to renewal.

Future emissions are worse than we realize, much worse, producing carbon dioxide and the infrastructure issues with pipe lines. We're getting hit with a rash of pipe lines and I don't want to see unnecessary build outs. They will be going through our preserved areas, our

(inaudible) the areas that make life worth living in New Jersey. If we lose these,

the weekends, when you're not working and so forth, it's just not going to be the same and that's my major concern. Thank you.

MR. Mroz: Thank you. The next speaker is Ray Albrecht. Come up and give the court reporter your name and also if you represent an entity.

MR. ALBRECHT: Thank you very much. My full name is Ray Albrecht, so R-A-Y, my last name is spelled A-L-B-R-E-C-H-T. And I work as a technical representative for the national (inaudible) diesel farms, so we're going to talk bio-diesel for a few minutes here.

I provide technical education for state agencies and not-for-profit organizations and a whole host of other folks across the United States. I appreciate the opportunity to come here to talk a bit about some innovative ideas that you should consider within the context of

your energy plan process.

For those of you who may not be familiar with bio-diesel is, it's a liquid

fuel that's a direct replacement for traditional diesel fuel or heating oil and it comes from organic sources, such as vegetable oil, or recycled cooking oil, it can also come from organic waste, for example, where you can go through a (inaudible) process, which is methane and then take residual from that and go through a sort of (inaudible) based, semi-fermentation process to produce (inaudible) and then used to make bio-diesel. So simply put, a renewable liquid fuel. Bio-diesel by way of technical introduction saves about eighty to ninety percent in terms of greenhouse gas emissions (inaudible) fossil fuel, and that includes natural gas especially if you incorporate and take into account methane losses from the pipeline system, okay.

And it (inaudible) these carbon reductions at the eighty percent plus level

that we really want to achieve by 2050 so it's not a bridge fuel that grows part way, it's the end goal fuel that (inaudible) renewable technologies that we can

consider.

Bio-diesel produces jobs that can be made locally. We can speak for hours about the economic benefits of that but we will put that aside.

I would like to get straight into some policy suggestions and topics that you might evaluate further, we spent a lot of time this afternoon talking about power reduction, both generation here in New Jersey. Bio-diesel is already being used in pockets across the U.S. (inaudible) very heavily in Hawaii, now, in some locations in New England, okay, in place of oil as a fuel.

One of the big opportunities for renewable liquid fuel is (inaudible) is in the very best technologies, for example a good portion of combined cycle gas even cycle power generation systems can use

liquid fuel, bio-diesel is a natural drop in replacement, so under all of these programs that we have spoken about whether (inaudible) or EPA clean power plant, there is a big door that we can walk through in

order to accomplish those goals and that is to start to add in renewable liquid fuels into the fuel mast.

In terms of thermal applications, you know, heating a building or industrial processed heat, bio-diesel is already being used as a component in heating oil, whether it's (inaudible) which a very clean product, especially with number six, heavy oil, which there are still pockets of (inaudible) being used across the entire northeast and you add bio-diesel which is a (inaudible) fuel, you can not only address the carbon footprint aspect which is globally important to everybody, but also you directly positively impact local air quality for the reduced particulars in essence.

We have spoken about combined heating

power, okay, which is producing heat and electricity at the same time. Also the concepts of (inaudible) for the purpose of sustainability and resiliency, bio-diesel, I think has a lot of untapped potential for those applications, especially since it

would be stored on-site as opposed to depending on a pipeline that might be vulnerable to disruption the key aspect of CHP okay, that applies to renewable fuels is that when you get high value in both the electric output thermal output is that you can finally get the numbers to work, dollars and cents wise, and achieve the payback that we need with renewable energy, all right, so that is why it's really important for the Energy Master Plan to focus on how you can make CHP work better in New Jersey.

The final policy suggestion or subject that EMP should look at, we would like thermal RPF programs. We made several references to electric RPF programs today. Another phase across New England which

includes now New Hampshire, Massachusetts, and just recently Vermont, and soon to be Rhode Island, have developed renewable thermal add on components to their electric RPF program since these thermal programs now incorporate the same features that the electric RPF programs, obligated components

have been quoted that they need to meet producers of renewable thermal energy (inaudible) renewable energy credits and there is a marketplace based mechanism there for encouraging the use of renewable fuel or renewable heating technologies out there in the world of residential, commercial and industrial facilities and I think it would be really be a smart thing for New Jersey to look at those.

