

THE FUTURE OF THE GRID: PROPOSALS FOR REFORMING NATIONAL TRANSMISSION POLICY

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND ENVIRONMENT

OF THE

COMMITTEE ON ENERGY AND
COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

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THE FUTURE OF THE GRID: PROPOSALS FOR REFORMING NATIONAL TRANSMISSION POLICY

FRIDAY, JUNE 12, 2009

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:24 a.m., in Room 2123, Rayburn House Office Building, Hon. Edward J. Markey [chairman of the subcommittee] presiding.

Present: Representatives Markey, Inslee, Butterfield, McNerney, Welch, Pallone, Green, Capps, Harman, Baldwin, Matheson, Barrow, Waxman (ex officio), Upton, Whitfield, Pitts, Scalise and Barton (ex officio).

Staff Present: Matt Weiner, Legislative Clerk; John Jimison, Senior Counsel, Energy; John Beauvais, Counsel; Jeff Baran, Counsel; Melissa Bez, Professional Staff Member; Mitchell Smiley, Special Assistant; Caren Auchman, Communications Associate; Andrea Spring, Minority Professional Staff; Mary Neumayr, Minority Counsel; Peter Kielty, Minority Legislative Analyst; and Amanda Mertens Campbell, Minority Counsel.

OPENING STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF MASSACHUSETTS

Mr. MARKEY. Welcome, ladies and gentlemen, to the subcommittee on energy and environment on this very, very important hearing on the future of the grid and the proposals for reforming the National Transmission Policy. There is no more central issue to resolve here than this question.

Three weeks ago, the Energy and Commerce Committee passed the American Clean Energy and Security Act of 2009. This landmark legislation on which the House will soon vote will revolutionize our Nation's energy policy, creating millions of clean energy jobs, saving consumers billions of dollars in energy costs, and unleashing trillions in new investment.

The 21st Century grid will play a central role in this revolution. Wheeling the country's vast wind solar and geothermal resources to market. Enabling the electrification of our transportation system and multiplying energy productivity through smart-grid technologies.

The Waxman-Markey bill recognizes this role by establishing a new framework to plan the grid of the future. We task the Federal Energy Regulatory Commission with establishing national grid

planning principles which it will use to support and coordinate regional planning processes across the country.

Within 3 years, the commission must report back to Congress on the results of this effort together with recommendations for further congressional action if necessary. Some believe we should go further by substantially expanding Federal authority to plan and site new transmission lines. That includes overriding State decisions to reject proposed lines and using Federal eminent domain authority if necessary. I think we need to look closely and skeptically whether such a step is warranted at this juncture.

I urge caution for three reasons. First, if it ain't broke, don't fix it. As several of our witness emphasize, there are a number of innovative and promising bottom-up planning processes now underway from New England to the Midwest to the West. We should give those processes time to succeed.

Moreover, as Commissioner Azar's testimony emphasizes, one of the greatest obstacles to developing the grid of the future is not a lack of Federal authority but rather uncertainty as to what energy policy that grid must serve. By establishing a national renewable electricity standard, a firm cap on carbon pollution, and efficiency programs that will dramatically curb growth in electricity demand, the Waxman-Markey bill will provide this certainty needed to guide private, State and regional development of the transmission system of tomorrow.

Second, look before you leap. Transmission is amongst the most complex and controversial aspect of energy policy. Today's hearing is literally the first hearing in this committee in this Congress or the last Congress on transmission. We cannot afford to take a ready-fire-aim approach in this area.

Further there appears to be little common grounds amongst core stakeholders. To give just one example, we invited the Edison Electric Institute, which represents investor-owned utilities that own most of the Nation's transmission system, to testify today. EEI cordially declined, in part because it was unable to agree on a witness that could represent the disparate views of its membership. The testimony before us confirms that it is very tough to find agreement in this area.

And third, to a man with a hammer, everything looks like a nail. Precipitous action could result in a policy that is ill-suited to address the problems at hand and could lead to perverse consequences. For example, the Western Governors' Association will testify today that, "Western Governors see little benefit in preempting State transmission line permitting processes," because, "the major hurdle for permitting transmission in the West has been securing permits from Federal agencies."

In other words, it is the Federal Government, not the States that is the problem from the perspective of the Western Governors.

Several witnesses in the East emphasize that Federal planning or siting authority could actually undermine regional efforts to developing renewable resources and encourage expansion of high carbon generation in the Midwest.

We need to take time, take a careful look at this and see what really makes sense. Today's hearing is an excellent beginning to

this process. We have a great line up of witness, and I look forward to their testimony.

I would like now to turn to a matter related to the subject of today's hearing which has been brought to my attention. After I agreed last month to hold an oversight hearing on the subject of electricity transmission and the question of whether to adopt additional new legislation in this area in addition to the regional transmission planning language that is already in the Waxman-Markey bill, I directed my staff to obtain additional information about two important provisions of the 2005 Energy Policy Act that also dealt with transmission and which are directly relevant to today's hearing.

As part of that effort, the subcommittee sent two letters to the Federal Energy Regulatory Commission. The first letter, dated June 3rd, dealt with the impact of the 2005 bill's incentive rate provisions on the construction of new transmission around the country. That letter was sent out last week.

The second letter, dated June 9th, dealt with the impact of 2005 bill's repeal of the Public Utility Holding Company Act on the construction of new transmission. That letter was sent out Tuesday.

Neither of these letters were related in any way to the allocation hearing that the subcommittee held on Tuesday on MidAmerican Holding CEO David Sokol's testimony before the subcommittee. They were being drafted prior to our even being aware that Mr. Sokol would be invited by the minority to be a witness at the Tuesday hearing. Both letters were aimed at helping the subcommittee better understand the impact of previously adopted transmission legislation.

The PUHCA letter contained 8 questions, two of which reference Mr. Sokol's earlier testimony before Congress in support of PUHCA repeal. Mr. Sokol was one of the leading proponents of repealing PUHCA, which is why his prior testimony was relevant to the issue.

However, these questions were in no way seeking to target Mr. Sokol or to intimidate him in any way for his appearance before the subcommittee earlier this week.

The day following the release of the PUHCA letter, I heard from Representative Barton that minority members of the subcommittee had concerns about the questions relating to Mr. Sokol and the timing of the letter's release. In response to those concerns, I made it clear that there was no attempt or intent to intimidate any witness.

In addition, to make it absolutely clear that this was the case, I sent a second letter to FERC clarifying that the FERC should respond to the subcommittee's questions generically and not just look at MidAmerican specifically.

I shared a draft of that letter with Mr. Barton's staff and Mr. Terry's staff on Wednesday night immediately after they brought this issue to my attention. I responded immediately to their concerns.

And finally, I reached out to Mr. Sokol to inform him of what my intent was, to clear up the misunderstanding, and to make it absolutely clear that neither he nor his company are the focus of the subcommittee's inquiry.

So I want to say to Mr. Barton, to Mr. Upton and to the members on the other side of the aisle publicly what I have already said to them privately, that I would never seek to intimidate or retaliate against a person from having to come in and testify before this subcommittee. I value hearing the perspectives that all of our witnesses bring to the issues that we are considering.

I regret any misunderstanding or misimpressions that the contents of the letter or its timing may have raised. That is why I immediately after learning of the minority's concerns prepared a second letter to the FERC to direct them to respond generically to the questions rather than focusing on MidAmerican. That is also why I contacted Mr. Sokol directly, to let him know of my intentions and to express my apologies, which I have done.

Joe and Fred and the other members, I just want to let you know that I have the personal greatest regard for you and that in no way do I want to leave any impression at any time that we would conduct hearings that were not fair and open to all of the members of this subcommittee or to the witnesses who appear before this committee. And I just want to make that very clear, very publicly at this hearing.

I now turn to recognize the ranking member of the subcommittee the gentleman from Michigan, Mr. Upton.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Thank you, Mr. Chairman.

And I, like many members on this side, do value your friendship.

I realize we are adversaries, good adversaries, on a number of fronts, and we have been together on a number of fronts.

And I know, as we have talked about this privately that it is very important that there is no intention to intimidate or pressure witnesses to testify in something that they perhaps don't believe in. And I for one appreciate your statement this morning.

I also appreciate you calling for the hearing today on National Transmission Policy. The electricity grid is of vital importance to our Nation. We all know that.

However, it is an area that is often overlooked, as evidenced by the fact that there were only minor mention of transmission in the Waxman-Markey climate bill and the fact that today, weeks after the climate bill has been passed out of committee, we are having our first really big transmission hearing.

We do have a long and distinguished panel today. I would like to thank all of our witness for joining us.

I would like to give special recognition to the heads of two Michigan-based companies, Dave Joos and Joe Welch. I know that ITC and CMS do not exactly see eye to eye on this issue, but I know that they have Michigan's interest at heart. And I would hope that we could all work together on this issue as we move forward.

This committee passed a sizable renewable electricity mandate without any consideration to the question of getting the renewable electricity to population centers. The strongest winds are concentrated in low population areas. The strongest sun exposure is found in low population areas as well. Existing transmission lines are centered in areas of high population, and there are inadequate

high voltage lines to the areas with the most abundant sources of renewable power.

If we are going to be serious about renewable power, we have to revamp the grid. And to properly do so, we will have to block the lawsuits from environmental groups that have increased costs and blocked much-needed transparency lines.

But let's put it in perspective. According to DOE, it would cost \$60 billion, yes B as in big, in new transmission lines to reach the 20 percent mark for wind power. Al Gore's lofty goal of fossil fuel electricity would cost perhaps as much as \$400 billion in transmission lines. And if we are serious, we must block the lawsuits and make real investments in the needed infrastructure.

A good example of these lawsuits is found in California. The proposed Sunrise Powerlink in southern California will connect the region to existing and proposed renewable energy sources, whether they be wind, solar or geothermal, located east of San Diego. Energy experts estimate that there is perhaps as much as 2000 megawatts of geothermal power and tens of thousands of megawatts in solar available in the area. However, without new power lines, the clean, green energy could not be delivered to its customers.

Studies show that the line will reduce greenhouse gas emissions by as much as 1.3 million tons. Yet various environmental groups, like the Sierra Club, are fighting it, well documented in publications like the Wall Street Journal. The areas that are best for wind, power and solar are often in these very remote areas, away from population centers.

Transmission lines are needed to get electricity from wind and solar farms to consumers. And I feel it is a mistake to legislate a costly renewable mandate without addressing the transmission issue.

With all of that said, we must also recognize that many renewable energy sources are unreliable and can bring instability to the grid. Transmission lines cannot distinguish between the green electrons or the brown ones. So we just can't be planning a transmission system for renewables. We have to take all sources into account, wind solar, nuclear, hydro, coal, clean coal and everything else. Changes need to be made to the current regulatory system. FERC can provide a backstop, but we not completely abandon the State and local process.

We must also be mindful of the cost. Renewable power is not free. Transmission lines are not free.

Consumers deserve to know what the real costs are of any policy and understand exactly what they are going to pay for and what they are getting for their hard-earned money. Consumers will already be saddled with rate increases, and these costs will only go up under the Waxman-Markey bill. Transmission policy shouldn't add to those burdens.

I yield back.

Mr. MARKEY. The gentleman's time has expired.

The Chair recognizes the gentleman from Washington State, Mr. Inslee.

OPENING STATEMENT OF HON. JAY INSLEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. INSLEE. Thank you, Mr. Chair, and thanks both for holding this hearing and your great work in assembling the Waxman-Markey bill.

I think that bill is tremendous mosaic of using multiple tools to solve our energy problems. But it really is missing one critical piece, and that is the piece that will help us spur the development truly of a 21st Century national grid. And I think we have to recognize that today, despite tremendous efforts of people in this field, we have a grid fit for the 19th or 20th Century, but not for the new challenges of the new American energy policy.

And the way I would categorize that new challenge is that we used to be able to move our energy components around by truck and rail. We could move coal to the site we wanted to generate electricity. We could move natural gas to the site where we wanted to generate electricity or heat, but we cannot ship photons on rail cars, nor can we ship wind by packages by truck. They have to be generated—the electricity has to be generated in fact where they are located.

Our existing policy on the grid is satisfactory for the first scenario but not the second. So I have now been at this for some time hoping to advance our ability to plan, site and finance a new grid system that is fit for the 21st Century. I have introduced H.R. 4059 and made some progress in the bill and hope to make further progress in the hopes to achieve this goal in this energy bill.

I want to make note of several things. Number one, our grid system is doing good work today. I am not sure you could say the grid is broken, but you can have a horse-and-buggy system that is working but not fit for today's new world. And we know that it will not be fit for the challenges of tomorrow. So while it may not be broken, it is certainly not fit for what we are now asking it to do. And it is my belief that if we are going to meet our appropriate and necessary 15 percent renewable energy goal, we will need to allow transmission to move forward.

Second, I would point out that the reason we are here today and the reason we need to act today is that this is the only vehicle moving out of town, and it will be the last chance and only chance to really move forward on this effort, and we can't move forward with a renewable electrical standard without a transmission piece.

So I think Lincoln's old quote fits, as our case is new, so should we think anew. And thinking anew means Federal backstop authority in the event that regional governments are unable to site these necessary facilities. And the reason national backstop authority is necessary is twofold.

Number one, our grid has always been designed to respond to local and regional interests, but with the challenges of global warming and national security needs, we have a national need for a national grid.

And second, we know that, while all of our constituents love electricity, virtually none of them love electrical lines. There is a time and a place where Uncle Sam needs to step in to overcome at times the reluctance of all of us to bear with some of the onerous aspects

of moving electricity. It is simply necessary, and we know we cannot wait decades to move these electrons.

I am excited about hearing the testimony.

Mr. Chair, thank you, and I hope we get this job done in this bill. Thank you.

Mr. MARKEY. The gentleman's time has expired.

The Chair recognizes the gentleman from Kentucky, Mr. Whitfield—I am sorry, the ranking member of the full committee the gentleman from Texas, Mr. Barton.

**OPENING STATEMENT OF HON. JOE BARTON, A
REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS**

Mr. BARTON. Thank you, Mr. Chairman.

Since we have an oversight hearing on upstairs, it helps me if I could give my statement.

I am going to give a double statement, kind of a bifurcated statement. I will talk a little bit about this hearing and then I want to comment on your personal comments, because I think we need to elaborate on that a little bit.

But first, on the hearing before us, it is a scary thing when I agree with Jay Inslee, but I do agree with Congressman Inslee. His amendment in the committee on the climate change bill was directed, as I recall, towards green energy or clean energy for transmission. But once you have generated that electricity, whether it is by wind, solar or even coal power, electricity is electricity, and it is going to go on the same wires. And the wires don't know what the source of the generation was.

So we do need to update our transmission grid. We started that in the Energy Policy Act of 2005. And I thought we had bipartisan support, and it became law. The Fourth Circuit has ruled recently that parts of EPAct are not as they should be. I disagree with that court ruling, and I hope that the Supreme Court will overturn it.

But in any event, I agree with Congressman Inslee that we do need to modernize our grid. We do need to give FERC more authority, in my opinion, to make decisions in interstate commerce when the States can't do it themselves. We tried to do that in EPAct. If that is not the right way to do it, perhaps we can try it a little bit different way.

In the Natural Gas Act, we give the right of eminent domain to the FERC. Now, I don't know that we need to go that far for electricity transmission. There is, in all probability, a middle ground where the States and the FERC can work together.

But in any event, Mr. Chairman, this is a good hearing, and hopefully out of this will come some consensus on both sides of the aisle about what to do legislatively.

Now let me comment on what you said, Mr. Chairman Markey, when you were talking about the letter of June the 9th and the comments towards the CEO of MidAmerican, David Sokol.

First of all, I am very appreciative of what you have said, that it was not intended to intimidate Mr. Sokol and that you have called him and taken steps to make sure that to correct what you say was a misunderstanding. To say that publicly means a lot, and I appreciate you doing that.

But let me elaborate on why people like myself have expressed concerns. You can't make the best public policy if you don't have witnesses come before this committee and give their full honest assessment of whatever the issue is that is before this committee.

If we adopt a standard that the only witnesses that are going to be received are witnesses that testify to the side of the question that the majority is supporting, you don't really have a full and fair debate on the issue.

And in the instance that you alluded to, David Sokol represented a point of view that was contrary to the majority's position on the climate change legislation and the allocation system that is a part of that, the allowance system. That is a side that needs to be presented to the American people.

Now it may be serendipity, and it may be inadvertent, but within 2 hours of him giving that testimony, a letter was sent under your signature to the chairman of the Federal Energy Regulatory Commission, who is sitting before us today, asking six generic questions and two specific questions about David Sokol and his company.

And the chairman of the FERC was asked to respond in writing to you by close of business yesterday. How can that not be perceived as an attempt to intimidate? Testified in the morning adverse to the position of the majority, received a letter that was sent in the afternoon to the chairman of the regulatory commission with jurisdiction over your industry and your company asking probing questions about the conduct and business decisions of your company.

Now, I take you at your word when you say that that was not intended and you are beginning to take steps to correct it, but what upsets myself and the others on the minority is that we do not accept that we can develop the mechanism where we allow any Member, majority or minority, to threaten, to intimidate, to abuse the power of the office that we are given by the people of our congressional districts on behalf of the people of the United States of America.

Now you are already taking steps to correct the perception that perhaps intimidation was being attempted, and I commend you for that. You are going to get a letter from myself and Mr. Upton and other members on the minority later today asking that we consider those discussions to make sure that we make it absolutely clear that any citizen of this country that comes before this committee can testify to whatever they believe is the truth as they know it without fear of intimidation or retribution.

And I think Members on both sides of the aisle will share that goal. If we are absolutely certain that that is the way it is going to be, then nothing else will be said.

But again, you and I have been friends for 25 years, and I hope we are going to be friends for another 25 if we both live that long. I have nothing but the upmost personal and professional respect for you and your conduct. And I am honored to sit on the same committee as you. I have sat in that chair as chairman of this subcommittee, so I think we can get this worked out. But it is a serious issue, and it deserves serious consideration. And to your credit, you are giving it that serious consideration.

With that, Mr. Chairman, I yield back.

Mr. MARKEY. I thank the gentleman very much. And I thank the gentleman for his words.

The Chair now turns and recognizes the gentleman from California, Mr. McNerney.

Mr. MCNERNEY. Thank you, Mr. Chairman.

I want to thank you for holding this hearing. This is a complex and difficult issue. I want to thank the panel for appearing this morning, in particular the chairman of the FERC. I had the opportunity to visit the FERC this week, and it was a good, worthwhile use of my time.

This issue is complex and difficult, as I just said. It has economic challenges, technical challenges and political challenges. And I believe the outcome will be best if we do our homework, consider the challenges and devise a rational and bipartisan plan. So thank you for appearing, and I look forward to your testimony. I hope I can stay most of the time this morning.

And with that, I yield back.

Mr. MARKEY. The gentleman's time has expired.

The Chair recognize the gentleman from Kentucky, Mr. Whitfield.

Mr. WHITFIELD. Thank you, Mr. Chairman.

We look forward to this hearing today and welcome the witnesses, and we look forward to their testimony.

I just want to make a couple of points. If the advocates for a renewable energy mandate are successful, there is going to be large portions of the Midwest that do not have solar, do not have wind power sufficient to meet their needs. It is going to be extremely difficult for them to meet this 20 percent renewable mandate without some Federal involvement regarding the siting, financing and the building of additional transmission lines.

And particularly when you consider the Department of Energy's 20 percent wind energy by 2030, saying that they are going to have to build at least 12,000 miles of new transmission lines to meet that need and then on top of that, when you consider this recent Fourth Circuit Court of Appeals decision that Ranking Member Barton mentioned which does make it more difficult for FERC to operate in this area, I do think we have some significant issues. And I hope this hearing can help us resolve those.

I yield back the balance of my time.

Mr. MARKEY. The gentleman's time has expired.

The Chair recognizes the gentlelady from Wisconsin, Ms. Baldwin for an opening statement.

OPENING STATEMENT OF HON. TAMMY BALDWIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN

Ms. BALDWIN. Thank you, Mr. Chairman.

Transmission is critical to our Nation's electrical system. And I certainly support grid expansion.

I have significant concerns however about many of the recent Federal proposals that jeopardize State and regional efforts to develop the transmission grid. Specifically these efforts ignore progress and may actually slow investments being made in States like Wisconsin and other in the Midwest.

Over the last 7 years my home State of Wisconsin, the Wisconsin ratepayers have supported more than \$2 billion in investments in our transmission system. These actions have and will continue to improve reliability and increase the flow of renewable energy in Wisconsin and our neighboring States.

Congress must ensure that we are not undermining the existing processes if we are going to venture into the transmission arena, especially when sensitivities already exist to State authority, cost allocation, safety and eminent domain issues.

As we examine these issues there are some questions and challenges that we must keep in mind. Who is going to pay for this? Will those not receiving the benefits of transmission have to pay for cost of lines traversing this country?

I am hearing strong concerns about the designing our transmission system for one specific purpose. It is not the just of transmission planners or transmission companies to choose the types of generation that may interconnect with the transmission system. Transmission is needed, plain and simple, regardless of the type of generation.

Where I come from, transmission is a sensitive subject. It will be very difficult to convince Wisconsinites and other Americans that in the name of national interest, the Federal Government is taking their property to essentially stretch an extension cord across it to power a larger urban area many, many miles away. So what will this process be like for public input if it is a Federally directed process?

While the siting of underground transmission lines may be easier than that of above-ground lines, the costs are significantly increased, perhaps as much as \$3 million per mile. So mandating technologies on States and regions has significant ramifications.

Again I share the goal of ensuring that critical new investments are made in our transmission system, but we must proceed with caution, not undermining existing efforts that are already working in this process.

Thank you, Mr. Chairman. I yield back.

Mr. MARKEY. The gentlelady's time has expired.

The Chair recognizes the gentleman from Pennsylvania, Mr. Pitts.

OPENING STATEMENT OF HON. JOSEPH R. PITTS, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA

Mr. PITTS. Thank you, Mr. Chairman.

Thank you for holding this hearing on our National Transmission Policy.

The official report on the 2003 Northeastern Blackout concluded that, "As evidenced by the absence of major transmission projects undertaken in North America over the past 10 to 15 years, utilities have found ways to increase the utilization of their existing facilities to meet increasing demands without adding significant high-voltage equipment."

Clearly there is a significant need for an increase in transmission capacity. This need is amplified as we consider adding more and more renewable energy to the grid. And while I am fully supportive

of adding more transmission capacity, I believe we do need to keep in mind legitimate desires of localities to preserve green spaces and historic sites.

My district includes some of the most pristine historic landscapes in the Mid-Atlantic. My district also has some of the most productive farm land in the United States. Chester County, the home of Valley Forge and the Brandywine Valley where I come from is one of William Penn's original three counties.

The tradition of preserving land and being good stewards of the earth have been passed down from generation to generation. We are not against progress, but we want to protect our heritage and be wise about how we use and develop the land we have.

Having the needed energy to turn on lights and heat water is critically important to the quality of life of every American. However, the preservation of our historic resources and natural environment of people's communities contributes to our quality of life as well. We need to ensure that all stakeholders are included in deciding where and when transmission lines are sited.

Dialogue and compromise are key in this issue. Indeed, it is critical to strike a delicate balance between the crucial electricity needs of the country while at the same time maintaining the historic open space areas that make our country beautiful and unique. As this committee continues to consider this issue, I hope that we hear from all affected parties and work towards viable solutions.

Mr. Chairman, I am grateful for the opportunity to discuss this issue. And it is my hope that today's hearing is only one in a series of hearings on this issue to ensure a robust and well rounded approach to our National Transmission Policy.

And I look forward to hearing from our witnesses, and I yield back.

Mr. MARKEY. Great, I thank the gentleman.

The Chair recognizes the gentleman from Vermont, Mr. Welch.

Mr. WELCH. Thank you, Mr. Chairman.

I actually want to get my microphone to work here.

I am proud that we have here today as one of our witnesses, David Coen. David is a member of the Public Service Board in Vermont, serving on his third term. And he has been appointed by Republican and Democratic Governors alike. He has done a tremendous job. He is now the vice president of the National Association of Regulatory Utility Commissioners.

David is acutely sensitive to the particular needs of rural utilities. We are a small State, but this issue of transmission is incredibly important to us as it is all around.

So I want to welcome him and thank you, Mr. Chairman for inviting David to be here and add to the testimony. Thank you.

Mr. MARKEY. The gentleman's time has expired.

The Chair recognizes the gentleman from Louisiana, Mr. Scalise.

OPENING STATEMENT OF HON. STEVE SCALISE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA

Mr. SCALISE. Thank you, Mr. Chairman.

Renewable energies will play an important role in the future of our national energy policy, and I support the development of re-

renewable sources of energy. As a matter of fact, Republicans have drafted legislation, the American Energy Act, which will invest heavily in the development of renewable sources of energy.

As we explore the advancement and promotion of energy sources like wind similar and hydro, and as the Congress and this administration discuss the future of our national grid and its capacity, we must not neglect that many of these renewable sources of energy are intermittent and need to be backed up by other sources of energy. And we would be remiss if we do not emphasize diverse the importance of diversifying our energy portfolio in ensuring that nuclear power is part of any comprehensive policy we discuss.

Wind and solar power still need to overcome fundamental obstacles and we cannot today exclusively rely on these sources of energy alone to power our Nation. When the wind stops blowing and the sun stops shining, our hospitals that care for our families and schools that teach our children must continue to have reliable sources of energy that ensure that the life-saving equipment and the lights stay on.

Transmission infrastructure, planning, and siting policies are all important to this conversation as is the regulatory framework that will surround these policies. I believe it is also important for the Congress to carefully weigh regional considerations as we further discuss this issue.

I look forward to today's hearing, and I yield back.

Mr. MARKEY. The gentleman's time has expired.

The Chair recognizes the gentleman from North Carolina, Mr. Butterfield.

OPENING STATEMENT OF HON. G.K. BUTTERFIELD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. BUTTERFIELD. Thank you very much, Mr. Chairman.

I will move one seat down so I can have the benefit of this microphone.

Thank you for convening this hearing. I particularly want to thank the five witnesses who have come forward today to make their testimonies available.

It goes without saying, Mr. Chairman, that I support the expanding of the grid using 21st Century technology. We certainly must do that.

Waxman-Markey takes dramatic steps to further the growth of renewable electric generation. The nationwide RES standard demands use of those sources, and the price signals sent from a carbon cap will further the use of clean fuels.

As we move forward, Mr. Chairman, we must focus on developing policies that ensure electricity generated from these new sources gets to the load centers that demand them. And this means we must address the deficiencies in our transmission grid that will delay us from reaching our full, renewable generation potential or hamper grid efficiency.

There are a number of challenges to improving transmission, but siting will be particularly difficult to overcome. Balancing the Federal and State and regional and regional and local stakeholder needs and interests will be difficult but critical to the completion

of a modernized grid. Comprehensive planning, cost allocation and ownership will also present challenges, as we have heard today. I applaud the collaborative nature of this subcommittee and look forward to discussing the issue further.

I yield back.

Mr. MARKEY. I thank the gentleman.

The Chair recognizes the gentlelady from California, Ms. Harman.

OPENING STATEMENT OF HON. JANE HARMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. HARMAN. Thank you, Mr. Chairman, we are debating on the floor a bill to have the FDA regulate tobacco, and I have to say it is a long time in coming, and I am absolutely thrilled that we will finally, I believe, pass it, and it will become law very soon.

So while I am celebrating about that, I am thinking about another hard issue, this one, which require all of us to step up and think about some risky strategies to make certain that the promise of renewable energy and the absolute need for transmission of electricity throughout the country can be accomplished. I think anything we do in this committee will make us a few friends and make us a few enemies. And that applies to us regardless of which party we are in and which region we are from.

But I think we have to step up, as many people finally have stepped up in both parties to the need to regulate tobacco.

I just want to point out some of the obstacles. The U.S. electric transmission system encompasses about 167,000 miles of high voltage transmission lines and another 300,000 miles of lower voltage lines. The grid is operated by approximately 130 balancing authorities, which are typically utilities that own transmission systems and operate control centers to monitor and control the grid.

Those transmission systems are owned by several hundred private and public entities, so let's just start with that. It is incredibly complex. And if we don't get a handle on that and don't step up to the tough decisions, we won't solve the problem.

But I would close by saying that if we really want renewable energy in this country, we really have to fix the grid.

Thank you, Mr. Chairman.

Mr. MARKEY. The gentlelady's time has expired.

The Chair recognizes the gentleman from Texas, Mr. Green.

OPENING STATEMENT OF HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. GREEN. Thank you, Mr. Chairman, and I have a full statement I would like to place into the record.

And just a little history, in the 2005 Energy Act, we actually provided for the Federal transmission corridors that are so needed. And like my colleagues, some of my colleagues, have said, we disagree with the court decision.

Hopefully it will be overturned by the Supreme Court, but there are things that we can do that may help, Mr. Chairman.

I appreciate both Mr. Inslee's legislation and to expand and have a national grid. We know that, and it can't be just limited to renewables because those electricity protons don't decide where they

come from; they just go down those lines, so that is why I am happy to be part of the hearing. And, again, I would like my full statement to be placed in the record, and again, I support our effort to expand the national grid.

I have a huge transmission corridor right behind my neighborhood, and I guess, in Texas, we don't have any problem with pipelines or transmission grids because our PUC just approved \$5 billion for the renewable fuel electricity to come from west Texas to our urban market.

Thank you, Mr. Chairman. I yield back the balance of my time. Mr. MARKEY. The gentleman's time has expired.

The Chair recognizes the gentleman from New Jersey, Mr. Pallone.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you, Mr. Chairman.

I want to first thank you for all that you have done on this issue. I mean, I know it has been so many years, and we finally passed a bill out of committee, and I know that we will pass it on the floor and send it to the President eventually.

I wanted to point out that Ralph Izzo, chairman and CEO of the Public Service Enterprise Group, a New Jersey based energy company will be testifying on today's second panel. And under Ralph's leadership, PSE&G has been a leader in renewable energy investments throughout the State of New Jersey.

Today the committee will address policy proposals for transmission planning, cost allocation and siting authority. A strong transmission grid is essential to ensure energy reliability and to move clean, renewable energy from remote locations to population centers.

I think we can all agree that planning and investing in a reliable grid is a national priority. With that said, we need to be very careful how we craft any National Transmission Policy. Two main areas of concern for the northeast and specifically for New Jersey are how to site new transmission lines and how to pay for those new lines.

It is critical that States like New Jersey have authority over the siting of new transmission lines that would run through the State. Giving FERC greater authority to site high-voltage electric transmission lines will generate widespread local opposition. Any new transmission legislation must give States adequate authority over siting to ensure that States can protect properly the environment and cultural and historical sites.

Another issue that will affect my State is cost allocations, specifically how do we craft legislation that encourages investment in new transmission lines to move renewable energy, such as wind, to population centers? I believe we should think regionally. New Jersey has tremendous potential to meet our renewable energy goals through solar and offshore wind. It does not make sense for New Jersey ratepayers to subsidize the cost of moving wind from the Midwest to the East Coast, a cost of \$10 million per mile. This could slow development of alternatives closer to home.

I believe the transmission provisions passed in the American Clean Energy and Security Act provide a balanced approach that respects regional differences and local concerns. Before we pass comprehensive transmission legislation, we must consider how it will affect the economies of local renewable energy projects and whether it provides adequate siting authority for the States.

Again thank you, again, Mr. Chairman.

Mr. MARKEY. I thank the gentleman very much.

The Chair recognizes the gentleman from Georgia, Mr. Barrow.

Mr. BARROW. I waive.

Mr. MARKEY. The gentleman's waives his opening statement.

All time for opening statements has been completed.

We will now turn to our very distinguished panel.

STATEMENTS OF JON WELLINGHOFF, CHAIRMAN, FEDERAL ENERGY REGULATORY COMMISSION; DAVID C. COEN, FIRST VICE PRESIDENT, NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS ON BEHALF OF NARUC; LAUREN L. AZAR, COMMISSIONER, WISCONSIN PUBLIC SERVICE COMMISSION; PAUL J. HIBBARD, CHAIRMAN, MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES; AND RICHARD HALVEY, ENERGY PROGRAM DIRECTOR, WESTERN GOVERNORS' ASSOCIATION

Mr. MARKEY. And our first witness, who is John Wellinohoff. He is the chairman of the Federal Energy Regulatory Commission, which oversees wholesale electric transactions and interstate electric transmission and gas transportation in the United States. He is also cochair of the Demand Response Collaborative launched jointly by FERC and the National Association of Regulatory Utility Commissioners.

We thank you so much for being here in your first appearance before our committee.

We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF JON WELLINGHOFF

Mr. WELLINGHOFF. Good morning, Mr. Chairman.

Mr. MARKEY. Could you push the mike a little closer and turn it on?

Mr. WELLINGHOFF. Thank you Mr. Chairman, Ranking Member Upton, and members of the subcommittee.

First, I have two quick preliminary issues. One is I would like to recognize and thank my colleague, commissioner Phil Moeller who is here with me today, and I would also like to request that my full pre-file testimony be placed in the record.

Mr. MARKEY. Without objection, so ordered.

Mr. WELLINGHOFF. The following is a summary of that testimony.

I appreciate the opportunity to appear before you today to discuss our Nation's electric transmission grid.

Mr. Chairman, your invitation for this hearing envisions, "A transmission system that will serve the goals of substantially reducing greenhouse gas emissions, developing renewable energy resources and improving energy efficiency while preserving or enhancing reliability."

A transmission system that meets the goals you have articulated will result from a strong and smart electric grid that can assist in promoting field diversity, reducing greenhouse gas emissions, strengthening our national security, revitalizing our economy, enhancing competition and ensuring reliability. Such a reliable and robust transmission grid is essential to allows regions, States and our Nation to meet these goals.

The commission has taken a number of important steps in recent years to promote the development of such a transmission system. For example, in February of 2007, the commission issued Order 890, which among other things required open, transparent, and coordinated regional planning; required evaluation in that planning of demand resources on a comparable basis to other resources.

The commission also approved an initiative proposal from the California independent system operator to better allocate costs of facilities needed to interconnect location constrain resources, such as wind and solar, to the transmission grid.

Nonetheless, I believe there are gaps in the commission's statutory authority. The absence of an adequate regulatory framework is the principal obstacle to developing the transmission system to support the goals have you outlined.

If we are to overcome that obstacle, we need a national policy commitment to develop such a transmission system. In developing that policy, Congress should consider three closely related issues: planning, siting and cost allocation.

First, the scope of existing regional planning initiatives needs to be expanded. To achieve greater benefits and efficiencies, we must create a structure that includes coordination on an interregional basis. Such coordination will facilitate, for example, the development of facilities, transport power from areas rich in renewable energy resources to load centers, as well as the deployment of distributed resources and key smart-grid equipment and systems.

Second, States should continue to have the opportunity to site transmission facilities, but transmission developers should have recourse to the commission as a Federal siting authority under appropriate circumstances. Federal siting authority would be helpful, even if limited only to transmission facilities needed to reliably meet renewable energy goals.

Third, if Congress determines there are broad public-interest benefits in developing the transmission system necessary to meet the goals discussed, then Congress should consider clarifying the commission's authority to allocate costs of such infrastructure to the load-serving entities within an interconnection or part of an interconnection where it is appropriate to do so. Of course, the commission would need to ensure, as it does today, that these costs are allocated fairly to the appropriate entities and that due deference is accorded regions that work together to develop cost-allocation mechanisms that garner broad support.

Finally, it is important to recognize the issue is not how to choose between nearby renewable or more distant renewable resources. Both should be part of the mix of energy resources to achieve our national goals. And appropriately allocating the costs of transmission facilities needed to connect remote resources should

not disrupt the implementation of State policies or disadvantage local renewable or other distributed resources.

Rather, full planning analysis that reveals respective costs of alternative resource scenarios and a fair cost allocation of necessary transmission to reliably deliver those resources to loads will eliminate a barrier to the development of new clean resources and thus will facilitate competition. Such a measured approach should inform consumers of the least-cost sustainable resources options to meet State and national environmental, economic and security objectives. And enacting a regulatory structure that enables such an approach to be implemented will ensure our national energy goals can be achieved.

Thank you, again, for the opportunity to appear before you, and I would be happy to answer questions that you may have.

[The prepared statement of Mr. Wellinghoff follows:]

**Testimony of Chairman Jon Wellinghoff
Federal Energy Regulatory Commission
Before the Energy and Environment Subcommittee
Of the Committee on Energy and Commerce
United States House of Representatives
Hearing on the Future of the Grid: Proposals for Reforming National
Transmission Policy
June 12, 2009**

Mr. Chairman, and members of the Subcommittee:

My name is Jon Wellinghoff, and I am the Chairman of the Federal Energy Regulatory Commission (Commission). Thank you for the opportunity to appear before you today to discuss the critical topic of the development of our Nation's electric transmission grid.

Transmission facilities are critical to meeting the goal of reducing reliance on carbon-emitting sources of electric energy and bringing new sources of renewable energy to market. A reliable and robust transmission grid is essential to allow regions, states, and utilities to access least-cost resource options to meet state and national environmental, economic and security goals. To meet the challenges of building needed new transmission facilities, we must address not only the role of federal siting authority but also the closely-related issues of transmission planning and cost allocation. In doing so, we must focus on maintaining the reliability of the electric system. The time has come to develop a regulatory framework that will allow us to successfully meet these challenges. I commend you, Mr. Chairman, and the Subcommittee for your decision to hold a hearing on these important issues.

Introduction

President Obama has stated that the country that harnesses the power of clean, renewable energy will lead the 21st century. The President also stated that we will need to build power lines that can carry new clean energy to cities and towns across this country. He also said we should be "starting to build a new smart grid that will save us money, protect our power sources from blackout or attack, and deliver clean, alternative forms of energy to every corner of our nation."

A majority of states have adopted renewable portfolio standards that require utilities to acquire renewable generation capacity, some of which are quite aggressive. For example, the Connecticut standard requires that 27% of the energy consumed in the state be generated using renewable resources by 2020.

Both houses of Congress are considering a federal renewable energy standard as well.

Clean power is essential to meeting energy goals such as promoting fuel diversity, reducing greenhouse gas emissions, strengthening our national security, enhancing competition, ensuring reliability, and revitalizing our economy. The need for additional federal authority to achieve these goals is clear. Historically, the Nation's electric utilities transported fuels to generate electricity to plants located near load centers. Many of today's clean energy resources are located far from consumers and existing transmission facilities and those resources cannot be moved. Moreover, they are not evenly dispersed throughout the country. Delivering the power generated by these resources to consumers will require the planning, siting and construction of interstate and inter-regional transmission facilities. Only Congress, exercising its authority to regulate commerce among the states, can address this problem.

The requirement for greater fuel diversity, whether as a result of federal or state goals, cannot be accomplished unless we ensure that the renewable, and sometimes variable, generation resources that we will rely upon to meet these goals can be reliably integrated into the power grid and ultimately deliverable to consumers. Renewable energy resources, particularly those whose operation follow a natural but variable cycle, must be integrated into the transmission system in a manner consistent with reliable operation of the grid. We know that the grid can accommodate some level of renewable generation, but we also know that, with the current configuration of the grid and the variability of some forms of renewable generation, it cannot accommodate 100%. Compounding the challenges of integrating renewable generation, we also know that the grid is aging, was designed for more traditional types of generation, and is characterized by decreasing reserve margins. These conditions mean that smaller disturbances on the grid cause larger fluctuations and increase the risk of outages.

Because of these factors, Commission staff is conducting a study to determine the appropriate metrics for use in assessing the reliability impact of integrating large amounts of variable renewable power generation onto the existing power grid. That study, which is being undertaken by Lawrence Berkeley National Laboratory and overseen by Commission staff, is due to be completed by November 2009. When the study is complete, it will help answer the question of how variable resources can be reliably integrated onto the existing grid, which will help inform policy makers about the current limitations of the grid and identify what new resources and transmission facilities will be necessary to reliably accommodate future renewable resources and those currently under development.

I believe that, if the Nation is to meet its goals, there must be a mechanism that, after the states have had an opportunity, allows a transmission developer to invoke federal authority to site the transmission facilities necessary to interconnect renewable power to the electric transmission grid and move that power to consumers. We need a national policy commitment to develop the transmission infrastructure to bring renewable energy from remote areas where it is produced most efficiently into our metropolitan areas where most of this Nation's power is consumed. This transmission infrastructure is likely to be comprised of extra-high voltage facilities, related feeder lines that will interconnect remote renewable energy resources to the transmission grid, and supporting upgrades to the existing grid (hereinafter, "transmission infrastructure"). Without this national commitment, we will not be able to take advantage of our capacity to develop clean power.

We must develop a structured regulatory framework that will enable the United States to build the transmission infrastructure necessary to deliver our Nation's high quality, location-constrained renewable resources to load centers. That framework must adequately address transmission siting and the related issues of transmission planning and cost allocation. And above all, we must ensure that we preserve the reliability of the electric grid so that consumers and businesses continue to receive the highest level of service, protecting the safety of our citizens, the security of our Nation, and the health of our economy.

There is a real opportunity to make the United States a world leader in developing the clean energy industries of the future. Without a coherent drive for a smart grid that is designed and built (or rebuilt) to achieve our national energy and environmental goals in a timely fashion, the jobs and sustainable economic development options from those potential new industries could very well manifest in Europe or Asia rather than here.

Though the focus of this hearing is on ensuring that the development of the interstate transmission grid allows our country to meet national and state goals, we should not lose sight of the critical role of local renewable energy, distributed resources, and demand response. We must focus on ensuring that we remove barriers to entry for local renewable and distributed resources. Developing and reliably delivering these local resources is important as we expand our capacity to generate clean power, but that effort must be made in concert with and not separate from developing the transmission infrastructure that I describe above. An optimal blending of both resources will be necessary to achieve our Nation's energy goals. That optimization process will require a collaborative effort between the states and the Federal government with an expanded Federal role.

The Need for an Expanded Federal Role

The electric grid is actually a combination of individual systems, separated into three electrical interconnections. Though there has been some expansion of regional and inter-regional transmission facilities over the last 15 years, that expansion is not sufficient to address the need I have identified to develop our transmission infrastructure to allow us to meet state and national goals. In the Energy Policy Act of 2005, Congress directed the Commission to develop incentive-based rate treatments for certain new transmission facilities, and while this effort has been effective in encouraging developers to come forward with new transmission projects, it does not ensure that the projects will be constructed and placed in operation. Without new siting authority, the Commission's ability to address these challenges is limited. For this reason, I recommend that the Congress enact legislation that will enable transmission developers to invoke federal authority in appropriate circumstances to site the transmission facilities necessary to interconnect renewable power to the electric transmission grid and move that power to consumers. Such legislation should also address cost allocation and planning of such facilities. Each of these issues is a crucial aspect of developing an effective power grid that can spur the production and reliable movement to market of renewable energy.

Siting. States should continue to have the opportunity to site transmission facilities, but transmission developers should have recourse to a federal siting authority under appropriate circumstances. With additional authority, the Commission could play an important role in this grid-building effort as it has the institutional structure, capacity, and experience to make important contributions. The Commission is well-versed in reviewing and authorizing critical energy infrastructure projects, and in establishing a regulatory regime that encourages the development of appropriate energy projects, while at the same time protecting the interests of consumers and safeguarding the environment.

Since 1920, the Commission has been charged with licensing and overseeing the operation of the Nation's non-federal hydropower projects. Using existing authority under Part I of the Federal Power Act, the Commission has sited thousands of miles of electric transmission lines related to these projects that have delivered this power to the Nation's consumers. Likewise, under the Natural Gas Act, the Commission has authorized the construction of natural gas pipelines for over 65 years. Under the Commission's oversight, the country has developed a robust, comprehensive pipeline grid that moves natural gas supplies from distant producing areas to consuming regions. Based on its decades of experience in siting natural gas pipelines and in siting hydropower projects and associated transmission lines, the Commission has developed comprehensive, efficient processes that provide for public notice and extensive public participation, including participation by affected states.

The Commission's existing transmission siting authority is limited. The Energy Policy Act of 2005 gave the Commission authority to site and permit interstate electric transmission facilities to relieve congestion under limited circumstances and only within geographic areas designated by the Secretary of Energy as national interest electric transmission corridors. However, the United States Court of Appeals for the Fourth Circuit has recently held that the limited authority granted by Congress to the Commission to review and site facilities needed to transmit electric energy in interstate commerce is not available in situations where a state agency has timely denied an application for a proposed project, regardless of how important the project may be in relieving congestion on the interstate grid. The court's ruling is a significant constraint on the Commission's already-limited ability to site appropriate projects to transmit electricity in interstate commerce. To date, no applicant has sought Commission authority to site transmission facilities under this law.

Congress should consider the question of how best to exercise its authority over interstate commerce to ensure that the necessary transmission facilities are built in a timely manner to deliver location-constrained renewable power to customers. Federal siting authority would be helpful even if limited only to transmission facilities needed to reliably meet renewable energy goals and only in those cases where the states have had an opportunity to address a proposal in the first instance. It is clear, however, that without some broader federal siting authority, it is unlikely that the Nation will be able to achieve its renewable energy goals.

Planning. Effective regional and inter-regional transmission planning will improve reliability, reduce congestion, increase the deliverability of existing power supplies, and identify investments necessary to integrate significant potential sources of renewable energy that are constrained by a lack of adequate transmission capacity or facilities. Increasingly, such planning must look beyond the needs of a single utility or even a single state to examine the grid requirements of the entire region. The Commission has recognized the need for improvements in transmission planning. To improve the coordination of transmission planning among utilities, it required all public utility transmission providers to establish and participate in open and transparent regional transmission planning processes (Order No. 890, February 2007). The Order No. 890 regional planning processes are in their second year, and the Commission is reviewing how well those planning efforts are working, is monitoring implementation, and will be looking for ways to improve the regional planning processes.