We would be happy to help with technical assistance on this as the agency folks want to look at maybe some ideas that haven't been wrestled with and (inaudible), so we will be happy to help. Thank you for the opportunity to talk --

MR. Mroz: Thank you for your

comments. Let's take a five minute break, we will come back quarter to four.

(Which time a short break was had)

MR. Mroz: Could I have your attention. At this point we have three more speakers registered. They are Elvin Montero and John Tomicki and M. V. Ramano,

if I'm getting that last name right. So Mr. Montero from (inaudible).

MR. MONTERO: Elvin, E-L-V-I-N, Montero.

Good afternoon, president Mroz, commissioner Solomon, thank you for this opportunity. Again, my name is Elvin Montero, and I am the Chemistry Council of New Jersey. We represent more than 60 chemistry manufacturers in the State of New Jersey, many of which are large energy users. They are all part of New Jersey's 25.3 billion Chemistry Industry -- just last month, we ranked our annual member survey which goes out to our membership and once again for the eighth consecutive year,

the listed energy cost is one of the major issues of concern and you can appreciate this because structural (inaudible) national average, but for some energy (inaudible), energy for both fuel and power, the feedstocks account for up to 85 percent of total production costs.

So the cost of energy impacts the bottom line. We need active affordable

reliable and safe energy to help stimulate the economy, investments within our sector and the (inaudible) cost New Jersey for the chemistry industry at a competitive disadvantaged.

The average electricity rate for all sectors has dropped about nine percent since 2011 when the last time I was up here, testifying about this current master plan. The residential rates have dropped about two percent but all energy rates still remain above the national average. We congratulate your efforts to date, but we challenge you to (inaudible) goals of the Energy Master Plan, particularly the

one To Drive down the cost of energy for all customers. BPU is right in keeping energy costs in mind for all rate payers, while considering any change to the EMP, particularly as they relate to any new resiliency policies. New Jersey should continue to promote a diversified energy portfolio that is sensitive to the electricity rates consumers will ultimately pay and should consider all energy

generation solutions, including nuclear and co-generation to help bring down the cost of energy while meeting the state's environmental goals.

Even the EPA clear energy plan recognized that industry combined heat and power, or CHP units, should not be subject to others in the final CPP. Given the environmental benefits of CHP and the U S government's efforts to promote growth of industrial distributed generation, continued support for safer, natural gas developments and energy generation will also help provide reliable energy at lower

costs while mitigating emissions. In fact, two days after the EPA plan was released the energy information administration issued a press release entitled monthly power sector carbon dioxide emissions reach 27 year low in April. Natural gas production is largely the reason emissions are reaching record lows. Increased natural gas use was responsible for more than 62 percent of electric power sector CO2 savings from 2005 to 2013 according to

an October report:

EMP should continue to support the safe expansion of natural gas pipe line system. Certainly the chemistry counsel is not against alternative energy generation, in fact, our member companies are leading the innovation that is helping to make the product used in solar panels and wind turbines more cost efficient and effective. But we are against the funding models that have been afforded certain alternative energy solution guaranteeing a high rate of return at the expense of rate payers. We

encourage the state to continue to implement the EMP's guiding principle to look at cost-effective alternative energy generation options that demonstrate a net benefit to rate payers, while protecting the environment. Any -- we do, however, remain a little concerned about the potential impact on the electricity rate for all rate payers with the renewable energy portfolio standard of 22.5 percent from renewable sources by 2021 will have. We are just six years away from only about

four percent of our energy from renewable sources.

We certainly encourage the promotion of energy efficiency in New Jersey. It is a practice that our members have engaged in regularly and have benefitted from. The only caution that we add is that as you set the standards that you are mindful that (inaudible), because technology can meet the needs of our efficiency goals, we are limbed to energy efficiency innovation currently available. In terms of energy

infrastructure upgrades, particularly as it relates to resiliency, CCNJ supports retaining the current rate making structure for utilities, the traditional rate making structure properly balances utility needs and consumer protection in a manner that is most accountable and transparent. We want to advance real solutions that will improve reliability for all electric consumers, not shortsighted plans that can result in millions of dollars in profits for the utilities and limited benefits to rate payers. We can't afford hirer energy rates

from multi-billion dollar energy proposals that are not properly scrutinized or deemed necessary effective or financially prudent.