Meeting our national energy goals will require building on such regional planning initiatives and expanding their scope. I urge the Congress not to be distracted by the false choice between so called "bottom-up" and "top-down" planning models.

It is indisputable that local and sub-regional planning and coordination must continue, addressing such issues as smaller upgrades that must proceed in a timely way, without awaiting regional or inter-regional review. But to achieve greater benefits and efficiencies, we must also create a structure that includes coordination on an inter-regional basis, which will facilitate, for example, the development of facilities to transport electric energy from areas rich in renewable energy resources to load centers or the deployment of key smart grid equipment and systems. The American Recovery and Reinvestment Act of 2009 includes funding of an initial analysis to implement this approach through the appropriation of \$80 million to the Department of Energy to conduct, in consultation with the Commission, a thorough resource assessment for each interconnection to facilitate regional transmission planning. Going forward, Congress could help by clarifying the Commission's authority to ensure that state and regional planning is consistent with national energy goals. I recommend, however, that any new transmission planning requirements be harmonized with, rather than supplant, planning efforts already taking place at the regional, state and local levels.

Cost Allocation. Renewable energy resources such as wind, solar, and geothermal are usually found in large quantities at dispersed locations remote from load centers. For this reason, there are often high costs associated with developing transmission facilities needed to deliver power from such resources. If the resource developer or the host utility is compelled to bear all of the cost of these transmission facilities, they may not be developed.

Under Federal Power Act sections 205 and 206, the Commission ensures that public utilities' (investor-owned utilities) rates, terms and conditions of transmission service in interstate commerce are just, reasonable, and not unduly discriminatory or preferential. This responsibility includes setting rates for recovering the costs of new transmission facilities built by public utilities. At present, the Commission has greater ability to assign such costs over broad geographic areas where there is a regional transmission organization (RTO) or independent system operator (ISO).

If Congress determines that there are broad public interest benefits in developing the transmission infrastructure necessary to accommodate the Nation's renewable energy potential, and therefore that in some cases it may be appropriate for the costs of transmission facilities needed to meet our renewable energy potential to be fairly spread to a broad group of energy users (for example, across a region or multiple regions), then Congress should consider clarifying the Commission's authority to allocate such transmission costs to all load-serving entities within an interconnection or part of an interconnection where it is appropriate to do so. Of course, the Commission would need to ensure, as it does today, that the costs are allocated fairly to the appropriate entities and that regions work together to

develop cost allocation mechanisms that garner broad support. However, I urge the Subcommittee to avoid including unduly restrictive language on cost allocation in any new legislation, particularly language that would impose a requirement to calculate the precise monetary benefits expected to accrue from a new transmission facility. Rather, Congress should maintain the Commission's flexibility to address cost allocation for each facility under the facts and circumstances presented.

It is important to acknowledge that appropriately allocating the costs of transmission facilities to connect remote resources will not disrupt the implementation of state resource policies or disadvantage local renewable or demand resources. Rather, a fair cost allocation will eliminate a barrier to the development of new, clean resources and thus will facilitate competition, which should ensure that utilities may access least-cost resource options to meet state and national environmental, economic and security goals. Development of the necessary transmission infrastructure will enable those resources options to reach load centers, and, as discussed below, ensure that they may do so without jeopardizing the reliability of the system. The issue is not how to choose between nearby renewable resources and more distant renewable resources: we need both. The issue is ensuring that costs are allocated fairly, sending the right economic signals without unduly impeding development of location-constrained resources.

Conclusion

In summary, to achieve the Nation's renewable energy goals, Congress and federal and state regulators, including the Commission, must address in a timely manner the issues of transmission planning, transmission siting and transmission cost allocation. Congressional action on all three of these related areas, particularly siting and cost allocation authority for transmission infrastructure needed to deliver high quality, location-constrained renewable energy, would provide greater ability to achieve these important goals. I recognize that the concepts we are discussing today can seem threatening or overreaching to some and that the Commission's actions have not always been perceived as benevolent. I recognize that we need to retain state and local expertise and authorities that are critical to everyday grid operations and regulation, but we also need to expand regional and national cooperation. We are not seeking to usurp local prerogatives but to make sure the Nation's electricity grid is prepared to meet the challenges and realize the opportunities of the 21st century. There are elements of the various bills under development in the Senate and the House that address the matters I have discussed, and I would be happy to answer follow-up questions in writing about the specific provisions in those bills.

Thank you for the opportunity to appear before you today to provide my insight as you consider legislation to provide a regulatory framework for tackling the challenging energy issues that we face. I stand ready to work with Congress, state and federal regulators, industry, and other stakeholders on these important issues. I would be happy to answer any questions you may have.

Mr. MARKEY. Thank you, Mr. Wellinghoff, very much.

Our next witness is David Coen. He is the first vice president of the National Association of Regulatory Utility Commissioners. Mr. Coen has also served as a member of the Vermont Public Service Board since 1995 and has continued. He has served in a variety of regional and national leadership positions, including the Chair of the Consumer Affairs Committee of the New England Conference of Public Utility Commissioners.

We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF DAVID C. COEN

Mr. COEN. Good morning, Chairman Markey, Ranking Member Upton and members of the subcommittee. My name is David Coen. I am a member of the Vermont Public Service Board. I also serve as the first Vice President of the National Association of Regulatory Utility Commissioners, also known as NARUC.

I am honored to have this opportunity to appear before you this morning and offer a State perspective on transmission. In addition, I would like to thank Representative Welch for his kind introduction and his service to our State. He is certainly my favorite Congressman from Vermont.

At the State level, we deal with transmission planning and siting requests regularly. And I can tell you that the issues and concerns are not policy or procedural, but multifaceted and do not lend themselves to a one-size-fits-all solution.

State commissioners are obligated to act deliberately to ensure that any new projects will benefit the public. This means regulators must determine whether a demand response, energy efficiency or perhaps a local renewable energy source is more appropriate than putting steel transmission towers in the ground.

A major impediment to siting energy infrastructure is the great difficulty in getting public acceptance. As a country, we want our electricity to be affordable, reliable and increasingly clean. But we also want to ensure that transmission infrastructure does not impact our quality of life.

Public hearings on transmission lines are always packed with concerned ratepayers and landowners with nearly all of them in opposition to the project. I can assure you that no level of Federal involvement will make this go away. Still, the State and local level provides an important venue for all parties to be heard. State regulators know the geography and citizenry better than any Federal agency can. Our processes are transparent and give all parties a voice. What some interests may consider roadblocks or impediments we consider due process.

Let me say a few words about what we are doing in Vermont. Vermont has a transmission planning process that analyzes potential transmission constraints over a 20-year horizon and considers various alternatives, including distributor generation and targeted energy efficiency programs that would address any identified reliability issues. The process ensures that solutions to transmission constraints serve the long-term needs of consumers at the lowest cost.

After decades without any major transmission investment, the public service board has approved three major transmission

projects from 2005 through 2008, with total projected capital investment over half a billion dollars. At the regional level, these decades without any major transmission investment, nearly \$4 billion of transmission infrastructure has been placed in servicing New England since 2002.

Despite the activity on the State and regional level, there is momentum in Congress to provide the Federal Government with broader transmission authority, although we are just 4 years removed from the enactment of the Energy Policy Act of 2005. EPAct gave the Federal Energy Regulatory Commission “backstop” siting authority in specific areas designated by the Department of Energy. Not enough time has passed to determine whether this law needs to be revisited, but the Congress is addressing this issue nevertheless.

NARUC recently updated our transmission policy in anticipation of Federal action. We believe that a bottom-up State- and regional-driven approach is the most appropriate model going forward, while we are not convinced that the case has been made for expanded Federal authority.

If Congress chooses to act, we recommend the following principles:

Any such additional authority granted to FERC by the legislation allow for primary siting jurisdiction by the States and provide the FERC’s backstop siting authority be as limited as possible;

In no event should FERC be granted any additional authority over the siting or construction of new interstate transmission lines;

In no event should FERC be granted any additional authority to approve a new interstate transmission line that is not consistent with a regional transmission plan developed in coordination with affected State commissions or other siting authorities or regional planning groups;

In no event should FERC be granted any additional authority to approve a new interstate transmission line unless there is already in place either a cost allocation agreement among all the States through which the proposed project will pass governing how the project will be financed and paid for, or a FERC-approved cost allocation rule that covers the entire route of the proposed project;

In no event should any legislation allow FERC to preempt State authority over retail rate-making, the mitigation of local environmental impacts under State authority, the interconnections to distribution facilities, the siting of generation or the participation by affected stakeholders in State and/or regional planning processes; and

In no event should any legislation preempt existing State authority to regulate bundled retail transmission services.

In conclusion, the electric transmission system must have the capacity to meet the growing energy needs of the Nation regardless of the generation source. The solutions to the challenges will not come quickly or easily and will require the cooperation of all stakeholders including State and Federal governments.

Thank you and I look forward to your questioning.

Mr. MARKEY. We thank you very much.

[The prepared statement of Mr. Coen follows:]

**BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE, SUBCOMMITTEE ON
ENERGY AND ENVIRONMENT
TESTIMONY OF THE HONORABLE DAVID C. COEN
COMMISSIONER, VERMONT PUBLIC SERVICE BOARD
ON BEHALF OF THE
NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS
ON
“The Future of the Grid: Proposals for Reforming National Transmission Policy”**

June 12, 2009



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**Summary of Testimony from
Commissioner David C. Coen
on behalf of the
National Association of Regulatory Utility Commissioners**

It is the long-standing position of NARUC that Congress should not expand Federal authority over transmission siting, either through amendments to the Federal Power Act or through other Federal legislation, should Congress choose to expand FERC's current authority over the siting and construction of new interstate transmission lines, we recommend that Congress incorporate the following principles into such legislation:

- Any such additional authority granted to FERC by the legislation allow for primary siting jurisdiction by the States, and provide that FERC's "backstop" siting authority be as limited in scope as possible;
- In no event should FERC be granted any additional authority over the siting or construction of new intrastate transmission lines;
- In no event should FERC be granted any additional authority to approve or to issue a certificate for a new interstate transmission line that is not consistent with a regional transmission plan developed, in coordination with affected State commissions or other designated State siting authorities, and other regional planning groups, that covers the entire route of the proposed project;
- In no event should FERC be granted any additional authority to approve or to issue a certificate for a new interstate transmission line unless there is already in place either (1) a cost-allocation agreement among all the states through which the proposed project will pass that governs how the project will be financed and paid for; or (2) a FERC-approved cost-allocation rule or methodology that covers the entire route of the proposed project;
- In no event should any such legislation allow FERC to preempt State authority over retail ratemaking, the mitigation of local environmental impacts under State authority, the interconnection to distribution facilities, the siting of generation, or the participation by affected stakeholders in State and/or regional planning processes; and
- In no event should any such legislation preempt existing State authority to regulate bundled retail transmission services.

Good morning Chairman Markey, Ranking Member Upton and Members of the Subcommittee:

My name is David Coen, and I am a member of the Vermont Public Service Board (PSB). I also serve as First Vice President of the National Association of Regulatory Utility Commissioners (NARUC). Today I will be testifying on behalf of NARUC and where noted, the Vermont PSB. I am honored to have the opportunity to appear before you this morning and offer a State perspective on “transmission” in general and specifically on federal siting, regional transmission planning, and cost allocation.

NARUC is a quasi-governmental, non-profit organization founded in 1889. Our membership includes the State public utility commissions serving all States and territories. NARUC’s mission is to serve the public interest by improving the quality and effectiveness of public utility regulation. Our members regulate the retail rates and services of electric, gas, water, and telephone utilities. We are obligated under the laws of our respective States to ensure the establishment and maintenance of such utility services as may be required by the public convenience and necessity and to ensure that such services are provided under rates and subject to terms and conditions of service that are just, reasonable, and non-discriminatory.

There are many challenges to resolve prior to the development of the much-needed growth in the transmission system that is so vital to reliable electric service, our economic growth, and our national security. Without increased capacity in the

transmission grid, our ability to develop the energy resources necessary to meet current and future demand may be jeopardized, particularly as many States and the federal government implement policies that limit greenhouse gas emissions and increase our reliance on renewable generation. Even with robust energy efficiency efforts, such as those in Vermont, significant upgrades will be necessary in order to meet growing demand and to improve access to renewable generation. Solutions to the current transmission challenges facing us are not quick, simple, non-contentious, inexpensive, nor, in some cases, obvious. Finding and implementing solutions will require cooperation by, not confrontation among, the various stakeholders.

NARUC recently adopted an updated resolution on transmission policy and I have attached it to this testimony. The discussions leading to this policy resolution were difficult and I bring this to your attention in an effort to illustrate that the nation's utility regulators are well aware of the issues and complications surrounding transmission policy. These issues are extremely sensitive within our organization precisely because they do not lend themselves to simple or even consensus solutions. The debate on these issues tends to follow regional differences and NOT partisan or ideological divisions. Siting, cost allocation, and planning issues are often controversial because in many situations someone's gain comes at someone else's expense.

While it continues to be the long-standing position of NARUC that Congress should not expand Federal authority over transmission siting, either through amendments to the Federal Power Act or through other Federal legislation, should Congress choose to expand FERC's

current authority over the siting and construction of new interstate transmission lines, we recommend that Congress incorporate the following principles into such legislation:

- Any such additional authority granted to FERC by the legislation allow for primary siting jurisdiction by the States, and provide that FERC's "backstop" siting authority be as limited in scope as possible;
- In no event should FERC be granted any additional authority over the siting or construction of new intrastate transmission lines;
- In no event should FERC be granted any additional authority to approve or to issue a certificate for a new interstate transmission line that is not consistent with a regional transmission plan developed, in coordination with affected State commissions or other designated State siting authorities, and other regional planning groups, that covers the entire route of the proposed project;
- In no event should FERC be granted any additional authority to approve or to issue a certificate for a new interstate transmission line unless there is already in place either (1) a cost-allocation agreement among all the States through which the proposed project will pass that governs how the project will be financed and paid for; or (2) a FERC-approved cost-allocation rule or methodology that covers the entire route of the proposed project;
- In no event should any such legislation allow FERC to preempt State authority over retail ratemaking, the mitigation of local environmental impacts under State authority, the

interconnection to distribution facilities, the siting of generation, or the participation by affected stakeholders in state and/or regional planning processes; and,

- In no event should any such legislation preempt existing State authority to regulate bundled retail transmission services.

Background

The Energy Policy Act of 2005 (EPAAct 2005) required the Department of Energy (DOE) to conduct a study of electric transmission congestion one year after the legislation was enacted, and every three years thereafter (language was included in the recently signed “stimulus” legislation modifying the DOE congestion study process). After considering alternatives and recommendations from interested parties, DOE must issue a report, based on the study, which may designate any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers as a National Interest Electric Transmission Corridor (NIETC).

The first DOE Congestion Study was issued on August 8, 2006. On April 26, 2007, the DOE issued two draft NIETCs: the Mid-Atlantic Area National Corridor (some or all counties in Delaware, Ohio, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia); and the Southwest Area National Corridor (seven counties in southern California, three counties in western Arizona, and one county in southern Nevada). On October 2, 2007, DOE finalized the designations of both NIETCs: the Mid-Atlantic Area National Interest Electric Transmission Corridor

(Docket No. 2007-OE-01); and the Southwest Area National Interest Electric Transmission Corridor (Docket No. 2007-OE-02). DOE affirmed the NIETC designation orders on March 10, 2008.

EPAAct 2005 gave federal backstop siting authority of certain electric transmission facilities, based upon the process outlined above, to the Federal Energy Regulatory Commission (FERC). Upon NIETC designation by DOE, FERC may issue permits to construct or modify electric transmission facilities if FERC finds that:

- (1) A State in which such facilities are located does not have the authority to approve the siting of the facilities or to consider the interstate benefits expected to be achieved by the construction or modification of the facilities;
- (2) The applicant is a transmitting utility but does not qualify to apply for siting approval in the State because the applicant does not serve end-use customers in the State; and
- (3) The State with siting authority takes longer than one year after the application is filed to act, or the State imposes conditions on a proposal such that it will not significantly reduce transmission congestion or it is not economically feasible.

To issue a permit, FERC must find that proposed facilities:

- (1) are used for interstate commerce;
- (2) are consistent with public interest;

- (3) significantly reduce transmission congestion in interstate commerce;
- (4) are consistent with national energy policy; and,
- (5) maximize the use of existing towers and structures.

Siting

A major impediment to siting energy infrastructure, in general, and electric transmission, in particular, is the great difficulty in getting public acceptance for needed facilities. This tells us that no matter where siting responsibility falls – with State government, the Federal government, or both, as prescribed in the EPAct 2005 – siting energy infrastructure will not be easy and there will be no “quick fix” to this situation.

During the EPAct 2005 debate, NARUC opposed the “backstop siting” provision. NARUC’s position prior to passage of EPAct 2005 was, and continues to be, that to have the greatest economical and environmental benefits transmission facilities should not be nationalized but rather should be approached on a regional basis. Just as States have a role in the siting of interstate highways, States need to continue having an active role in transmission decisions.

As Congress considered EPAct 2005, NARUC expressed deep concern with the language that eventually became Section 1221. At that time, NARUC opined that the language could in essence overrule legitimate State agency concerns and laws with regard to how a State ruled on a transmission project. The language would then permit FERC to

overturn, or indeed, ignore the decision and preempt State law and actions. As reflected in recent litigation, our initial observations and fears were accurate. In *Piedmont Environmental Council v. FERC*, the Fourth Circuit overturned FERC's expansive interpretation of its backstop siting authority in NIETCs. The court followed FERC Commissioner Suede Kelly's dissent to Order 689, and held that section 216 of the Federal Power Act (which gives FERC backstop siting authority if a State "withheld approval for more than one year") clearly does not give FERC siting authority when a State affirmatively denies a siting permit application within the year. Now, members of Congress and FERC, and their supporters, see the current energy and climate legislation as an opportunity to reverse the Court's decision by providing FERC blanket authority to overturn well-reasoned State decisions made in good faith.

In our comments on the FERC rulemaking which inspired the court action, NARUC said it expected the backstop siting authority to have limited applicability because the majority of the State commissions have the authority to approve or deny proposed transmission projects within their jurisdictions and State commissions are frequently allowed to address the interstate benefits of proposed projects. Furthermore, many State statutes require a petitioner to obtain a certificate of public convenience and necessity, or some other similar certificate, from a State commission before constructing transmission facilities regardless of whether the applicant provides electric service to end-use customers. In its comments, NARUC proposed that:

1. FERC clarify that federal backstop siting authority under FPA Section 216 is only triggered when the State Commission fails to or cannot act in a timely manner;
2. FERC clarify how it will apply the federal backstop criteria;
3. The proposed rule be revised to implement the due process requirements of the statute; and,
4. The Final Rule adopted should incorporate a reference and deference to extensive siting records developed at the State level to prevent duplication and confusion.

The Final Order gave the States one full year to consider a transmission line siting application before the federal pre-filing process begins. The intent is to avoid conducting “parallel proceedings” – where a State commission and FERC would be considering a siting application at the same time. If such “parallel proceedings” were allowed, that process would create *ex parte* and prejudgment concerns under State law. Such a situation could potentially result in an applicant “gaming” the siting process by purposefully filing a deficient application to the State with the hopes of starting the one-year federal clock and precluding adequate State consideration of the application. NARUC did not appeal the FERC backstop siting rule and our members have generally been attempting to work within the framework of the EPACT 05 backstop provision.

While the American Clean Energy and Security Act, as reported out of Committee, does not include expansion of federal preemption on siting, our membership is troubled that some in Congress think it necessary to begin consideration of changing the siting provision that was just established in EPAct 05. This provision has not been given an appropriate amount of time to ascertain whether or not it can, will or is working. We are pleased, however, to see that a growing number of House and Senate members are becoming increasingly concerned with the potential for federal government preemption in the siting of electric transmission.

If Congress does anything on siting, it should affirm the Fourth Circuit decision by clarifying that if a State turns down a transmission line proposal for good reason and within a reasonable timeframe FERC should not be able to second guess the State. FERC Commissioner Suedeen Kelly correctly reasoned that it was incomprehensible that Congress intended FERC to override timely State decision. In addition, it only seems fair that the one-year clock for State action needs to be suspended whenever a federal agency is the cause for the State delay in a permitting decision.

Planning

State Commissions are acutely aware of the necessity and process of regionally planning transmission projects. In all sections of the country where there is a regional planning process, State Commissioners and their staffs are participants in the process.

For example, Title IV of the American Recovery and Reinvestment Act of 2009 required the formation of an Eastern Interconnection Planning mechanism, and provided the Department of Energy with \$80 million for this effort and included provisions for State participation in this study. The Western Interconnect has a model for promoting interconnection wide planning under the Western Governors Association and Commissioners in the Eastern Interconnect are developing a similar process.

Commissioners from the Eastern Interconnect met on May 15, 2009, to decide how to create a mechanism for State involvement. The May 15 group determined that it is important for States, regulatory commissioners and Governors' offices, to play a leadership role in Eastern Interconnect planning process. To that end all 39 states and the District of Columbia have been invited to send a delegate from their State Commission and Governor's office to a meeting later this month in Washington to organize State participation in the Eastern Interconnect wide planning process.

Let me to say a few words about Vermont and New England as it relates to transmission planning and investment. I think it underscores the rich environment that can develop as States and regions work to ensure that needed transmission projects get built and can be used to complement State, regional, and national goals for developing clean and renewable energy resources, while preserving and enhancing reliability.

Vermont has a transmission planning process that analyzes potential transmission constraints over a 20-year horizon and considers various alternatives, including distributed generation and targeted energy efficiency programs that would address any identified reliability issues. The process ensures that solutions to transmission constraints serve the long-term needs of consumers, at the lowest cost. In addition, the Vermont planning process is an integral part of a six-State regional planning framework known as the Regional System Plan. This is a dynamic process and State plans are updated on a three-year cycle and contribute to the ISO New England (ISO-NE) Regional System Plan, which is updated annually. These planning efforts provide a forum for States and participants to collectively analyze regional system needs. This process has proven successful and is delivering needed investment.

In Vermont, after decades without any major transmission investment, the Public Service Board has approved three major transmission projects from 2005 through 2008 with total projected capital investment of over a half a billion dollars. At the regional level, after decades without any major transmission investment, nearly \$4 billion has been placed in service since 2002. These Vermont and New England regional projects were needed to meet system reliability needs.

Going forward, the regional planning efforts are broadening to focus on creating greater access to renewable resources. ISO-NE indicates that the combined New York and New England regions hold more than 100 projects representing over 12,000 MW of

new wind resources in their interconnection queues. At the request of the New England Governors, ISO-NE is assisting the region in the development of a regional blueprint for transmission development to access on-shore and off-shore renewable resources.

Coordinated planning efforts between ISO-NE and the NYISO are underway to enhance the development of wind potential in the combined region. We expect these planning efforts to also consider options for accessing the many large renewable and non-carbon resource proposals from neighboring provinces in Canada.

State and regional planning efforts are now focused on using these planning efforts to develop plans and strategies for accessing the bounty of renewable resources that, while often distant from load, are close to New England and hold the promise for affordable delivery of clean and renewable energy resources. State and regional planning efforts are contributing toward both reliability and accessing clean energy resources. Where planning efforts like these efforts in New England are successful and are triggering needed investments, federal preemption authority should be limited.

In summary, Vermont and New England have a robust transmission planning process. On May 11, 2009, the Northeastern governors sent a letter to the House and Senate leadership requesting that any federal legislation on transmission siting preserve State and regional oversight and review. Consistent with the Governors' letter, my testimony supports the concept that our regional and state planning provides a sound framework for addressing our transmission needs.

Cost-Allocation

State regulators are concerned about transmission reliability, adequacy, and the costs required to support the development of robust competitive wholesale markets. The investment that is needed to upgrade the transmission grid in order to support expanded wholesale power markets will cost billions of dollars. Notwithstanding the general benefit to the wholesale electric marketplace of encouraging the construction of new generating capacity and its interconnection to the grid, it is also important to provide proper price signals to encourage optimal demand response and promote economic and efficient expansion of the grid and siting of generation. The FERC has in the past adopted transmission pricing policies that generally provide for the direct assignment of costs to the parties causing the costs.

FERC Order No. 2000 stated the "[m]arket designs that base prices on the average or socialization of costs may distort consumption, production and investment discussions and ultimately lead to economically inefficient outcomes." FERC has departed, in some instances, from a transmission pricing policy that provides for the assignment of costs to the cost-causative parties. In general, NARUC supports efficient pricing policies that result in the economic use and expansion of the transmission system to support a robust wholesale electricity market. We recognize that investments needed to maintain the reliability of the existing transmission systems should continue to be recovered through rates charged to all transmission users. We advocate that the cost of upgrades and

expansions necessary to support incremental new loads or demands on the transmission system should be borne by those causing the upgrade or expansion to be undertaken, except that FERC should not preclude the assignment of interconnection cost to the general body of ratepayers within a State when that State's regulatory body determines that such allocation is in the public interest.

A robust regional electric transmission system is an essential prerequisite to support both reliability and the market function allowing more generators to reach loads and compete directly for wholesale sales to such loads in order to increase competition among generation suppliers and meet national goals for renewable generation and energy independence. A new rate design is needed that will facilitate the construction of the strong transmission backbone required to support the nation's wholesale electric markets, future increases in renewable generation capacity, and reliability.

In conclusion, the electric transmission system must have the capacity to meet the growing energy needs of the nation, regardless of the generation source. The solutions to the challenges will not come quickly or easily. These solutions will require the cooperation of all stakeholders, including State and federal governments, and must not require ratepayers to bear the entire financial burden with the entire reward allocated to the owners of generation and/or transmission. Thank you and I look forward to your questions.

ATTACHMENT



N A R U C
National Association of Regulatory Utility Commissioners

Resolution Regarding Possible Federal Legislation Amending the Federal Power Act Addressing Expansion of Transmission Facilities

WHEREAS, the siting of electric transmission facilities has historically been subject to the exclusive jurisdiction of the States; and

WHEREAS, it is in the States' interests to ensure that adequate electric transmission facilities are constructed to meet the needs for economic and reliable utility service; and

WHEREAS, it continues to be the long-standing position of the National Association of Regulatory Utility Commissioners (NARUC) that Congress should not expand Federal authority over transmission siting either through amendments to the Federal Power Act or through other Federal legislation; and

WHEREAS, Section 216 to the Federal Power Act, enacted as part of the Energy Policy Act of 2005, provided the Federal Energy Regulatory Commission (FERC) with limited "backstop" transmission siting authority; and

WHEREAS, it is anticipated that within the next few months, Congress will be considering possible amendments to the Federal Power Act that will provide FERC with expanded authority over the siting and construction of new interstate transmission lines; be it therefore

RESOLVED, that in connection with any proposed legislation introduced in the current session of Congress that would expand FERC's current authority over the siting and construction of new interstate transmission lines, the Association and its Washington staff recommend that Congress incorporate the following principles into such legislation:

- That any such additional authority granted to FERC by the legislation allow for primary siting jurisdiction by the States, and provide that FERC's "backstop" siting authority be as limited in scope as possible;
- That, in no event should FERC be granted any additional authority over the siting or construction of new intrastate transmission lines;
- That, in no event should FERC be granted any additional authority to approve or to issue a certificate for a new interstate transmission line that is not consistent with a regional transmission plan developed, in coordination with affected State commissions or other designated State siting authorities, and other regional planning groups, that covers the entire route of the proposed project;
- That, in no event should FERC be granted any additional authority to approve or to issue a certificate for a new interstate transmission line unless there is already in place either (1) a cost-allocation agreement among all the states through which the proposed project will pass

that governs how the project will be financed and paid for; or (2) a FERC-approved cost-allocation rule or methodology that covers the entire route of the proposed project;

- That, in no event should any such legislation allow FERC to preempt State authority over retail ratemaking, the mitigation of local environmental impacts under State authority, the interconnection to distribution facilities, the siting of generation, or the participation by affected stakeholders in state and/or regional planning processes; and
- That, in no event should any such legislation preempt existing State authority to regulate bundled retail transmission services.

Sponsored by the Committee on Electricity
Adopted by the NARUC Executive Committee
March 10, 2009

Mr. MARKEY. I am now going to turn to Congresswoman Baldwin to introduce our next witness.

Ms. BALDWIN. Thank you, Mr. Chairman.

I am pleased to welcome a very special constituent to our hearing today. In 2007, Governor Jim Doyle appointed Lauren Azar to the Wisconsin Public Service Commission. As a commissioner, she has played a leading role in confronting the challenges associated with transmission development. Just yesterday the Wisconsin PSC sited a very significant transmission line.

Lauren also serves as President of the organization of MISO States where she is leading a regional planning and cost allocation effort for developing electrical transmission over the Midwest ISO region, which includes 13 States and one Canadian Province.

Prior to her appointment to the Wisconsin PSC, Commissioner Azar worked as an attorney and practiced extensively in the areas of electric and water utilities representing both ratepayers and utilities. She helped create the Nation's first stand-alone transmission company, American Transmission Company, otherwise known as ATC, and helped to site a 210-mile extra-high-voltage line in Wisconsin and Minnesota.

In addition to all of these credentials, I can also tell you that I know what she eats for breakfast and what she grows in her vegetable garden because for those of you who don't know, Lauren is also my partner. And it is a thrill and a very proud moment to have her here to testify based on her significant expertise on the issues before us.

I welcome her to our subcommittee.

Ms. AZAR. Thank you, Congresswoman.

Mr. MARKEY. We welcome you. Whenever you are ready please begin.

STATEMENT OF LAUREN L. AZAR

Ms. AZAR. Thank you, Mr. Chairman, Ranking Member Upton, and the members of the subcommittee. Thanks for inviting me to appear at this hearing on the future of the grid. And my primary messages for today are, number one, before a transmission grid can be cost effectively planned, Congress must define the goals for that grid; number two, States with technical assistance from the regional and utility transmission engineers should plan the grid and site transmission lines; three, Congress should define the framework through which the States will design and site the grid—if the States fail, then it is appropriate for the Federal Government to step in; and four, Congress should agree to do no harm by not selecting a specific grid design or technology and by not selecting a specific cost allocation.

As to point number one, Congress should define the goals. The renewable energy standards and carbon limits that Congress may set will define the generation portfolio that our Nation will need to develop. With clear identification of RES and the carbon mandates, the States can begin designing the transmission grid that is necessary for that generation portfolio.

Point number two, States should develop the plan and site the lines. There are a variety of reasons why a State-led process will lead to better results than a federally led process, and these rea-

sons include, first, State commissions have the ultimate responsibility for retail electric rates; second, planning must accommodate State choices for generation in demand side programs, the distribution decisions that they have made; third, planning must incorporate the designs for the existing State transmission and distribution systems; and lastly, State decision-making allows more complete public information, participation, and acceptance.

Point number three, Congress should define the process. Congress could define the parameters for a State-led process. Such parameters could include the following:

Essentially, require the States to participate in regional planning initiatives to design a grid that will meet the congressional mandates;

Set strict but reasonable deadlines for the planning product and the siting of lines in that plan;

Ensure that parties who will profit from this grid build-out do not make the decisions for that build-out; and

Lastly, if States do not complete the plan or the siting of the lines in that plan, then the Federal Government should intervene.

Point number 4, Congress should do no harm. I ask you to take a Hippocratic oath today, and such an oath would require you not to do two things. Number one, do not pick technologies or plans. While the moniker "transmission superhighway" sounds good, depending on the goals of Congress it may not be what we need. I suspect one-size-fits-all solutions such as the 765 grid overlay will not be cost effective, will likely be oversized and will harm some areas.

As an aside, the parties who are advocating for a 765 grid overlay are the very parties that will make a lot of money off of that plan.

And the second point about not doing harm is, do not select a specific cost allocation for the grid. Because cost allocation should be tailored to the plan developed, Congress should not preselect such an option. If Congress mandates a specific cost allocation, it will be indirectly endorsing a specific type of design. For instance, endorsing a so-called "postage stamp" which allocates the costs evenly over a very large area is more appropriate for an alternating current solution than a direct current solution.

In conclusion, I ask Congress to promptly set renewable standards and carbon limits so that the problem is defined. I also ask that Congress essentially lock the States in a room and instruct them to solve the problem within a specified time period.

The \$80 million already appropriated under the ARRA will provide the funding necessary to conduct this endeavor. After being locked in the proverbial room for a reasonable period of time, if the States are unable to design a transmission grid meeting the congressional mandates, then the Federal Government should step in. The same framework should also be applied to transmission siting.

I see I still have 43 seconds, so I will quickly provide a quick summary of some of the efforts that are currently happening within the States as far as regional planning and siting. The chairman and Congresswoman Baldwin already referenced one of them, which is namely the organization of MISO States, and that is the Midwest Independent System Operator. The States within that 13-

State region and one Canadian Province are currently developing a regional plan and cost allocation process, and we expect to have that done by the end of the year.

More, I think, importantly to this committee's work, in the ARRA, Congress identified they wanted to have interconnection-wide plans. And on May 15, leaders from the eight different regions within the eastern interconnection met to begin the process of planning on a interconnection-wide basis. At the end of this month, we expect to have all 40 States present at a meeting in which we will begin to discuss just how we expect to go forward in that process and what the States' role should be in that process.

Thank you very much, Mr. Chairman.

Mr. MARKEY. We thank you very much for being here today and for your testimony.

[The prepared statement of Ms. Azar follows:]

**Testimony of Commissioner Lauren L. Azar
Public Service Commission of Wisconsin¹
Before the House Committee on Energy and Commerce
Subcommittee on Energy and the Environment
United States House of Representatives
June 12, 2009**

Introduction and Summary

Mr. Chairman and members of the Committee, thank you for the opportunity to appear at this hearing on the “Future of the Grid.” There is no question that America is facing new and mounting challenges in the way that we plan for and build electric transmission lines. However, while I am certain that America is entering a new era of energy policy, what this new policy will require of the transmission grid remains unclear. This uncertainty is preventing the development of meaningful transmission plans.

Forthcoming energy policy *may* require that the grid be developed to deliver significantly more renewable energy from remote locations to far-away electricity customers. Additionally (or alternatively), imminent policy changes *might* require that a significant amount of our energy come from no or low-carbon generation. To truly debate the “Future of the Grid,” it is essential that Congress first identify the future of our energy policy. Once Congress defines the goals that our transmission grid must meet, then we can design that transmission grid. This hearing will identify a number of

¹ My appearance today should not be construed as a representation of any official position of the Public Service Commission of Wisconsin (“PSCW”). I appear today as a member of the PSCW, but not on its behalf. As a three member Commission, any position we adopt must garner the support of at least two Commissioners, and the arguments I identify today have not been considered by the full Commission due to time constraints.

potential frameworks for ensuring our nation's transmission grid is properly planned and timely sited in light of changing policies.

I urge Congress to adopt a framework that maintains the initial responsibility for the adoption of transmission plans and transmission siting on state and regional entities. With clearly established mandates, goals and timelines, I believe that state and regional transmission entities can develop and site the transmission facilities necessary to meet our future energy needs. Indeed, I believe that plans that are developed and implemented by state and regional entities will be better and more accepted than if the plans were developed in Washington.

If Congress identifies the goals that states need to meet, and the states fail to develop and site these transmission facilities in a timely manner, then I can agree that more aggressive federal action will be necessary. However, I do not believe that we are at that tipping point today.

Identifying the Problem

It should be universally understood that it is difficult to solve a problem when you don't really know what the problem is. In the context of transmission planning and siting, it is difficult to conclude that state planning and siting processes have failed to address the transmission needs of the nation, since it is unknown what power the national transmission grid is going to have to convey and from where.

As it stands today, the biggest impacts on the future of the transmission grid remain largely unknown. Recent action by the House Committee on Energy and Commerce makes it more likely that we will have a nation-wide renewable energy

standard that will require electric utilities, by 2020, to meet 20% of their energy requirements through renewable energy sources and energy efficiency. To the extent this becomes law, it will have a dramatic effect on the transmission system that is needed, since many of the largest population centers are located far from the most viable renewable energy zones.

Additionally, this same proposal includes limitations to the amount of carbon dioxide that certain entities, including electric generators, may emit. This policy change, if enacted, will require the building of carbon-free or low-carbon emitting resources along with the retirement of many existing generation facilities. These generation changes will also have a significant impact on what type of transmission grid will be needed to meet this national goal.

Without a clearly defined problem, it cannot be expected that states (or the federal government) will be able to identify and adopt regional solutions. For example, it will be easier for a region of states to agree on the need and location of a large, multi-state transmission line if they knew that it was necessary to meet a mandated national renewable energy standard. When I work with colleagues from other states, we spend much of our time trying to guess what the mandate might be, and less on how we will meet that mandate. With clear identification of the mandates, we can begin the work of solving the transmission problems necessary to meet those mandates.

Stated more bluntly, planning to integrate renewable, low-carbon or carbon-free resources will be dramatically more effective if all the parties knew the mandates and the

timelines that apply. I encourage Congress to act quickly to answer these questions so that transmission planners and policymakers can narrow their sights.

We Are Facing New Challenges

States are currently facing the challenges of implementing renewable energy standards and evaluating their generation portfolios in light of carbon constraints. These challenges are relatively new to policy-makers, utilities and transmission planners. Historically, transmission planning was an exercise in reliability forecasting. Under this paradigm, a utility would evaluate the reliability and the adequacy of the grid to deliver capacity to customers within their service territory. This discrete function has changed dramatically in the last decade.

The development of wholesale energy markets and central dispatch of generation requires transmission planning to perform the reliability analysis over a much larger footprint while also accounting for economic and uneconomic congestion. In this context, transmission planning has evolved rapidly from simply needing to overcome certain contingencies (i.e., line outages), to identifying an optimal grid to move energy through multi-state networks.

Presently, transmission planning in areas with state-sponsored renewable energy standards and greenhouse gas initiatives² is making another paradigm shift. Planning

² There is some irony in the context of today's hearing. The fundamental question at issue here is the power balance between state and federal authority as it relates to planning for and siting a transmission grid that will fulfill certain policy goals. There is a suggestion that states cannot accomplish this goal in a timely manner. The irony is that many states have actually adopted renewable energy requirements and have entered into greenhouse gas accords, and are taking action to develop transmission to support those state policies. At the same time, the federal government continues to consider similar renewable and climate-related policies. Given that states have already proven to be effective laboratories of energy

now begins with identifying the type, size and location of generation and then designs the transmission lines necessary to carry that power to electricity customers.³ In this new paradigm, generation and transmission planning have become intertwined. The “Future of the Grid” is going to largely depend on the placement of new generation facilities, for example, the placement of large wind farms. The placement of these generators will be largely made by state-level policy-makers, and not transmission engineers. This is a major shift in the role of transmission planners, and one that will create new challenges for policy-makers and planners alike.

There are also challenges involved with the uncertainty of who will pay for the new transmission infrastructure necessary to meet these identified policies. Most current transmission tariffs were developed to address reliability with those who benefit the most, paying the most for the grid improvements. The beneficiary metric for reliability improvement on an AC system rightly places most of the cost allocation on ratepayers most proximate to the new transmission line.

These reliability driven tariffs may not make the most sense for new transmission needed to tie remote generation to distant electricity customers. Indeed, the Midwest Independent System Operator (Midwest ISO or MISO) is working right now to modify a tariff for generation interconnection to make sure that wind generation located in sparsely

policy, Congress should look to the states to provide the initial answers on transmission planning and siting once the appropriate national policies are finalized.

³ It is a misconception to suggest that, on an alternating current (AC) system, you can move an electron from Point A to Point B. In an AC system, power flow cannot be actively controlled and it will follow the path of least resistance. Extra high-voltage AC systems must have a sufficiently robust underlying system in place to ensure that power flows efficiently. This is contrasted with a direct current (DC) system where power flow of the line can be actively controlled and directed.

populated areas does not disproportionately increase electric rates in places like North Dakota. How costs are allocated is a responsibility of both the state regulators and the FERC.

Changing policies are creating new challenges with respect to transmission planning and cost allocation, and it is essential that energy policy be resolved quickly to remove the uncertainty.

Some States Are Already Taking Action

Despite the fact that there are many unknowns about our energy future, there are several examples of states that recognize we are pivoting to a new energy world. These examples show that states *can* work collaboratively amongst themselves to design and site transmission facilities that will enable tomorrow's energy policy.

First, there are several states taking action to respond to state-based renewable energy requirements and goals. Given the problem that many renewable resources are located far from the customers that need the energy, some states are collaboratively identifying renewable energy zones and the transmission infrastructure needed to export the energy from those zones.

My home state of Wisconsin offers a good example of a changing state perspective. Currently, all three of the Commissioners from the Public Service Commission of Wisconsin (PSCW) are engaged in at least one forum to discuss regional transmission development. The PSCW Chairman Eric Callisto is working with Commissioners and Governors from a five-state region to identify prime renewable energy zones and develop transmission plans associated with them. My other colleague,

Commissioner Mark Meyer, is working with the Midwest Governors Association in their transmission collaborative.

I am currently chairing a Cost Allocation and Regional Planning (CARP) initiative formed by the Organization of MISO States (OMS). In January of this year, this group of 13 states in the Midwest ISO, began an initiative to prepare a regional transmission plan and a cost-allocation to pay for that plan. At this time, CARP has identified a variety of future scenarios to model, including scenarios that assume increased renewable requirements and increases in smart grid technology. Also, for the first time, at the request of CARP, the Midwest ISO will be modeling a scenario that sets a cap on the amount of carbon emissions. This is a significant policy shift, and one that is being led by state regulators.

On top these efforts, in the recent American Reinvestment and Recovery Act (ARRA), Congress directed \$80 million to the Department of Energy (DOE) to conduct resource assessments and provide technical assistance for eastern and western interconnection-wide planning. At this point, DOE is planning to release requests for proposals for this planning. The Regional Transmission Organizations (RTOs), Independent System Operators (ISOs) and the transmission planning authorities from the southeastern states have met to discuss their potential collaboration for the Eastern Interconnection planning. Concurrently, I have been working with regulators and representatives from Governors' offices throughout the 40-state region to organize and develop a strategy for state involvement in this process. Our first meeting of all 40 states

will occur at the end of this month. These are unprecedented steps toward state collaboration in the field of transmission planning.⁴

I recognize that these examples may be unique and that some states may not embrace a planning process the way Wisconsin has.⁵ But these situations evidence that states can address transmission development issues and these ongoing efforts cannot be characterized as failure. Indeed, I believe that we are witnessing the start of a transformation in the role that states play in regional transmission planning and development.

State Leadership on Transmission Planning and Siting Is Preferable

There are a variety of reasons why a state-led process will lead to better results than a federally-led process. First, state commissions have the ultimate responsibility for retail electric rates and are therefore keenly aware of how the costs of interstate transmission lines will flow to the ratepayers of their states and will be able to ensure that ratepayers are not overburdened by transmission decisions. Second, transmission planning must accommodate state choices with respect to generation portfolios and the complementary demand-side programs. This issue will only be magnified if carbon constraints are implemented, since some states will be impacted more by this policy change than others. Third, state regulators and their staffs are better situated to identify

⁴ FERC also recently announced plans to hold regional conferences this year to obtain information on current planning processes as well as information about potential improvements to those processes to ensure that there will be sufficient and reliable energy supplies. I look forward to seeing beneficial outcomes from these outreach efforts.

⁵ Wisconsin's success in this area is demonstrated by the fact that between 2001 and the end of this year, there will be approximately \$2.5 billion in new transmission infrastructure, which includes over 1,700 miles of new or upgraded transmission lines.

and address transmission upgrades such that they do not harm or require excessive upgrades to existing facilities.

Finally, having represented a transmission company in the past, and now as a state regulator, I know that one of the most important components of actually constructing a transmission line is to ensure that there is sufficient buy-in from those who will be affected most by the lines – those who will have to live with a line in their community. State decision-making allows more complete public information, participation, and acceptance.

Whenever I have to make a decision about a power plant or transmission line, I make sure I recognize that, while the structure will be a benefit to society as a whole, some people have to bear a greater burden for that societal good. I am not so naïve to suggest that this recognition will fully mitigate the burdens some people bear, and I know that there will never be 100% buy-in when a transmission line is constructed. However, I firmly believe that if these decisions were to be made in Washington, those individuals that have to bear these burdens would feel they have less opportunity for participation in the process and there would ultimately be less acceptance of the result.⁶ Significant state participation in the planning and siting process will mitigate this concern.

⁶ This same logic applies to the decisions that will have to be made based on the policies adopted by Congress, including the retirement of some, if not many, generation facilities that emit significant carbon dioxide. The decision to retire these plants, which will be inevitable, will also carry negative economic impacts to many communities. When made close to home, with ample opportunity for local input, these decisions will be more acceptable to those communities.

Congressional Leadership Can Enhance State and Regional Planning Efforts

As identified above, I believe that there needs to be a strong state role in transmission planning and siting. Once Congress identifies what energy policy will require of the transmission system, ongoing state and regional planning efforts should have the opportunity to address these policies. A strong state role will lead to greater acceptance of what will likely be significant construction of transmission facilities.

Congress can and should play an important role in bolstering and catalyzing state efforts by setting clear mandates and guidelines as well as strict deadlines for state and regional transmission planning efforts. If these planning efforts fail to meet these mandates or deadlines, Congress can set up additional backstop authority for federal agencies to take action and ensure that projects identified in the regional planning efforts move forward. This framework will require states to work quickly and efficiently to meet our future energy requirements.