In closing, we again congratulate the BPU and the state for it efforts thus far. We encourage you to stay the course with the Energy Master Plan by implementing environmentally conscious energy initiatives that can ultimately reduce electricity rates, revitalize New Jersey's economy, and secure our energy future. And

always keep in mind the rate payers, not just the structural rate payers, with electricity rates at 60 percent above the national average, but those who are making the decision between paying for food, medicine or the electric bill. Thank you.

MR. Mroz: Thank you for your comments. Next is John Tomicki.

(NO RESPONSE)

MR. Mroz: The last person that we have registered to speak is M.V. Ramano. Will you just confirm the spelling your name and if you're representing anyone or affiliated with any groups.

MS. RAMANO: I am with the New Jersey (inaudible) from (inaudible) and economic safety and production for meany years. I would like to focus on three points. The first which I haven't heard addressed today concerns the consideration of (inaudible)construction Energy Master Plan. The EMP notes that (inaudible) problematic and uncertain and high rates of safety associated with nuclear gas or accident and

the (inaudible) high construction costs and (inaudible) however, the EMP also states that unless New Jersey pursues additional (inaudible) the current greenhouse production will also be unattainable. This is not (inaudible) first constructing new nuclear gas (inaudible) is going to be in direct contradiction to the (inaudible) which will drive down the cost of energy for all consumers. (Inaudible) is not going to get any cheaper, and practically all (inaudible) demonstrate that nuclear power has not in both (inaudible) and France, the two countries with the most (inaudible)anywhere in the world, cost of

nuclear construction has increased (inaudible). (Inaudible) with the reactors under construction industry (inaudible) showed us the future of this power is not (inaudible).

Second, there are many studies, including ones that I have conducted myself, that showed that (inaudible) and meets plans without increasing nuclear

power capacity. All of these causes will (inaudible) more energy efficiency and (inaudible) sources. The goal of (inaudible) is a good first step but in light of these increased costs, (inaudible) this could be enhanced.

Third, to the extent that there is concern about the limited nature of solar and wind power, nuclear powers will be (inaudible). Both (inaudible) nuclear reactors cannot increase or decrease the power (inaudible) and the folks can argue that (inaudible). That can be done only through the deployment of (inaudible) powers open gas lines and (inaudible) power and (inaudible). Limited use of

(inaudible) technologies and demand (inaudible).

(Inaudible) but (inaudible) cheaper in contrast to nuclear power.

These (inaudible) these problems with nuclear power and (inaudible) elsewhere are not going to be solved by new (inaudible). I (inaudible) to more modern reactors and

both of them are definitely going to be more expensive than (inaudible).

In recent years more and more reactors have been widely (inaudible) but our examination of these different designs show that none of them can solve all of these problems simultaneously and (inaudible) one problem particularly to make others worse. For example, (inaudible) safety, but that same type makes (inaudible) waste deployment.

My second point is that the EMP does not adequately (inaudible). To what is critical and power plan (inaudible). Most common (inaudible) and strong purpose. In order to accomplish this they should aim to as much greater levels of resiliency

including two (inaudible) using (inaudible) combined heat and power blocks. As experience with this (inaudible) in the aftermath of Sandy (inaudible). And efficient on campus power (inaudible) combined from seeking power plants (inaudible) and a solar panel (inaudible).

(Inaudible).

Third, in planning, it's important to remember that much of the natural gas infrastructure (inaudible) these will be the main determinants of New Jersey's green house gas emission (inaudible) but also methane in the medium and long term future. It is critical to enhance the lines of natural gas. I thank you for allowing me to offer my comments.

MR. Mroz: Thank you for your comments. That concludes the list of individuals who registered who wished to speak. Is there anyone else that is here that has not spoken and wishes to do so? Seeing none, I will conclude this hearing. I thank you all for your participation and we will have one more hearing Monday

afternoon of next week at Stockton University at 1:00 p.m. Thank you.

(Hearing was adjourned at 4:15 p.m.)

C E R T I F I C A T I O N

I, RICHARD A. MERLINO, being a Certified Court Reporter and Notary Public within and for the State of New Jersey, do hereby certify that the foregoing is a true and correct

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