Examples of the type of leadership that would be helpful include the following:

- A mandate for state-led transmission planning efforts that requires participation in regional planning processes. Those states that choose not to participate will have to abide by the outcomes identified by states participating in the process.
- Strict but reasonable timelines for the preparation of regional transmission plans.
- A requirement that transmission plans be determined by neutral parties that work in the public interest and not by utilities or developers who have a duty to their shareholders.
- Timelines for siting approval of transmission projects that are identified in regional plans.

- Clear and powerful backstop authority for federal action to plan for, approve and site transmission lines that are identified as vital in the state-led transmission planning process.

With specific guidelines in place, state and regional transmission planning entities can realize the benefits of state action and identify cost-effective transmission facilities that will carry out national energy policies. Many of the proposals pending before Congress recognize that states can bolster the planning and siting process. Any Congressional action should ensure that States have the opportunity to act before full federal preemption is considered.

What Congress Should NOT Do

I encourage committee members to take a “Hippocratic oath” with respect to transmission planning and development to, first, do no harm. Pursuant to this oath, it is critical that any federal transmission legislation be agnostic as to the technologies that may be employed to meet our transmission policy goals. The fact is, meeting policy requirements and energy needs in the most cost-effective ways may require the use of many technologies, some of which may not even be known to us now. If Congress identifies particular technologies at the start, this is likely to result in a grid that will be insufficient to meet our energy needs, one that is untested and fails, or one that is too robust and overly expensive. Transmission planners need to have all options available to them as inputs if we expect to have the most optimal outputs.

Currently, there is discussion that a large, high-voltage alternating-current overlay is the proper solution to move renewable energy from western states to eastern ones.

While this option is certainly one that transmission planners should consider, I cannot say today that it would create an optimal solution.

As an example, an extra high-voltage 765-kV AC overlay may or may not be the best option to move renewable energy across America. If this option were mandated today, there may be unintended consequences for many places along the route of that line. In the AC system, energy will flow along the path of least resistance; therefore a 765-kV line is going to require that much of the underlying grid between the start and terminus of the line be upgraded as well. In Wisconsin, the American Transmission Company has designed a 345-kV grid for most of our state. Should a 765-kV overlay be brought into our state, it will undermine our very deliberate design efforts to date. Wisconsin will be forced to significantly buildup our underlying grid in order to accept the larger voltage lines. If the goal is to move energy from a remote source to far-away electricity customers, there may be lower cost options that will not require unnecessary upgrades to the existing grid.

Flexibility is also necessary with respect to cost allocation issues. Some advocate for widespread use of a cost allocation called a “postage stamp,” where the cost of a new transmission facility is spread to all ratepayers over a large geographic footprint. Postage stamp allocation is usually proposed in concert within the framework of an AC overlay, because it alleviates the tedious and contentious inquiry of identifying specific cost-causers and beneficiaries of the new line. This is a difficult exercise when dealing with an AC overlay, but identifying cost-causers and beneficiaries is simplified if DC lines are used. Mandating a specific cost allocation may have unintended negative consequences.

To determine the best solutions, transmission planners should not be constrained in their choices. Therefore, at this point, neither Congress nor federal agencies should require the use of a single technology or the adoption of a single cost allocation methodology.

Additionally, it is critical that those charged with determining the “Future of the Grid” not be tied directly to the profits that may flow from the development of a particular technology or a particular transmission project. Decisions that are made in a transparent manner, by unbiased parties, are likely to result in better solutions that will be more accepted. This is true of the decision-making made by the members of this Committee, and it will be true in the context of electric generation and transmission planning as well.

Conclusion

The future of our electric transmission grid is going to largely depend on the decisions that Congress makes with respect to America’s energy future. I urge members to move quickly and decisively on these issues so that we can narrow our focus to develop a grid to meet those policies. At that time, I believe that Congress should turn toward state and regional transmission development initiatives, many of which are already underway. With clear goals, mandates and timelines, these entities can identify and site the generation and transmission facilities that will make our energy future a reality.

Thank you again for the opportunity to testify on this issue. I look forward to answering any questions you may have.

Mr. MARKEY. Our next witness is Paul Hibbard. He is the Chairman of the Massachusetts Department of Public Utilities. Chairman Hibbard previously worked for the Massachusetts Department of Environmental Protection.

We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF PAUL J. HIBBARD

Mr. HIBBARD. Thank you, Mr. Chairman. I also want to thank the members of the subcommittee for inviting me here today to talk to you about this critical topic.

On behalf of Governor Deval Patrick and the Commonwealth of Massachusetts, I want to thank you all for your leadership in addressing our energy challenges and global climate change, and for your wisdom in addressing both at the same time in the ACES legislation. We support your efforts and encourage Congress to move forward with the ACES legislation expeditiously.

On transmission, we think that ACES has got the transmission planning and siting question exactly right. In its current form, it presents a measured and sensible approach that supports the continued and vital primary role of State and regional resource planning in siting efforts and expands the role of FERC to coordinate regional planning across a broader geographical footprint and with an added focus on national energy policy. But most importantly, it does so without jeopardizing the critically important role of competition in wholesale energy markets.

In contrast, I have serious concerns with the more aggressive proposals that have been put forward to expand Federal authority in transmission planning and siting. At their core, these proposals appear to put FERC in three roles:

First, in the role of requiring the development in a short period of time of interconnection-wide plans like the JCSP, ostensibly to access renewable resources;

Second, it puts FERC in the role of deeming transmission included in such plans as needed for the public convenience and welfare triggering the siting override and eminent domain authorities; and

Third, it puts FERC in the role of approving or imposing the allocation of associated costs on a broad basis across all load.

Under these proposals, FERC's traditional authority is expanded to where it becomes a de facto central planning authority to select and direct the build-out of renewable generating resources across the Nation, potentially diminishing the development of the abundant level of demand reduction and renewable resources that are available at the local level in all of our regions.

Developing renewable resources locally is a top priority for the Commonwealth, as I am sure it is for States across the country. We believe that renewable resources in our State and along the eastern seaboard, both onshore and offshore, represent one of our Nation's most promising yet underdeveloped renewable resources, sources of energy.

While offshore wind installation costs currently exceed those of onshore installations, these resources are much closer to our load centers. And research and development efforts that are focused on reducing costs and improving reliability promise to make offshore

wind competitive with distant but onshore wind farms on a delivered cost of power basis.

As regional onshore projects move forward and offshore wind moves into commercialization in the United States, they all must have the opportunity to compete on an even playing field with the onshore and more remote sources of renewable power and not be disadvantaged by upfront transmission subsidies.

The threat that unsubsidized local renewables would be unable to compete in fact has been taken very seriously in our region and beyond. A bipartisan group of 11 Governors representing every coastal State from Maine to Virginia, as well as Vermont, recently joined together to raise these concerns in a letter to the committee chairman.

A top-down central planning process is in stark contrast to how free markets are supposed to operate. In our region and at the direction of FERC, to ensure fair competition, all generating resources, renewable or otherwise, are responsible for all development costs, including the costs of environmental compliance and the costs of delivering their power reliably to load. In this competitive market context, it is the lowest-cost provider, based upon the price at retail, that prevails ensuring that society's electric reliability and environmental goals are met at the lowest possible cost.

Notably, this is the design principle under ACES, where the prices offered by fossil fuel resources will be higher and less competitive due to the additional marginal costs associated with purchasing carbon allowances, and the price offered by renewable resources will be lower and more competitive due to the additional marginal revenues associated with the generation of renewable energy credits and other incentives. In this framework there is no need for a central planning decision to force development or to pick the winning resources because, by definition, the cost of carbon allowances and the value of renewable energy credits will rise to levels that are needed to support the resources that must come on line in order for our Nation to meet our carbon cap and our renewable resource floor.

This is the way it is supposed to work and indeed has worked in emission markets over the past couple of decades. By suggesting that FERC needs to engage in resource planning to build transmission to preselected renewable resources is to concede at the outset that the free market structure for emission control and renewable control contained in ACES will fail.

In my view, the more aggressive proposals for transmission legislation, thus, are about much more than siting. They force the Federal Government into an administrative role of central renewable resource planning, a role that I believe in the long run will damage the operation of competitive markets, suppress the technological innovation and creativity that come from the operation of competition, and ultimately will result in our meeting our climate objectives at prices to retail consumers of electricity that are higher than they otherwise would need to be.

So I want to, again, thank the members of the committee for this opportunity and look forward to questions

Mr. MARKEY. Thank you Mr. Hibbard.

[The prepared statement of Mr. Hibbard follows:]

THE AMERICAN CLIMATE AND ENERGY SECURITY ACT

TESTIMONY OF PAUL J. HIBBARD

Chairman, Department of Public Utilities
Commonwealth of Massachusetts

before the

House Subcommittee on Energy and Environment, Committee on Energy and Commerce

Friday, June 12, 2009

Good morning, and thank you, Chairman Markey and members of the Subcommittee, for the opportunity to testify before you today. On behalf of Governor Deval Patrick and the residents and businesses of the Commonwealth of Massachusetts, I want to thank you for your leadership in addressing our energy challenges and global climate change, and for your wisdom in addressing both at the same time. The Commonwealth and the nation are fortunate to be able to tap your experience and knowledge as we work together to craft an energy and climate policy for the 21st century.

We share your view that the time has come for bold action. We must commit ourselves to unleashing the full potential of our nation to solve our energy and climate challenges while growing a new clean energy economy. Your American Climate and Energy Security (ACES) Act makes this commitment. I am here to offer our support for your efforts, and to encourage Congress to move forward with the ACES legislation expeditiously.

We appreciate greatly the leadership of Chairmen Waxman and Markey in proposing a comprehensive and forward-looking approach to addressing our energy and environmental challenges, and agree with the measured and sensible approach in the proposed legislation regarding transmission authorities – one that we believe upholds successful competition in regional energy markets, and supports the continued and proven role of regional resource planning efforts, while expanding the role of FERC in coordinating such regional planning across regions, and supporting the development of interconnection-wide joint planning review.

But I am here today to strongly caution committee members against the temptation to add to the draft legislation the more drastic step that has been proposed to expand the traditional transmission authority of FERC well beyond transmission reliability and into resource planning and development, particularly against the backdrop of the related efforts to rapidly deploy interconnection-wide

transmission “superhighways,” such as that conceptualized in the Joint Coordinated System Plan (JCSP). In our view, the expansion of FERC authority into centralized resource planning and associated siting jurisdiction violates fundamental free market principles, is unwarranted from energy or environmental policy perspectives, would diminish or eliminate the proven benefits of competition in electricity markets, including the fostering of local renewable and energy efficiency resources, and would strip states and indeed whole regions of critical policy authority over energy resource planning.

At the outset, I want to recognize the appropriate level of jurisdiction that FERC does and should have over transmission in interstate commerce. The maintenance of robust transmission infrastructure is critical to supporting competitive markets and ensuring the safe and reliable operation of our interconnected transmission networks. FERC currently has, and should have, backstop authority for siting interstate transmission projects that are needed to meet federally enforceable reliability standards, or to address major existing transmission system bottlenecks. When it comes to challenges to system reliability or significant congestion on the existing transmission system, the federal government needs to step in when states do not act in a reasonable timeframe. Given the recent Fourth Circuit court decision, it would be wise for Congress to address the concerns of the court, and clarify FERC’s authority in this area.

But key to FERC’s authority on siting is its limitation to projects *needed to maintain bulk power system reliability*. This is fundamentally different from what is proposed in draft transmission legislation being floated in the House and Senate, which would dramatically expand FERC’s siting and – more significantly – planning authority to include new transmission that is not needed for reliability, but instead is only needed to interconnect new generating resources to the transmission network. While on its face this seems like a laudable goal, especially when linked to bringing distant renewables to market, the practical impact is likely to lead to costly and inefficient results – and would be a dramatic federal intervention of central-planning into currently successful regionally-managed competitive energy markets. In short, federal decisions that dictate the generation that will be used to meet electricity demands on a national basis from among all possible sources will override the operation of competitive electricity markets, and squash state and regional efforts to promote demand response, energy efficiency and local renewable resource development.

In contrast, we believe that renewable resources steered to market need to be those that are lowest cost, as determined by testing all options within a competitive market framework, one that operates subject to legislated emission caps and renewable resource floors. I want to be clear; the Commonwealth of Massachusetts recognizes that our need to address the carbon challenge is paramount; but we will fail in this challenge if the path we choose to do so abandons the free market principles that we rely on to maintain steady downward pressure on costs and upward support for

technological innovation. FERC's reliance on competition in wholesale electricity markets as a de-facto determination that wholesale rates are just and reasonable is a lynchpin of these principles in their application to wholesale electricity markets across the country, and deviation from competition will come at a great cost to our nation's electricity consumers.

In the world of electricity, there are three pillars that we must rely on to enable us to meet our energy and environmental objectives at the lowest possible cost:

- First, we must continue the evolution of FERC's oversight of wholesale electricity rates across the country in a way that increases reliance on regional competitive market structures to capture system efficiencies and to fairly allocate risks and rewards among market participants and consumers. This includes expansion of short- and long-term markets for energy, capacity, transmission rights, and ancillary services;
- Second, we must continue to meet our emission reduction goals through cap-and-trade emission control programs that rely on allowance trading to meet established annual emission caps through market-driven mechanisms that achieve lowest costs; and
- Finally, we should meet our renewable development objectives not through central planning, but through market-based minimum portfolio standards that establish an incremental monetary value for renewable generation, through the sale of tradable renewable energy credits in regional and, hopefully, national markets.

In every instance, the guiding principle is for legislators and regulators to set the rules, and then leave it to the creativity of the marketplace to produce the most efficient – and least cost – compliance path. The Energy and Commerce Committee has done this many times and it has yielded impressive results. Indeed, this is the very framework encompassed in the Waxman-Markey legislation – we applaud you for this approach, and urge you to maintain it.

To understand my concern regarding the risk to free markets and competition in the various proposals for central transmission planning, it is instructive to consider the operation of existing wholesale markets and the potential impact of the transmission superhighway vision.

Where competitive markets operate (and here I describe markets in the Northeast, but the principles are the same in competitive markets across the country), new resource developers of all types compete in a competitive capacity, energy and reserve markets to meet existing and future demand. In New England, the market response has been overwhelming, with active and successful participation by demand response and renewable resources. Well over 10,000 megawatts of demand response and supply resources, including renewables, have responded to competitive market auctions that seek just hundreds of megawatts of new demand. All of these resources compete to meet future

demand in a manner consistent with our underlying energy and environmental objectives. Specifically, resources compete:

- (1) with full internalization of the cost of NO_x, SO₂, and CO₂ associated with national and regional cap and trade programs – *increasing* the price offered by fossil-based resources;
- (2) with full internalization of the value of renewable resources through the issuance and trading of renewable energy credits generated by state renewable portfolio standards – *decreasing* the price offered by renewable resources; and
- (3) with full internalization of all development costs, *including the cost to transmit power reliably to load*. This last point is fundamental to the efficient operation of free and competitive markets, placing all competing entities on an equal footing, and removing development risks from captive ratepayers, and placing it with the development and financial communities – precisely the entities most able to manage such risks over time.

In this way, evolution of our region's power system happens in a manner that meets our states' energy and environmental policy goals, but does so at *delivered* prices to ratepayers that are driven to their lowest possible levels by competition.

By contrast, proposed legislation to expand central planning and siting authorities would enable, and in effect require, that FERC approve, site, and allocate to ratepayers the costs and risks associated with building transmission to connect some types of generation, with insufficient consideration of what this means to the prices consumers pay at the end of the line. Combined with the interconnection-wide vision embraced by the JCSP, this approach would lead to a direct subsidy for distant resources only, on a discriminatory basis, thus eliminating the level playing field that exists in regional markets. This will needlessly increase electricity prices to consumers, and most importantly would seriously derail the development of local and regional energy efficiency, demand response and renewable resource alternatives. This would be a bad outcome for consumers, and for meeting long-term environmental objectives alike.

The impact of such a scheme would be significant, and long-lived. By way of example (again using the Northeast context here), how might it have this effect? Recall that in New England we have over 10,000 MW of demand response, renewable, and traditional resources competing in a market that has a need for only 1,000 to 2,000 MW of new resources over the next couple decades, and has less than 30,000 MW of existing demand. If FERC, with its new resource planning authority, moves quickly on a major transmission buildout as conceived in the Joint Coordinated System Plan, this would, as a result of a single, non-market planning decision, dump on the order of *several thousand* MW of resources into New England along new high-voltage lines. This would wipe out the need for new resources in our region for decades, dramatically reduce opportunities for new

local resources to compete with existing resources to meet existing demand, and by flooding the market could seriously diminish market prices for energy, capacity, and reserves (even though such price reductions would not benefit consumers, as they would be offset by transmission development costs that are embedded in pass-through transmission rates).

Over the past few years, one thing has become clear: the development of new energy efficiency, demand response, and local renewable resources in market regions relies critically on energy, capacity and reserve market revenues to attract investor interest, fund development and maintain profitability. The expansion of central resource planning and the subsidization (through allocation of transmission costs to captive ratepayers) of distant generation thereby present the very real scenario of crushing the market value of local and regional conservation and renewable resource development. This will unintentionally disfavor local renewables which are near load centers (even though their total all-in delivered cost might well be lower), because we will effectively give a free ride to the distant renewables since they will not have to bear the cost of their transmission investments in their delivered costs.

On a very practical level, while in our region we have abundant land-based renewables that stand ready to compete, it is also worth mentioning one potential casualty of the focus on Midwest resources and FERC planning authority could be the most promising advanced emerging energy technology available to our country today. The very best wind resource in our country – from the perspectives of resource size, distribution, capacity factor, reliability, proximity to population centers, and minimization of environmental impact – is located a short distance off the major load centers of the East Coast. For sure, offshore wind turbine installation may currently cost more than on-shore wind development, but better wind resource economics, decreasing unit costs with increased development opportunities, and the absence of the need for cross-country transmission could make offshore wind competitive with remote wind farms. The higher cost of construction may well be more than offset by the markedly lower cost of transmission. In short, offshore wind should and must have that opportunity to compete on a delivered energy cost basis – and not be disadvantaged by transmission subsidies for other forms of renewable power generation. Given the sheer magnitude of this resource potential so close to our nation's major load centers, and the opportunity to have it developed incrementally, disbursed geographically, and through many different interconnections along the coast (improving power system reliability), we would miss an enormous opportunity to not focus aggressively on its development, and we would be making a grave mistake to preclude its development by overwhelming local markets with a high volume of power from distant generation sources.

Recognizing the abundance of on-shore and off-shore renewable development potential in the Northeast, the New England Governors have been working cooperatively, and with ISO-New

England, to develop a New England Governors' Energy Blueprint (Blueprint). The Blueprint analyzes the development of up to 12,000 MW of on- and off-shore wind and other renewable development potential in the region, and will review (1) potential transmission pathways for such development, (2) the existing state-by-state competitive procurement and long-term contracting mechanisms that can provide the revenue certainty needed for development efforts, and (3) state and potentially joint regional procedures to facilitate the siting of associated interstate transmission lines. The Blueprint effort is a joint cooperative planning effort coordinated by the region's Governors, energy offices, and public utility commissions, and is being carried out in close cooperation with the regional system operator.

I recognize that support is building for transmission from wind projects in Texas and the Dakotas to load centers thousands of miles away. Bringing renewable energy to market from remote sources should certainly be one option for meeting our clean energy needs. But if we are to meet those needs in the most economic and responsible way, such resources must compete on a fair and equal basis with demand-side and renewable resource alternatives within each region – *based on the price of power at the point of consumption, including all transmission and other development costs*. And the path to this result starts from the bottom up – at the level of state and regional planning, policies, and markets. The role of FERC in this planning exercise should be focused on and limited to coordination and information sharing between regions, and facilitating the development of formal interregional analyses. In strongly endorsing this approach, the bill put forth by Chairmen Waxman and Markey got it exactly right.

In contrast, without recognizing these fundamental market principles, proposed legislation to expand federal siting authority is not simply about transmission siting, but something far more. It will effectively strip states and regions of their resource planning functions, eliminate them as laboratories for the development of innovative low-carbon alternatives, seriously damage the function of competition in regional electricity markets and, in so doing, drive up electricity prices unnecessarily.

Thus I urge you to focus not on an expansion of FERC's authority over resource planning, or the build out of a massive transmission system focused on one set of pre-determined renewable generation resources, but rather to retain the basic approach to federal oversight of regional planning coordination outlined in the Waxman/Markey draft legislation. We can then focus on how to direct funding and assistance in a way that brings the best and most economic and promising renewable resources to market, in the context of local resource availability and regional system planning. This will lead to the most effective use of government research and development assistance dollars, preserve the competitive market foundation for electricity resource additions, minimize the cost of

electricity to consumers, and leave in place an appropriate level of state and regional review of electricity infrastructure development.

Many of the concerns I have mentioned today are shared in a letter to Chairmen Waxman and Markey supported by a bipartisan groups of 11 Govenors representing every coastal state from Maine to Virginia (Appendix A). The Governors recognized the high value of local development of on and offshore renewable resources in the East, and urged Congress to avoid a central planning solution and instead create strong, fair and efficient markets for efficiency and renewables, consider long-term contract mechanisms to support the competitive development of renewable resources based on the delivered price of electricity, encourage regional plans to promote local renewable resources and offshore renewable development, and evaluate expansion of the federal investment tax credit. I urge you to consider the measures recommended in the Governors letter, and to refrain from a more planning-focused approach that would likely be a more costly and inefficient path to the development of renewable resources in our country.

I want to thank you again for this opportunity to comment, and would be happy to follow up with the Committee in whatever manner is most helpful.

APPENDIX A

**LETTER OF THE EASTERN GOVERNORS ON
RENEWABLES AND TRANSMISSION PLANNING**

Mr. MARKEY. Now we have one final, very important witness representing the Western State Governors, who I think we should all hear from before we cast our vote on the floor on the last vote of the day. Then we will reassemble after that roll call. But I think since we are all here right now that we will hear from Rich Halvey, who is the Energy Program Director for the Western Governors' Association and representing those Western Governors before this subcommittee today.

We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF RICHARD HALVEY

Mr. HALVEY. Thank you, Mr. Chairman, members of the committee; thank you for the invitation to testify here today.

Over the last 8 years, the Western Governors' Association has assumed a strong leadership role in defining policies for transmission planning, cost allocation and regional cooperation. In 2002, a protocol governing cooperation among State and Federal agencies in the siting and permitting of interstate transmission lines in the Western United States was developed and signed by the WGA, the Departments of Energy, Interior and Agriculture, and the Council on Environmental Quality.

In June 2006, the Western Governors' Association published a report that explained that while vast resources, renewable resources, exist throughout the West, many reside in remote areas without ready or cost-effective access to transmission. Lack of transmission access was and remains the greatest impediment to the rapid development of utility-scale, renewable, rich resource areas.

In April 2008, the Western Governors partnered with the United States Departments of Energy, Interior and Agriculture and the Federal Energy Regulatory Commission to create the Western Renewable Energy Zones project. This project will ultimately identify those areas with the highest potential for large-scale, cost-effective, renewable energy development across the Western region and the high-voltage transmission that would ensure this electricity can be delivered to demand centers.

This coming Monday, the Western Governors' Association will be releasing the project phase one report quantifying the potential of the richest renewable resource areas.

WGA will continue to work on the project over the next 2 years. We are partnering with utilities and the Western Electricity Coordinating Council to evaluate transmission needs to move power from preferred renewable energy zones. We will be working to improve the integration of wildlife and environmental values in decisions on the development of generation and transmission associated with these renewable energy zones.

Ultimately, we will propose conceptual transmission plans to move electricity from the most desirable zones to markets. We will work with load-serving entities to coordinate purchasing for the desirable renewable energy zones and to foment interstate cooperation for renewable energy generation and transmission.

The Western Governors support the development of interconnection-wide transmission plans. However, if the Federal Energy Regulatory Commission is given the authority to approve such plans, Congress needs to set explicit criteria by which FERC evaluates

these plans. At a minimum, statutory criteria should require that the States approve electricity future scenarios to be studied and approve interconnection-wide plans corresponding to the future scenarios.

Even with the success of our past efforts, the Western Governors recognize that we need help from the Congress. I will mention four positions the Governors have consistently emphasized as necessary elements of transmission planning, cost allocation and regional cooperation where legislation will be critical:

First, the Federal Government should be responsible for ensuring that near-term projects proposed to serve large geographically constrained low-carbon resource areas are adequately sized to meet long-term needs. When we know future demand will materialize, action by the Federal Government to correctly size lines will help projects capture economies of scale in building transmission and avoid environmental impacts from the construction of multiple lines to the same area. We propose that the Federal Government pay for the incremental cost of building higher capacity lines to these areas.

Second, Congress should redirect the implementation of sections 1221 and 368 of the Energy Policy Act of 2005 to preserve important transmission corridors and ensure the timely siting and permitting of large transmission lines to move geographically constrained low-carbon generation. Specifically, once higher priority zones and associated conceptual transmission have been identified, Congress should direct Federal land management agencies to use those results when evaluating and designating corridors.

Third, the Western Governors see little benefit in FERC preempting State transmission line permitting processes. The major hurdle for permitting transmission in the West has been securing permits from Federal agencies. The implementation of Federal law has resulted in lengthy and inflexible Federal permitting processes. Enabling FERC to preempt State siting processes will not fix the underlying problem.

I would like to mention the limited instances in which the Governors could agree with FERC backstop siting authority.

It must be demonstrated that the transmission line is needed to meet national carbon and renewable generation requirements; comports with an interconnection-wide transmission plan; is right sized to meet the long-term needs for geographically constrained low-carbon generation; is the lowest cost option to meet long-term needs and where the State has failed to make a decision within a reasonably set statutory period.

Finally, the Western Governors believe the current system for cost allocation in the West has worked well, and we believe it will continue to be adequate for the future. The exception, of course, would be the cost allocation as it applies to the kind of right sizing we described.

We are attaching two letters to our testimony and we ask that they be included, two letters that the Western Governors have sent to the Congress in 2009 regarding transmission issues.

Thank you for the opportunity to talk with you today. Mr. MARKEY. Thank you, Mr. Halvey, very much.

[The prepared statement of Mr. Halvey follows:]



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**U.S. HOUSE
COMMITTEE ON ENERGY AND
COMMERCE**

**SUBCOMMITTEE ON ENERGY AND
ENVIRONMENT**

**FRIDAY JUNE 12, 2009
WASHINGTON, D.C.**

Testimony of

**Richard Halvey
Energy Program Director**

Representing the

WESTERN GOVERNORS' ASSOCIATION

Regarding

**The Future of the Grid: Proposals for Reforming
National Transmission Policy**

Chairman Markey, Representative Upton, and Members of the Committee:

My name is Richard Halvey. I am the Energy Program Director for the Western Governors' Association. Thank you for the invitation to testify today concerning electricity transmission.

May 2001 Transmission Summit

Over the last eight years, the Western Governors' Association has assumed a strong leadership role in defining policies for transmission planning, cost allocation and regional cooperation. In May 2001, the Western Governors held a transmission summit that kicked off the first interconnection-wide transmission expansion planning process in the West. This process has been institutionalized at the Western Electricity Coordinating Council. Based on work initiated at this summit, a protocol governing cooperation among state and federal agencies in the siting and permitting of interstate transmission lines in the Western United States was developed and signed in 2002 by WGA, DOE, DOI, USDA, and the Council on Environmental Quality. This protocol preceded the requirements for federal agency cooperation in the Energy Policy Act of 2005.

Clean and Diversified Energy Report

In June 2006, the Western Governors' Association published "Clean Energy, a Strong Economy and a Healthy Environment," a report from the Clean and Diversified Energy Advisory Committee. This report explained that while vast renewable resources exist throughout the West, many reside in remote areas without ready or cost effective access to transmission. Lack of cost effective transmission access was, and remains, the greatest impediment to the rapid development of utility-scale, renewable-rich resource areas.

Western Renewable Energy Zones Project

In April 2008, the Western Governors partnered with the U.S. Departments of Energy, Interior, Agriculture and the Federal Energy Regulatory Commission to create the Western Renewable Energy Zones project. The Department of Energy has been the primary funder for this project. This project will ultimately identify those areas with the potential for large-scale, cost-attractive renewable energy development across the Western region and the high voltage transmission that would ensure this electricity can be delivered to demand centers. By identifying the most developable renewable resource zones throughout the Western Interconnection, load-serving entities, transmission providers, and state regulators will be able to make more informed decisions about the costs of renewable power, the optimum transmission needed to move renewable power to consumers, and which entities might have the potential to form partnerships for developing transmission to access renewable energy. By promoting a regional perspective, we can blunt the potential balkanization of renewables markets, while respecting each state's primary jurisdiction in siting generation and transmission facilities. We can pave the way for interstate collaboration on the permitting of multi-state transmission lines and more equitably allocate and recover the costs of new transmission.

This coming Monday, the Western Governors' Association will be releasing the project Phase 1 report quantifying the potential of the richest renewable resource areas. In the next two years, WGA will work on three more phases of the project. We are partnering with utilities and WECC to evaluate transmission needs to move power from preferred renewable energy zones. We will

be working to improve the integration of wildlife and environmental values in decisions on the development of generation and associated transmission associated with these renewable energy zones. Ultimately, we will propose conceptual transmission plans to move electricity from the most desirable zones to markets. We will work with load serving entities to coordinate purchasing from the desirable renewable energy zones and to foment interstate cooperation for renewable energy generation and transmission.

Federal Cooperation and Partnership

Western Governors support the development of interconnection wide transmission plans. However, if the Federal Energy Regulatory Commission is given the authority to approve such plans, Congress needs to set explicit criteria by which FERC evaluates these plans. At a minimum, statutory criteria should require that the states approve electricity future scenarios to be studied and approve interconnection-wide plans corresponding to the future scenarios.

Even with the success of our past efforts, the Western Governors recognize that we need help from the Congress. I will mention four positions the governors have consistently emphasized as necessary elements of transmission planning, cost allocation and regional cooperation where legislation will be critical.

First, the federal government should be responsible for ensuring that near-term projects proposed to serve large, geographically constrained, low carbon resource areas are adequately sized to meet long-term needs and will preserve options for correctly sizing transmission projects in the future. Trying to increase the capacity of an already constructed transmission line is both difficult and expensive. When we know future demand will materialize, action by the federal government to correctly size lines will help projects capture economies of scale in building transmission and avoid environmental impacts from the construction of multiple lines to the same area. We propose that the federal government pay for the incremental cost of building higher capacity lines to these areas. This strategy will require federal legislation.

Second, Congress should redirect the implementation of sections 1221 and 368 of the Energy Policy Act of 2005 to focus on expedited cooperative actions with states to preserve important transmission corridors and ensure the timely siting and permitting of large transmission lines to move geographically constrained, low carbon generation. Specifically, once high-priority zones and associated conceptual transmission have been identified, Congress should direct federal land management agencies, including the Departments of the Interior and Agriculture, to use the results when evaluating and designating corridors.

Third the Western Governors see little benefit in FERC pre-empting state transmission line permitting processes. The major hurdle for permitting transmission in the West has been securing permits from federal agencies. Most importantly, efficient and expeditious processing of permit applications across federal lands needs to be a priority with federal agencies. Still, even where federal land management agencies have tried to make processing of right-of-way permits a priority, the implementation of federal law has resulted in lengthy and inflexible federal permitting processes. Enabling FERC to pre-empt state siting processes will not fix the underlying problem. The governors believe there must be a way to protect wildlife and other natural resources and still issue permits in a shorter time than the three to ten years we often see.

The governors are serious about wanting to expand the use of renewable energy. To do that, we must resolve the federal permitting issues.

The potential circumstances where the governors could agree with FERC backstop pre-emption of state transmission siting laws would be in those very limited instances where the transmission line:

- Is needed to meet national carbon and renewable generation requirements;
- Comports with an interconnection-wide transmission plan;
- Is right-sized to meet the long-term needs for geographically constrained, low-carbon generation;
- Is the lowest cost option to meet long-term needs; and
- Where the state has failed to make a decision within a reasonably set statutory period.

Finally, the western governors believe the current system for cost allocation in the West has worked well and we believe it will continue to be adequate for the future. The exception, of course, would be cost allocation as it applies to the kind of right sizing we described.

Wildlife Decision Support

An essential part of making energy siting and transmission decisions is consideration of wildlife sensitivity. The Western Governors are working on development of coordinated state decision support systems for wildlife. We believe these systems will be invaluable as we assess renewable resource zones and transmission corridors. We believe it would be in the best interest of the federal land agencies to work with us and to extend financial assistance as we develop these systems.

We are attaching two letters the Western Governors have sent to Congress in 2009 regarding transmission issues.

WGA stands ready to work on developing a strong transmission grid. In fact, we look forward to it. Thank you for the opportunity to talk with you about transmission.



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January 27, 2009

The Honorable Nancy Pelosi
Speaker, House of Representatives
H-232
Washington, DC 20515

The Honorable John Boehner
House Minority Leader
H-204 The Capitol
Washington, DC 20515

The Honorable Harry Reid
Senate Majority Leader
S-221
Washington, DC 20510

The Honorable Mitch McConnell
Senate Minority Leader
S-230
Washington, DC 20510

Dear Speaker Pelosi, Majority Leader Reid, Minority Leader Boehner and
Minority Leader McConnell:

There is an urgent need to preserve the capability to transmit large amounts of geographically constrained, low-carbon electricity generation to distant population centers. Geographically constrained resources, such as wind, solar and geothermal, cannot be moved to preferred locations on the transmission system. While private industry and the states will be heavily involved with planning for transmission expansion, it would be most effective to do it in partnership with the federal government.

The efforts of Western Governors and others over the past eight years have spurred an unprecedented number of major, long-distance transmission expansion proposals. Most of these transmission proposals would tap the very large and geographically constrained wind, solar and geothermal resources of the West. We are concerned, however, that a traditional approach to investment and siting will result in lines that are too small to move substantial amounts of power generated from geographically constrained, low-carbon resources. In fact, there are already proposals that have reached a point where siting and investment decisions will lock in the characteristics of the project at a level almost certainly insufficient for the long-term. This is of particular concern as we face a future shaped by federal standards regarding renewable generation and climate change.

The federal government should help ensure that near-term projects are adequately sized to meet long-term needs and options are preserved to correctly size transmission projects in the future. Appropriate and timely action by the federal government will help projects capture economies of scale in building transmission and avoid environmental impacts from the construction of multiple lines to the same area. Once a transmission line is constructed, it is very difficult and expensive to increase the capacity of that line.

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We believe the federal government should take the following actions now:

- Enact legislation to fund the upsizing of *near-term* transmission projects proposed to serve large geographically constrained, low-carbon resource areas.
- Enact legislation to preserve the ability to expand, to their maximum technical capabilities, *other proposed* projects to large geographically constrained, low-carbon resource areas.
- Increase the borrowing authority and authorization for federal power marketing administrations for transmission construction to move geographically constrained, low-carbon generation.
- Provide that interest on bonds issued by or on behalf of states or local governments to finance transmission facilities in furtherance of developing geographically constrained, low-carbon resources is exempt from federal income tax;
- Redirect the implementation of Sections 1221 and 368 of the Energy Policy Act of 2005 to focus on expedited cooperative actions with states to preserve transmission corridors and ensure the timely siting and permitting of large transmission lines to move geographically constrained, low-carbon generation.

In the West, there are major transmission projects to areas rich in geographically constrained, low-carbon resources that have been evaluated assuming they will carry large amounts of power. However, project sponsors are having difficulty justifying these high-capacity lines because the focus of regulators is generally on meeting the immediate, foreseeable needs of their customers. Public utility commissions are frequently limited to judging the prudence of a proposed project based on the foreseeable benefits to the company's ratepayers. It is difficult to justify the additional cost to a company's ratepayers of upsizing a line to meet long-term national renewable and climate-change goals, especially if those goals are not yet operational. Additionally, in the current economic climate there are new difficulties in securing financing for transmission to meet long-term needs.

Unless the federal government provides the financial assistance to upsize these projects, the lines will be built at a lower voltage. This means that limited transmission corridors will be consumed by undersized lines and the economies of scale in transmission construction will be lost. When demand for geographically constrained, low-carbon energy within an area grows, new lines will almost certainly be proposed to that same area, resulting in new environmental impacts, potential land-owner opposition and regulatory delays. State action alone cannot resolve this conundrum.

The Western Governors' Association (WGA) proposes that the federal government pay for the incremental cost of building higher capacity lines to geographically constrained, low-carbon resource areas where we know future demand for transfer capacity will increase. In return, the federal government would hold the rights to the newly created capacity. This incremental capacity would be sold as the demand for transmission capacity from the renewable

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resource area increases. The proceeds from the sale of the incremental capacity would be used to pay back the federal investment.

In the longer term, there is a need to preserve the capability to increase transfer capacity in transmission corridors from areas with large amounts of geographically constrained, low-carbon resources. To achieve this, the federal government should pay the relatively small cost of acquiring wider rights-of-way and transmission towers capable of handling additional transmission circuits in the future. Project sponsors would pay the cost of the underlying project. When demand for additional transfers of low-carbon generation materializes, companies can build out the remaining capacity on the project and pay back the federal government for its investment to preserve the option to expand the line.

The federal government can help meet the need to move electricity generated from geographically constrained, low-carbon sources by:

- fostering long-term regional transmission planning and using the results of such planning in prioritizing the allocation of federal financial support for transmission;
- supporting state efforts to define renewable energy zones and the transmission needed from those zones;
- refocusing the designation of energy corridors on federal lands to those transmission corridors that will allow us to tap areas with large amounts of geographically constrained, low-carbon resources; and
- redefining the processes for designating National Interest Electric Transmission Corridors and for pre-empting states in permitting projects within such corridors by focusing on interstate transmission needed to move geographically constrained, low-carbon generation.

Our proposal relies on market participants, rather than federal agencies, to determine where new transmission is needed to access geographically constrained, low-carbon generation. The federal role should be limited to upsizing lines that are otherwise viable investments. The federal government should be encouraged to partner with states rather than run roughshod over state transmission siting processes. Federal backstop siting authority should be limited and targeted only to interstate transmission needed to meet national renewable energy and climate change goals in those cases where the states are not already doing so.

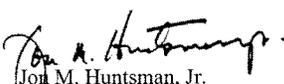
In the West, the foundation has been laid for the development of transmission necessary to tap the region's geographically constrained, low-carbon resources. FERC Order 890 helped launch robust regional transmission expansion planning. State policies on Renewable Portfolio Standards and greenhouse gas emissions have refocused the generation acquisition plans of load-serving entities. WGA's Western Renewable Energy Zones (WREZ) project and many effective state REZ projects are providing the necessary information and tools that enable load-serving entities, energy policy-makers and regulators to better understand their resource options. This

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foundation will be extremely valuable in meeting future federal goals related to renewable energy and climate change. The additional actions we are proposing will build on this foundation.

Western states believe the type of partnership we have outlined in this letter and in WGA Policy Resolutions 08-8 and 08-9 will create the most expeditious path toward building the transmission needed to meet state and national goals related to renewable energy and climate change. We look forward to working with the Administration and Congress on this urgent issue.

Sincerely,


Jon M. Huntsman, Jr.
Governor of Utah
Chairman, WGA


Brian Schweitzer
Governor of Montana
Vice Chairman, WGA

cc: The Honorable Barack Obama



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May 1, 2009

The Honorable Jeff Bingaman, Chairman
Senate Energy & Natural Resources Committee
304 Dirksen Senate Building
Washington, DC 20510

Dear Senator Bingaman:

On behalf of the Western Governors' Association, we urge the federal government to take constructive action that will accelerate the expansion of the electrical grid. Taking this action will enable the development of transmission lines for low-carbon electricity generation to meet national energy objectives and help stimulate economic activity at the time of the nation's serious economic slowdown. In November last year, we conveyed our views on the critical elements of national energy policy to then-President Elect Obama. In January, we conveyed our views to Congressional leadership on the appropriate federal role in enabling the development of transmission for geographically-constrained, low carbon generation. Copies of both letters are attached.

Bills introduced recently in Congress are aimed at reforming transmission development processes and highlight the urgent need to fill the vacuum created by the absence of a comprehensive federal energy plan. The adoption by the President and Congress of clear federal energy goals will remove the uncertainties public and private utilities now face in making generation choices and will help create the demand for new transmission lines to access areas of low-carbon electrical generation for existing and emerging markets. To be beneficial, any expansion of the federal role in transmission development must be explicitly linked to the need to achieve the clearly articulated national energy goals that the President and Congress adopt as the nation's leaders.

In the West, there are an unprecedented number of major proposed transmission expansion projects to move geographically constrained, low-carbon generation to load centers. These projects are sponsored by utilities, as well as independent transmission companies, and represent billions of dollars of potential private investment that can be leveraged by appropriate transmission plans and federal capital dedicated to clean energy development, including loan guarantees and other incentives.

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In the West, the first step by the federal government should be a focus on and commitment to expediting these major proposed transmission projects. We believe the Administration and Congress should make a conscious effort to develop, in coordination with the WGA, a transmission road map to a new energy future in a manner that stimulates the rapid deployment of proposed projects and avoids creating new impediments that might delay these projects.

Such rapid deployment will not only lead to an acceleration of renewable energy delivery as part of meeting the challenge of global climate change, but will also provide, through the billions of construction dollars, a significant stimulus to the Western economy that will help move our nation from the economic doldrums to a growing economy.

Federal transmission legislation needs to include clear national energy goals that will reduce uncertainties for utilities and create the market demand necessary to enable cost-effective transmission projects to move forward. Assuming clearly articulated national goals are in place, Western Governors offer the following specific recommendations regarding the federal government's role in transmission development.

Transmission Planning

Western Governors support the development of interconnection-wide transmission plans. If the Federal Energy Regulatory Commission is given the authority to approve such plans, Congress needs to set explicit criteria by which the Commission evaluates these plans. At a minimum, statutory criteria should require that Governors within an interconnection approve electricity future scenarios to be studied and approve interconnection-wide plans corresponding to the future scenarios. For plans to be meaningful, legislation should require that federal agency actions related to the development of transmission comport with Governor-approved interconnection-wide transmission plans. These actions include FERC approval of incentives for transmission investments consistent with Governor-approved plans, designation of energy corridors across federal lands, prioritizing federal agency processing of applications for transmission rights-of-way, and the allocation of federal financial support for transmission.

As the WGA Western Renewable Energy Zone (WREZ) project is finding, there is also an urgent need to improve the understanding of the impacts of transmission and renewable generation development on wildlife values. The federal government has an important role to play in funding, helping improve the quality of information on wildlife impacts and avoiding or mitigating those impacts.

Financing Transmission

As stated in our January 27 letter to Congress, the federal government should play a major role in helping finance the "right sizing" of transmission to areas with large quantities of

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geographically constrained, low-carbon energy resources. With clear national energy policies in place, utility assessments of resource options will provide strong market signals on where new transmission is needed and viable core transmission projects will emerge. However, only the federal government can assure that new transmission to such areas will be adequately sized to capture the significant economies of scale in transmission development and avoid the unnecessary environmental impacts that will result if the initial lines constructed to such areas are too small thereby requiring more lines to the same areas as demand increases. Only the federal government has the capability to invest to preserve the option to rapidly expand transfer capacity from areas with large quantities of geographically-constrained, low-carbon generation. Federal legislation should accept and address this central federal responsibility.

Transmission Permitting

We see little benefit in FERC pre-empting state transmission line permitting processes. The major hurdle for permitting transmission in the West has been securing permits from federal agencies. This effort has been the most dominant time-consuming element of transmission development. Efficient and expeditious processing of permit applications for transmission lines across federal lands needs to be a priority with federal land management agencies. Even where federal land management agencies have made processing right-of way permits a priority, the implementation of federal law has resulted in lengthy and inflexible federal permitting processes. Enabling FERC to pre-empt state siting processes will not fix the underlying problem of untimely federal permitting decisions. If Congress wants to reform transmission permitting processes, we respectfully request that it:

- Direct that the timely processing of transmission right-of-way applications become a priority activity for federal agencies;
- Re-examine requirements in federal law that increase permitting time without adding value, make it difficult to rapidly accommodate project modifications during the permit review process, and allow preservation of rights-of-way for rapid future expansion;
- Prior to FERC exercising any “backstop” pre-emption of state transmission siting laws, require that the Commission find the transmission line:
 - is needed to meet national carbon and renewable generation requirements;
 - comports with an interconnection-wide transmission plan;
 - is “right sized” to meet long-term needs for geographically constrained, low-carbon generation;
 - is the lowest cost option to meet long-term needs; and
 - that the state has failed to make a decision within a set statutory period.
- Require that the data identified in the WREZ process be used when evaluating and siting transmission corridors;

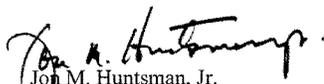
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The plethora of proposed transmission projects in the West is strong evidence of the willingness of the private sector to build transmission. However, capitalizing on this opportunity to make significant progress in meeting the goals of the President and the West is hampered by:

- the lack of a federal energy plan that removes uncertainty and creates demand for the generation these projects would carry;
- a failure to recognize the essential role the federal government must play to “right size” these projects to meet long-term national energy and environmental goals; and
- a lengthy and inflexible federal agency permitting process.

We urge the federal government to create a comprehensive national energy plan and take constructive actions along the lines of this letter to accelerate the expansion of the electrical grid.

Sincerely,


Jon M. Huntsman, Jr.
Governor of Utah
Chairman, WGA


Brian Schweitzer
Governor of Montana
Vice Chairman, WGA

Attachments:

November 2008 letter to President-Elect Obama
January 2009 letter to Congress

cc: The Honorable Nancy Pelosi
The Honorable Harry Reid
The Honorable John Boehner
The Honorable Mitch McConnell
The Honorable Henry Waxman
The Honorable Edward Markey
The Honorable George Voinovich
The Honorable Ben Nelson



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November 20, 2008

The Honorable Barack Obama
Obama for America
P.O. Box 8102
Chicago, IL 60680

Dear President-elect Obama:

Western Governors are very concerned that during our nation's deepening energy crisis, the United States lacks an effective long-term energy policy. As you prepare to take office, we urge you not to delay in exercising the leadership necessary to ensure swift adoption and implementation of an energy plan that will provide affordable and clean energy to sustain our economy, stimulate greater energy efficiency, strengthen our energy security and independence, and reduce greenhouse gas emissions.

We believe that the United States has the ability to be the world leader in developing and implementing the innovative technologies that will be necessary to meet our energy challenge. However, the scale of the effort that will be required is enormous. Unless we make substantial investments in energy efficiency and other systemic changes, the Energy Information Administration projects that by 2030 U.S. demand for petroleum and other liquid fuels will increase by 10% while global demand will increase by 30%. In the same time period, U.S. demand for electricity is expected to increase by 20% while global demand would nearly double.

An enormous national commitment is necessary to transform our energy infrastructure and our economy as we shift to low-carbon-emission energy sources that include wind, solar, geothermal, biomass, hydro and other renewables, as well as fossil fuels with carbon capture and storage. We recognize that nuclear may be a part of the discussion of a national energy strategy. This letter does not speak to nuclear energy as WGA does not have relevant existing policy.

Transforming our energy infrastructure and economy will require new policies, incentives, market mechanisms and private-public partnerships. Most important, it will require a bipartisan partnership that achieves a broad consensus among political leaders and with the American people.

As a first step, we must promote more efficient use of energy in all of its forms. This includes: (1) manufacturing more fuel-efficient vehicles and enhancing our public transportation systems, (2) wide-scale adoption

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of regulatory structures that reward those utilities achieving reduced energy usage among their customers, and (3) the design and manufacture of more energy efficient consumer goods.

The United States faces a very serious policy and technological challenge in increasing energy security, while simultaneously reducing greenhouse gas emissions and maintaining energy expenditures at a reasonable fraction of national GDP. The challenge must be met decisively with policies that represent the best environmental and economic interests of our nation.

Western Governors recommend the following goals, principles and immediate actions as the foundation for a National Energy Policy:

Energy Policy Goals

- Promote a more efficient use of energy throughout the economy.
- Reduce greenhouse gas emissions on a scale necessary to contribute to climate stabilization.
- Maximize the economic development opportunities offered by clean energy.
- Ensure that energy costs are affordable for consumers and support a sustainable, growing economy.
- Increase the proportion of our energy supplies that come from domestic resources and friendly trading partners.
- Minimize adverse environmental impacts.

Energy Policy Principles

- Energy security is essential; both energy efficiency to reduce demand and a diversity of energy sources and technologies must be part of the solution.
- Climate change is happening, so we must reduce our greenhouse gas emissions immediately and adapt to changes that cannot be avoided.
- A clean energy economy should focus on economic prosperity, environmental sustainability and energy affordability.
- A National Energy Policy must consider that global and domestic energy demand and prices are increasing.
- Energy delivery infrastructure development and expansion are needed to avoid supply interruptions and promote increased development of and accessibility to renewable and other clean energy sources.
- Transportation energy and emissions should be addressed as a system, including vehicles, fuels and transportation demand.
- Energy development must be done in an environmentally responsible manner.
- A comprehensive national framework should include clear and measurable goals, an aggressive timeframe for implementation, and certainty in how solutions will be implemented.
- Substantial, long-term national commitment to investment in energy technology and infrastructure is needed, in the same way our nation made a commitment to put a man on the moon.

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- Stable long-term policies are necessary to enable public and private investment in environmentally responsible energy research, development and immediate deployment.

While the solutions to our energy dilemma will take time to fully develop and implement, we believe that, with your leadership, our nation can set a course of action within the first 100 days of your new administration. We urge you to promptly:

1. Establish an aggressive and achievable national greenhouse gas emissions reduction goal that will put the United States on a path to contribute to global climate stabilization.
2. Propose a mandatory national system for reducing greenhouse gas emissions that makes maximum use of market-based mechanisms. Revenue raised should support the energy policy principles in this letter and not be used as a means of sustaining or expanding general governmental operations.
3. Aggressively pursue a national energy efficiency program to reduce existing and future energy demand and thereby reduce greenhouse gas emissions.
4. Establish an oil import reduction goal that strengthens energy security and independence. Since nearly 90% of oil is used for transportation, propose a plan that:
 - Brings more fuel efficient and near-zero emission vehicles into the market;
 - Increases the supply of domestically produced, low-carbon fuels;
 - Minimizes the economic and technological uncertainties inherent in deploying high efficiency vehicles and developing and using non-petroleum transportation fuels; and
 - Reduces vehicle miles travelled and increases mass movement of people and goods.
5. Create a substantial, long-term national public investment on the scale of tens of billions of dollars annually, and encourage at least the same investment from the private sector, to support the kind of basic and applied research and deployment of clean energy technology and infrastructure that will result in:
 - Near-zero greenhouse gas emissions from new coal-fired electricity generation in 10 years and from existing generation no later than 2030;
 - Dramatically increased energy from wind, solar, geothermal, hydro and biomass resources;
 - Expansion and upgrade of the electricity transmission grid and storage capabilities;
 - Advanced vehicle and battery technologies and alternative transportation fuels; and
 - Next generation energy efficiency technologies and practices.

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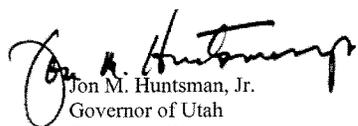
6. Ensure affordability for lower income energy consumers through energy efficiency and cost assistance programs.
7. Provide for workforce development and clean energy jobs, adaptation to climate change impacts, reduced consumer impacts, particularly for low-income consumers, and transition assistance to industries.

While the first 100 days are critical, these actions only represent the first steps. Within the next year, a comprehensive energy plan must be enacted that will set the direction of this nation for the next 50 years. This plan, though adjustable over time, must establish measurable goals, strategies, milestones and funding to ensure that we are moving towards affordable and environmentally responsible energy security and independence.

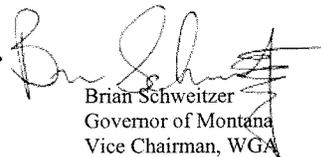
We must not repeat the mistakes of the past. We must have the collective political will and resolve to create and implement a long-term comprehensive energy policy despite short-term political and market fluctuations. The future of our nation depends upon it.

The Western Governors stand united and ready to work with your administration to develop and implement a strong National Energy Policy.

Sincerely,



Jon M. Huntsman, Jr.
Governor of Utah
Chairman, WGA



Brian Schweitzer
Governor of Montana
Vice Chairman, WGA



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January 27, 2009

The Honorable Nancy Pelosi
Speaker, House of Representatives
H-232
Washington, DC 20515

The Honorable Harry Reid
Senate Majority Leader
S-221
Washington, DC 20510

The Honorable John Boehner
House Minority Leader
H-204 The Capitol
Washington, DC 20515

The Honorable Mitch McConnell
Senate Minority Leader
S-230
Washington, DC 20510

Dear Speaker Pelosi, Majority Leader Reid, Minority Leader Boehner and
Minority Leader McConnell:

There is an urgent need to preserve the capability to transmit large amounts of geographically constrained, low-carbon electricity generation to distant population centers. Geographically constrained resources, such as wind, solar and geothermal, cannot be moved to preferred locations on the transmission system. While private industry and the states will be heavily involved with planning for transmission expansion, it would be most effective to do it in partnership with the federal government.

The efforts of Western Governors and others over the past eight years have spurred an unprecedented number of major, long-distance transmission expansion proposals. Most of these transmission proposals would tap the very large and geographically constrained wind, solar and geothermal resources of the West. We are concerned, however, that a traditional approach to investment and siting will result in lines that are too small to move substantial amounts of power generated from geographically constrained, low-carbon resources. In fact, there are already proposals that have reached a point where siting and investment decisions will lock in the characteristics of the project at a level almost certainly insufficient for the long-term. This is of particular concern as we face a future shaped by federal standards regarding renewable generation and climate change.

The federal government should help ensure that near-term projects are adequately sized to meet long-term needs and options are preserved to correctly size transmission projects in the future. Appropriate and timely action by the federal government will help projects capture economies of scale in building transmission and avoid environmental impacts from the construction of multiple lines to the same area. Once a transmission line is constructed, it is very difficult and expensive to increase the capacity of that line.

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We believe the federal government should take the following actions now:

- Enact legislation to fund the upsizing of *near-term* transmission projects proposed to serve large geographically constrained, low-carbon resource areas.
- Enact legislation to preserve the ability to expand, to their maximum technical capabilities, *other proposed* projects to large geographically constrained, low-carbon resource areas.
- Increase the borrowing authority and authorization for federal power marketing administrations for transmission construction to move geographically constrained, low-carbon generation.
- Provide that interest on bonds issued by or on behalf of states or local governments to finance transmission facilities in furtherance of developing geographically constrained, low-carbon resources is exempt from federal income tax;
- Redirect the implementation of Sections 1221 and 368 of the Energy Policy Act of 2005 to focus on expedited cooperative actions with states to preserve transmission corridors and ensure the timely siting and permitting of large transmission lines to move geographically constrained, low-carbon generation.

In the West, there are major transmission projects to areas rich in geographically constrained, low-carbon resources that have been evaluated assuming they will carry large amounts of power. However, project sponsors are having difficulty justifying these high-capacity lines because the focus of regulators is generally on meeting the immediate, foreseeable needs of their customers. Public utility commissions are frequently limited to judging the prudence of a proposed project based on the foreseeable benefits to the company's ratepayers. It is difficult to justify the additional cost to a company's ratepayers of upsizing a line to meet long-term national renewable and climate-change goals, especially if those goals are not yet operational. Additionally, in the current economic climate there are new difficulties in securing financing for transmission to meet long-term needs.

Unless the federal government provides the financial assistance to upsize these projects, the lines will be built at a lower voltage. This means that limited transmission corridors will be consumed by undersized lines and the economies of scale in transmission construction will be lost. When demand for geographically constrained, low-carbon energy within an area grows, new lines will almost certainly be proposed to that same area, resulting in new environmental impacts, potential land-owner opposition and regulatory delays. State action alone cannot resolve this conundrum.

The Western Governors' Association (WGA) proposes that the federal government pay for the incremental cost of building higher capacity lines to geographically constrained, low-carbon resource areas where we know future demand for transfer capacity will increase. In return, the federal government would hold the rights to the newly created capacity. This incremental capacity would be sold as the demand for transmission capacity from the renewable

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resource area increases. The proceeds from the sale of the incremental capacity would be used to pay back the federal investment.

In the longer term, there is a need to preserve the capability to increase transfer capacity in transmission corridors from areas with large amounts of geographically constrained, low-carbon resources. To achieve this, the federal government should pay the relatively small cost of acquiring wider rights-of-way and transmission towers capable of handling additional transmission circuits in the future. Project sponsors would pay the cost of the underlying project. When demand for additional transfers of low-carbon generation materializes, companies can build out the remaining capacity on the project and pay back the federal government for its investment to preserve the option to expand the line.

The federal government can help meet the need to move electricity generated from geographically constrained, low-carbon sources by:

- fostering long-term regional transmission planning and using the results of such planning in prioritizing the allocation of federal financial support for transmission;
- supporting state efforts to define renewable energy zones and the transmission needed from those zones;
- refocusing the designation of energy corridors on federal lands to those transmission corridors that will allow us to tap areas with large amounts of geographically constrained, low-carbon resources; and
- redefining the processes for designating National Interest Electric Transmission Corridors and for pre-empting states in permitting projects within such corridors by focusing on interstate transmission needed to move geographically constrained, low-carbon generation.

Our proposal relies on market participants, rather than federal agencies, to determine where new transmission is needed to access geographically constrained, low-carbon generation. The federal role should be limited to upsizing lines that are otherwise viable investments. The federal government should be encouraged to partner with states rather than run roughshod over state transmission siting processes. Federal backstop siting authority should be limited and targeted only to interstate transmission needed to meet national renewable energy and climate change goals in those cases where the states are not already doing so.

In the West, the foundation has been laid for the development of transmission necessary to tap the region's geographically constrained, low-carbon resources. FERC Order 890 helped launch robust regional transmission expansion planning. State policies on Renewable Portfolio Standards and greenhouse gas emissions have refocused the generation acquisition plans of load-serving entities. WGA's Western Renewable Energy Zones (WREZ) project and many effective state REZ projects are providing the necessary information and tools that enable load-serving entities, energy policy-makers and regulators to better understand their resource options. This

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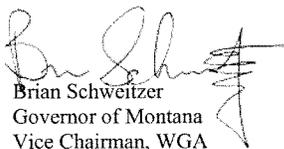
foundation will be extremely valuable in meeting future federal goals related to renewable energy and climate change. The additional actions we are proposing will build on this foundation.

Western states believe the type of partnership we have outlined in this letter and in WGA Policy Resolutions 08-8 and 08-9 will create the most expeditious path toward building the transmission needed to meet state and national goals related to renewable energy and climate change. We look forward to working with the Administration and Congress on this urgent issue.

Sincerely,



Jon M. Huntsman, Jr.
Governor of Utah
Chairman, WGA



Brian Schweitzer
Governor of Montana
Vice Chairman, WGA

cc: The Honorable Barack Obama

Mr. MARKEY. I think this is about as important a hearing as we are going to have this year. We appreciate the opening statements from the witnesses.

There are 5 minutes left on the House floor for us to cast our vote. And so what I will recommend is that we reconvene this hearing in 15 minutes and then we will begin with questioning of the witnesses by the subcommittee members.

The subcommittee stands in recess.

[Recess.]

Mr. MARKEY. Welcome back, ladies and gentlemen, and we would ask all of the witnesses to please be reseated. And I would ask that the rear door be closed so that we can have the attention of all of our audience on the witnesses. Thank you.

So the Chair will recognize himself. And I will ask you, Mr. Halvey, to please elaborate on your testimony that permitting on Federal lands is the major obstacle to siting transmission in the West.

That issue is not generally within this committee's jurisdiction, but rather within the jurisdiction of the Committee on Natural Resources. But I don't think this is a widely understood kind of political reverse takedown that it is not the problem that the Federal Government has with the States, but the problem the States have with the Federal Government as represented by the management of the Federal lands, especially across the West.

Could you elaborate on that and perhaps give us some specific examples?

Mr. HALVEY. Sure. Thank you, Mr. Chairman.

Let me mention a couple of things. At a meeting of the Western Governors in February, Governor Otter from Idaho made the statement very clearly that in those instances where we have the opportunity to site transmission lines and not go through Federal lands, we are often going to want to exercise that.

There are a couple of issues, I think, that come to mind in terms of permitting with Federal lands. One, if you live in the West, it is difficult to avoid Federal lands. Many of the States are covered with lands under Federal jurisdiction, both the Department of Interior and the Department of Agriculture. So that is certainly an issue.

Second, there is no priority system for dealing with lease applications. It is on a first-come, first-served basis.

One of the things they are doing with the Western Renewable Energy Zones is really pointing out what we think is a critical issue, which is that there are places that are really better for not only locating renewable energy, but there are also transmission corridors that are going to be more important in moving that renewable energy. We believe that there ought to be some kind of a way to recognize that priority and to do the transmission work, the permitting work that is necessary to get those facilities located.

We think, in many cases, it is not unusual to see 5, 7 or even 10 years to locate transmission lines when they go through Federal land.

Mr. MARKEY. Would you repeat that fact?

Mr. HALVEY. Yes. That it is not unusual to see 5-, 7-, 10-year time periods in terms of getting lines approved through Federal lands.

Mr. MARKEY. So when the States go to Federal agencies, it takes 5 to 7 to 10 years?

Mr. HALVEY. There are certainly instances where it has taken that long.

Many of the applications that we see now, that are going through that process—in fact, Governor Rounds from South Dakota was talking about a line to run from South Dakota to Minnesota. At one of our meetings he mentioned that they have been working on it for 2 years, and they have had very little success in moving it through the Federal permitting process; and he sort of got the response of a chuckle from people in the audience, essentially suggesting, 2 years, you have barely started.

And so I think there is a great frustration on the part—

Mr. MARKEY. So what you are saying is that the States were working together cooperatively to try to find a solution to that regional, North Dakota-Minnesota issue, but because of the Federal Government, there was a multiyear delay in getting to a point where the issue could be resolved.

Mr. HALVEY. That I think is the sense of the Western States that the Federal permitting process is difficult, it is onerous, it is time consuming, and in many cases there are requirements that don't add any value to the permitting process.

We would hope to see something that one would recognize those areas that have a priority because of the richness of their renewable resources, but more than that, recognize that if we are going to meet any requirements for renewable portfolio standards or carbon reduction, we have got to do a much better job of matching up how long it takes to do renewable development with how long it takes to get the transmission to those developments.

Mr. MARKEY. So again, not to make too fine of a point of this, but you are saying that out West it is very difficult, if you are dealing with the remote areas where the wind and the sun might be strongest—geothermal, as well—to create any kind of a transmission system without at some point confronting this Federal issue.

Mr. HALVEY. That is absolutely true.

Mr. MARKEY. And no matter how cooperative the States are—and your testimony is that in most instances when States are trying to resolve these issues, the Federal Government serves as an impediment sometimes of such a nature as to just paralyze the process?

Mr. HALVEY. That is correct.

Mr. MARKEY. That is very helpful to us. Thank you.

Let me now turn and recognize the gentleman from Kentucky, Mr. Whitfield.

Mr. WHITFIELD. Thank you, Mr. Chairman.

And thank you all for your testimony.

Mr. Wellinghoff, back in April of 2009, the New York Times quoted you in an article saying that new coal and nuclear plants may be unnecessary. And I know that Chairman Barton and Mr. Walden and some others have sent you a letter about that. And I

have not had an opportunity to read your response, but you are certainly not opposed to coal and nuclear power, I am sure of that.

Mr. WELLINGHOFF. That is correct. I am not opposed to coal and nuclear power.

Mr. WHITFIELD. Since I didn't even read the New York Times article, would you basically explain what you were referring to when you made that statement?

Mr. WELLINGHOFF. I would be happy to. Thank you for the question.

I was referring basically to a scenario where, if we look at the diversity of the number of renewable resources, which would include, potentially, Midwest wind, that may have a diversity of delivery from offshore wind and include solar and geothermal, biomass; and also include the demand side, looking at demand response, energy efficiency, distributive generation, combining these things together with a smart grid.

And the whole answer was—in the response was, in the context of the smart grid, if you combine these things together it may, in fact, be possible with a smart enough grid to effectively provide these renewables as if they are base load, displacing base load; and that was the context of my statement.

Mr. WHITFIELD. When you talk about a “smart grid,” do you have any idea or thoughts, or have you seen any studies about what the cost would be to complete transformation to a smart grid?

Mr. WELLINGHOFF. I have seen cost estimates anywhere from \$50 to \$60 billion up to \$200 billion.

Mr. WHITFIELD. And to reach the scenario that you referred to in the New York Times article that you just explained, in what sort of time frame would you view this transformation taking place?

Mr. WELLINGHOFF. At least a 10-to-15-year time frame.

Mr. WHITFIELD. Now on the Fourth Circuit Court of Appeals decision, have you all appealed that decision? Has FERC appealed the decision?

Mr. WELLINGHOFF. Let me check with my counsel.

It is due in July. We haven't yet made a decision. We are looking at it now.

I will tell you, though, I personally disagree with the Fourth Circuit decision.

Mr. WHITFIELD. Well, I know there are many of us that hope you will appeal, but that is a decision that you all make, of course.

Mr. Coen, Ms. Azar, Mr. Hibbard, can you tell me the last—when the last new transmission line was built in each of your States?

Mr. COEN. We are actually, in Vermont, in the process of upgrading most of our transmission systems. So we actually have ongoing projects as we speak.

The most major transmission line that has ever been sited in Vermont, the docket ended 2 years ago, and the line is currently almost complete today.

Mr. WHITFIELD. And how many miles is that line?

Mr. COEN. Well, this is Vermont. The line was 60 miles.

Mr. WHITFIELD. And what about you, Ms. Azar?

Ms. AZAR. Just yesterday, we approved a 32-mile, 345kV line that costs about \$220 million through the city of Madison. So, in

other words, the three commissioners essentially sited a transmission line through their backyards.

Over the last 8 years, we have spent \$2.5 billion upgrading or creating about 1,700 new miles of transmission in the State of Wisconsin. We have construction going on all over the State. A line was just energized, I believe last week, which was over 100 miles long.

And as Congresswoman Baldwin indicated, before I became Commissioner I was on the other side. I was getting permits for a 210-mile line between Minnesota and Wisconsin, and that line has been energized.

Mr. HIBBARD. In Massachusetts, our most populous area, of course, is the Boston region and it is where our heaviest electrical load is. And over the past 10 years we have sited and had constructed a number of transmission enhancements to support the flow of power into Boston, including two major 345kV lines to eliminate the constraints between Boston load pockets and the remainder of Massachusetts.

Mr. WHITFIELD. One other question to you three: With the anticipated increase in demand of electricity needs over the next 15 or 20 years, do you think the existing system is adequate in your State?

Ms. AZAR. With regards to the increase in demand, we continually update our systems. So we are going to continue to do updates. We have been doing updates all along. I don't think that process ever stops.

Mr. COEN. In Vermont, we have actually been able to mitigate any increase in our load over the last 5 years with energy efficiency. So I would say, offhand, that with the completion of what is called the Southern Loop in a couple of years, I think our transmission grid will be adequate for the next 10 to 15 years.

Mr. WHITFIELD. Mr. Hibbard?

Mr. HIBBARD. I would give a similar answer. The answer to your question is "yes." When we look at potential scenarios for load growth over time within Massachusetts, and indeed within the New England region, we see that the transmission system, including what is existing today and what is in the process of going through the regional planning process in siting, will be more than adequate to support the movement of power throughout our region for a decade or two.

Mr. WHITFIELD. Mr. Chairman, I see I have gone 1 minute 25 seconds over.

Mr. MARKEY. I thank the gentleman.

By the way, we will be having a second round and perhaps a third round of questions of the witnesses if the gentleman is interested.

Let me turn and recognize the gentleman from Washington State, Mr. Inslee.

Mr. INSLEE. Thank you. I would like to put in the record, with no objection, a letter from the University of California, Berkeley, from Dr. Dan Kamen, a letter describing the reason and appropriateness of expanding new transmission lines—if I can put that in the record.

Mr. MARKEY. Without objection, it will be included in the record.

[The information was unavailable at the time of printing.]

Mr. INSLEE. Chairman Wellinghoff, I wanted to ask you to expand on your thoughts on how FERC could implement—if it does receive backstop siting approval, how it could implement a greenhouse gas performance interconnection standard for new transmission and/or some criteria associated with compliance or fulfillment of the Nation's renewable energy goals.

Several of the other witnesses made reference to something of that nature. Could you tell us how you think that could work? Even though we have heard the physical explanation and that an electron is an electron, how could this function?

Mr. WELLINGHOFF. Thank you, Congressman Inslee.

First of all, we have initiated a rule-making, and certainly as part of that, all stakeholders would have an opportunity to provide any proposals as to how to implement such a greenhouse gas performance standard. But in doing so, there are a couple ways it could be done.

Certainly, in looking at the current emission permits from the generation stations—from those, it is based on known items such as model and configuration of the generator and its mission control equipment and composition of fuel and the approximate run time of the generator.

You could take from that also the annual emissions are typically capped by a permit that can be used as the baseline to determine compliance.

So we could take compliance, I think, from their current permit applications, or new permit applications from generating stations, and take that data, put it into a database and ultimately from that use it to determine a greenhouse gas performance standard for particular plants that were into the interconnect.

Mr. INSLEE. So you can obviously do that for particular plants, but could you effectively reference that to particular lines? In other words, are the plants specific enough to the line that this type of standard could be applicable to lines?

Mr. WELLINGHOFF. I think you would have to do that by regions, because it is all a matter of sort of displacement. You are not really delivering electron A to point B necessarily over an AC line. It is really pushing one electron down the road.

So I think you would have to do it basically on a regional basis, but I feel that we can do it, yes.

Mr. INSLEE. Thank you.

Commissioner Azar, I appreciated your comments, first off, about the appropriateness of Federal backstop authority and its general view, that I share, that it is appropriate. And I appreciate your views on that because of your incredible background in this area.

But I also appreciate you making reference to the necessity of considering demand-side issues when you do siting and planning. And I want to make sure you are aware that in the ACES bill, we do have a very specific policy that is a policy of the United States and regional electrogrid planning to meet these objectives should take into account all significant demand-side and supply-side options.

Do you want to comment on that? Is it a good idea? Is there anything we should do to expand on that to make sure we consider that is part of our planning process?

Ms. AZAR. It is a very good idea. And my point in raising it is that those kinds of solutions are oftentimes best made at the State level because the States are going to understand how they are going to be setting up their distributed generation, how they are going to be setting up their energy efficiency and conservation measures, better than the Federal Government.

So that was the point I was trying to make with regards to why I thought a State-led process would be better with regards to those specific items.

Mr. INSLEE. Thank you.

Chairman Hibbard, I wanted to ask you about cost allocations. I am told that recently there has been a 345kV end star reliability project in transmission in the Boston area, and I am told that the total cost of that was \$334 million and 325 of that was spread across New England in a cost allocation system; only 3 percent was assigned directly to the Boston area ratepayers. So regional cost allocation seems to work at least in your area.

If cost allocation in general of that nature seems to be acceptable, should we not be able to fashion some other cost allocation more widely?

Mr. HIBBARD. Certainly.

Thank you, Congressman. I think it is instructive when thinking about the cost allocation issue to draw a very clear line between transmission projects that are needed to maintain grid reliability and transmission projects that are essentially for the benefit of generation developers.

In the New England system, we have exactly that split. If, through the regional planning process, lines are identified that are needed to maintain reliability on a regional basis—and the end star line in Boston was exactly one such line—then we support the socialization of costs across the entire region, because it benefits everyone within the region to maintain the reliability of the grid.

So the cost of the end star line is shared by everyone in New England. In Massachusetts, we are about half of the load; we pay about half of the bill. Similarly, the project that Commissioner Coen referred to in Vermont, other projects that are on the books in New Hampshire and Maine and Connecticut, all focused on reliability of the grid, projects for which even though they are not within Massachusetts, Massachusetts consumers will pay half of.

It is a vitally important component of cost allocation that when looking at reliability there be a willingness within an integrated power grid to share that cost across load.

The distinction I want to make here is that the issue of cost allocation for building lines to interconnect generation resources departs from that. We want—in order for our consumers to be protected, we want the cost of developing generation, including the cost of meeting compliance measures, the cost of delivering power reliably to load and making sure you don't adversely impact the reliability of the system to be borne by the generation developer and included in the price that they are charging customers.

Mr. INSLEE. I just want to comment, I think this is a new approach that some of us are suggesting, because there is a new national need just as important for reliability and that is to prevent the Earth from turning into toast. So that is the reason for our thinking.

Thank you very much.

Mr. MARKEY. The gentleman time's has expired.

Again, there will be a second round of questions for all members who are interested.

The Chair recognizes the gentlelady from the State of Wisconsin.

Ms. BALDWIN. Thank you, Mr. Chairman. And I want to direct this question to Commissioner Azar.

One of the proposals that we hear a lot about on Capitol Hill is the possibility of a 760kV line, often known as the "transmission super highway." And I would like to hear your insights on how a 765kV overlay might affect a State profile like a State of Wisconsin, and if you could, describe any concerns that you might have that it would be detrimental to Wisconsin or others.

Ms. AZAR. Thank you, Congresswoman.

When you add a high voltage overlay into a State, you have got to make sure that the underlying system is built up to accept that. In Wisconsin, as both you and I have noted, we have spent billions of dollars at this point in time designing a specific kind of system. The American Transmission Company has designed a 345kV system. If there is a 765 overlay built into Wisconsin, it is essentially going to mess up our very deliberate 345kV design. So we are going to have to build up our underlying grid.

That being said, ultimately, if Congress gives us the mandates and the group of States decide that the best thing to do would be a 765 grid overlay, then we are going to need to accommodate that. But I think there are better ways to do it.

The one-size-fits-all will likely be, in my estimation, probably oversized and not cost effective. The one way in which I think about a 765 grid overlay is, you have got somebody with a hose on one side of the swimming pool and he has to get the water to the other side of the swimming pool, there is a drain at the other side of the swimming pool. There are two options he has got. One, he can extend a hose, or the second option is, he fills up the swimming pool. And the 765 grid overlay is more akin to filling up the swimming pool than extending the hose.

I think there are better ways to do it than one-size-fits-all. The bottom line is—the primary message is, we need to do the calculus. We can figure this out. A tailor-made answer is better than a sort of a generic answer.

Ms. BALDWIN. Another proposal that we hear a lot about that has been floated is making RTOs the final decision-makers with regard to transmission decisions. And I wonder how you would analyze this as an option. Do you think that RTOs have all the correct interests in mind when they would approach these sort of decisions?

Ms. AZAR. You know the decision-maker, in selecting the plan for the grid, needs to be beholden to only one interest and that is the public interest. The RTOs have got a lot of different stakeholders. And they are very adept, and I compliment them on trying to balance the competing needs of the stakeholders.

But I can speak for the Midwest Independent System Operator. They actually have a contractual obligation to their transmission owners to maximize the revenues of the transmission owners. And when you have got those kind of interests, they will not be thinking about the public interest when they are making their decisions; they will be thinking about their contractual obligation to the transmission owner.

So, no, I do not believe the RTOs should be the ultimate decision-maker in this. That being said, their expertise with regard to planning and their planning engineers absolutely needs to be involved in this process.

Ms. BALDWIN. I don't know if Mr. Coen or Mr. Hibbard have any comments on that same question.

Mr. COEN. I would concur with Commissioner Azar's comments as well.

Mr. HIBBARD. As would I.

Ms. BALDWIN. Mr. Chairman, I don't have any other questions at this time.

Mr. MARKEY. Great. I thank the gentlelady.

The Chair will recognize himself for another round of questions. Let me move to you, Mr. Hibbard, so that we can put this out on the table.

A lot of people, when they think of the solar revolution, they think, well, we are going to bring it in from the deserts of the United States and bring it into the cities of our country. And that is true. And they also think that when we consider wind, we are going to go out to the prairies of the United States and we are going to bring it into the cities in order to provide the electricity.

But people don't really think about the oceans as much a source, in the future, of renewable electricity. And you made a reference to all of the Eastern States' Governors from Maine down to Virginia, who are very concerned that their plans for bringing in wind off of the coastline or other renewable sources might be undermined by this kind of a proposal.

Could you talk about that and talk about what your vision is—that is, all of these Governors'—in terms of what the long-term renewable prospects are for the East Coast?

Mr. HIBBARD. Certainly. And thank you, Mr. Chairman.

In Massachusetts and I think throughout the New England region, we are strongly supportive of the climate goals that are inherent in the ACES legislation and the renewable goals—certainly, in Massachusetts we are—and we want to find the best way to meet them.

We see offshore wind as being an enormous renewable potential for the coastlines of our country, a potential that is very close to load centers and can interconnect in multiple locations on the lower-voltage-type networks that Commissioner Azar mentioned in a way that will strengthen the reliability of the grid; and that it represents—there is also a huge amount of onshore renewable potential up and down the East Coast.

The concern that we have is that by—if you take, for example, what is included in the Joint Coordinated System Plan, it would essentially dump—

Mr. MARKEY. Could you expand on what that is?

Mr. HIBBARD. Sure it is a multiregional plan that was done—I think, coordinated by MISO.

Mr. MARKEY. Can you explain what MISO is?

As you all continue your testimony, we have C-SPAN watching this, and I think it would be a very interesting subject if it was actually communicated in English to the watching audience. So we are going to be on acronym alert for the rest of this hearing, and I am going to stop every time you use an acronym and every time you make an assumption that everyone in the room knows what you are talking about.

This is a very important issue that has very profound impact on families, so please explain what you are talking about.

Mr. HIBBARD. Thank you, Mr. Chairman. I will try not to use a lot of acronyms. I hope my Boston accent is OK.

Mr. MARKEY. You sound very eloquent. All of the other people in the room have such funny accents, don't they?

Mr. HIBBARD. I agree.

Mr. MARKEY. How about those Red Sox and Yankees last night?

Mr. HIBBARD. I was going to, on a personal note, commend you for your astute observation about the link between our national economy and baseball because we are seeing signs that our economy is improving, and it occurred to me that at the same time, as you watch the Red Sox once again sweep the Yankees over the past few days, Ortiz is hitting home runs again.

Mr. MARKEY. I will give you 1 extra minute, so everyone—again, people won't know what you are talking about.

I gave a speech in Boston on Monday, and I said that—I said in Boston that the economy was in a David-Ortiz-like slump, but that I had faith that our economy and David Ortiz would be hitting home runs again. Now, unfortunately, the Boston Globe ran a little editorial the next day questioning my judgment in linking David Ortiz's recovery to the American recovery. That night David Ortiz hit a home run. Last night David Ortiz hit a home run.

Today and yesterday we received all this new, positive commentary about the American economy. I am not saying it is directly related to my speech on Monday. However, I do believe that, and I thank you for pointing this out, that my comments were accurate.

So please continue, and we will add back the time onto your statement.

Mr. HIBBARD. I will see if I can remember the original question.

There was what I think has gone hand in hand with the efforts to push for expanded Federal oversight over transmission, there have been a couple of major studies done recently by DOE and also done by a group of regional planning entities across the country to look at this idea about how do we actually expand the development of renewable generation in the parts of the country where it exists and move that across the multiple regions and deliver it into sub-regions.

So the Joint Coordinated System Plan was a very large technical analysis of how to go about doing that, what the transmission network would look like, a super-high-voltage transmission network would look like, to accomplish that result.

As part of that plan, when you look at it, one of the things it does is, it would dump on extra-high-voltage lines on the order of

several thousand megawatts of power into New England at a very high voltage.

Now, in addition to that—issues that Commissioner Azar has mentioned—that would require a lot of building out of the transmission network within New England.

The concern I have is that we have a competitive market framework in New England that is absolutely essential to keep commodity prices low for our consumers. We have a need in the region over the next couple of decades only on the order of several hundred to 1,500 megawatts for new power. If we were to administratively put in a large high-voltage transmission line that put that quantity of power into our region, it would eliminate the market signals that our local renewable resources require in order to move forward with financing and development. That is the threat.

Our position is, we absolutely have to meet the carbon goals that the country is now warming up to and that we need to meet in the coming years. But the way to do that is to do it through ensuring that the resources that are brought on line are those that make the most sense to the customers from the standpoint of the delivered price of electricity; and we think we can do that without this level of Federal oversight.

Mr. MARKEY. So—if I may, so one of your concerns and New England's concerns generally, those six States, would be that as you put together regional plans to generate renewable electricity within the region, offshore or onshore—there is a huge project up in Aroostook County in Maine that could be, ultimately, in the thousands of megawatts if it is built out completely; but there will be an issue there of getting that electricity down into the population areas. But nonetheless it is contained within New England that has had historic relationships and worked through all of the reliability, cost allocation and siting issues over the years.

But you would be concerned that if there was some superimposed decision made to build transmission lines in from other parts of the country, that that would then change the economics of developing the renewables that are indigenous to Massachusetts and New England whether it be in Aroostook County, Maine, or off the coastline of New England.

I think—and I will add this as well—one of the things that is not well understood about the East Coast of the United States is that when you go out 10 miles, 20 miles, 30 miles, 40 miles, you are still only in 200 feet of water. When you go out that far on the West Coast, you are out—you are miles deep in the ocean. And so in terms of the siting issues along the East Coast, for wind especially, you can go out miles and miles and still be just hundreds of feet from having to site these wind facilities; and then with superconducting technologies, just bring them in to the shore and hook them into the preexisting grid that already is there in New England—with the States having to work out, of course, what the cost allocation is, but knowing that all of New England, for example—and New York, for that matter, and New Jersey and Maryland are all committed to resolving and cooperating in the production of new, renewable energy resources.

So just opening up this whole question of the remote areas of Maine, for example, most people don't know that 95 percent of

Maine is forest. It is woods. It is rural. So there is a lot of opportunity there as well, and it is a huge State as well. So I just raise that issue because we have to strike a balance here, because we do want each region's indigenous resources to be developed as well.

Let me just stop there and recognize the gentleman from California, Mr. McNerney, for his questions.

Mr. MCNERNEY. Thank you. I was expecting you to recognize Mr. Inslee first.

Mr. MARKEY. He has already been recognized for his first run. So I think it is appropriate for you to be recognized.

Mr. MCNERNEY. Thank you.

First of all, I want to thank Chairman Wellinghoff for his hospitality this week. And I think your testimony was rational. I noticed one thing though. You were seeming to advocate that the Fed has a significant, large role and the State regulators were all saying, Well, the States should have a larger role and the Fed should have a littler role. So I guess that is not too surprising.

I wanted to ask you, though, do you think that the U.S. faces significant technical hurdles, or do you think it is mostly political hurdles to improving our national grid?

Mr. WELLINGHOFF. Thank you, Congressman McNerney.

First, on the issue of the Federal role, I really believe that we should primarily defer to the States. I think what we need is to have Federal pressure to ensure that the States can move forward with interconnection-wide regional planning, siting, cost allocation.

But I largely agree with Commissioner Azar and her testimony. I think really it needs to be primarily informed by the States.

We certainly, though, have to have some entity who would overlook that State activity to ensure that the national goals are also incorporated into what the States—

Mr. MCNERNEY. And I like Ms. Azar's suggestion that we lock all the State people in one room until some decisions are made. But I don't think that that is really going to happen.

Mr. WELLINGHOFF. But on your second question with respect to whether it is technical or political, it is a good mix of both. And on the technical side, I think it is important to understand—and I know that New England and the eastern seaboard States are very interested in offshore wind, and I support offshore wind; that is a great resource.

What we have to understand is, they are not an island either; they are interconnected to the entire eastern interconnect. So, for example, if we had offshore wind from Rhode Island, New Jersey, New York all the way up through New England put in place, developed, say, 10 gigawatts, 10,000 megawatts of wind put into the East Coast, we could not simply, as I understand it from my reliability engineers, simply interconnect that into the existing grid. We—in fact, if we had that happen, and we had as little as perhaps 2,500 or 3,000 megawatts of that go off line, we could black out Florida.

So we ultimately need to look at how to strengthen the entire interconnect so that all the regions, in fact, can meet the renewable goals and can do it with their local renewable resources and with distance-renewable resources, if necessary.

Mr. MCNERNEY. Thank you, Mr. Chairman.

Mr. Halvey, I certainly appreciate your work toward the Western region. I understand your desire to streamline the permitting process. Do you have any specific recommendations along those lines?

Mr. HALVEY. Yes, I think a couple of recommendations, one because of the work that we are doing with regard to the Western Renewable Energy Zones project. We think it will become clear very quickly which areas represent the most desirable, the richest and the most developable renewable resource zones. Given that identification, we think there is the opportunity to prioritize those areas. Where they exist in concert with federal lands, we believe there should be a priority given to the permitting on those areas.

Same thing with the transmission lines that would be necessary to move that power from those renewable energy zones to the market centers where it is needed.

One of the other aspects of the project is that we will identify, conceptually at least, where the transmission lines need to be in order to use that power.

Mr. MCNERNEY. So you are really addressing the prioritization, not the actual process of permitting?

Mr. HALVEY. We think it is both. One recommendation is the prioritization. The second is to look at the requirements and certainly limit the number of requirements that agencies have to go through that have no value added in terms of that permitting process, that there is a way to protect wildlife, that there is a way to address environmental values, that there is a way to go through these processes and not take the kind of time that we are seeing with many of these applications.

Mr. MCNERNEY. I agree. And I just want to remark on Mr. Hibbard's optimism that offshore wind can be as significant as it can. And the fact that it is proximate to load centers, that is an important consideration as opposed to putting in a lot of transmission. So I appreciate that.

And also the observation about just putting in large transmission capacity can have a negative impact on renewables. So those are appreciated, those comments are appreciated.

And with that, I will yield back.

Mr. MARKEY. Gentleman's time has expired.

The Chair recognizes the gentleman from Washington State, Mr. Inslee.

Mr. INSLEE. Thank you. I wanted to read just a little portion of Commissioner Azar's testimony and ask a couple of questions to the three of you about it. Commissioner Azar said Congress can and should play an important role in bolstering and catalyzing State efforts by setting clear mandates and guidelines as well as strict deadlines for State and regional transmission planning efforts. If these planning efforts fail to meet these mandates or deadlines, Congress can set up additional backstop authority for Federal agencies to take action and ensure that projects identified in the regional planning efforts move forward. I am paraphrasing now. Examples of the type of leadership that would be helpful include the following, and the commissioner lists four things. But the fifth thing is clear and powerful backstop authority for Federal action to plan for, approve and site transmission lines that are identified as vital in the State-led transmission planning process.

I agree essentially with that statement. And I think a bill I have introduced heads in that direction. The question I would like to ask Mr. Hibbard, Commissioner Azar and Chairman Wellinghoff is, Mr. Hibbard has identified this issue that he doesn't want to see offshore wind intruded upon by, say, coal coming in from Ohio or somewhere else. And I believe if we do have this backstop authority, we can and should build something in that would make sure that we preserve our goal of enhancing low carbon-based fuels as part of what you might think of as bonus backstop Federal authority.

Is there a way to do that? And if you could give us your thoughts on the best way to do that. I will just start with Mr. Hibbard. If we were going to adopt this backstop Federal authority, what would you encourage us to do to prevent the scenario that you fear?

Mr. HIBBARD. Well, let me start by saying I think that the legislation as it stands contains that backstop authority. By setting a cap on carbon and by setting a floor on renewable resource development, you are providing competitive markets the market signal they need to spur the development.

The question you are posing is what if that is not enough? What if at some point we look and we see that, for whatever reason, we are not getting the level of development of renewable and low-carbon resources to meet our clear caps and our clear floors?

What I would urge all of you to consider is to try to come up with a framework that does so while maintaining the importance of competitive market solutions.

Again, under FERC's leadership, our wholesale competitive markets in New England are critical to keeping prices low to consumers, and not violating that is extremely important. Now, are there ways to do that? The one example I can give you is that in Massachusetts we recently enacted legislation that requires our distribution utilities to enter into long-term delivered-price contracts with renewable power sources so that the utilities themselves would issue solicitations and would select the lowest-cost option for meeting that goal of the Massachusetts State Legislature.

You could consider something along the same lines where at some point you could evaluate whether or not the country is heading towards meeting its carbon cap and its renewable power floor, and if there is a deficiency identified, have FERC step in in essentially a backstop planning mode and require that regions, RTOs, utilities or interconnecting transmission owners issue solicitations for long-term contracts for renewables on a delivered-price basis.

Mr. INSLEE. I want to make sure, if you could kind of wrap up, I want to make sure we get to the other two witnesses.

Ms. AZAR. Thank you, Congressman. I am optimistic that if Congress sets the goals and sets the process and has a strong backstop authority, that we will be able to get this done. If we don't get it done, again, I think that is when the role of FERC steps in. So if FERC for instance—if the States came up with a specific plan and the plan did not meet the objectives of Congress that Congress set, I think there needs to be essentially an overseer. And I personally would be fine with that being the Federal Government saying, yes, this plan actually meets those objectives. But the plan itself has to be designed by the States.

Mr. INSLEE. Mr. Chairman.

Mr. WELLINGHOFF. Thank you, Congressman Inslee. Just to respond to Mr. Hibbard, I want to make very clear that FERC is very committed to competitive market solutions. We wouldn't choose to do anything that would be counter to that. But I think when we look at transmission, there are some nonmarket barriers, and those include the issues of siting and cost allocation. And, again, agreeing with Commissioner Azar, I think it is necessary to allow the States to move forward in those areas to see if they in fact can do some interconnect-wide planning collectively, that they are moving forward to do that both in the eastern and western interconnects, and then see from that if the siting and cost allocation can be agreed upon. But if not, we have to I think have that pressure, that Federal pressure behind it to inform that process, to make sure that it moves forward to ensure that we meet our national goals.

Mr. INSLEE. Thank you.

Mr. MARKEY. The gentleman's time has expired. The Chair recognizes the gentlelady from Wisconsin.

Ms. BALDWIN. Thank you, Mr. Chairman. When I hear the discussions about connecting Dakota wind generation through transmission to load centers on the east coast, I sort of feel like Wisconsin could become a State that has an extension cord just running through it. Maybe I should use the swimming pool analogy instead. But that is the image that it conjures up for me. And I worry that it disincentivizes distributed generation.

And as I pondered in my opening statement earlier this morning, how we propose to pay for the transmission upgrades that are coming down the pike is a critical question. Will those who do not receive the extensive benefits of this transmission have to pay for the cost of traversing lines across the country?

The ratepayers that I represent, as you have already heard, have supported their share of more than \$2 billion of new investments in the Wisconsin transmission system. Clearly there are transmission technology decisions that need to be made, and there are cost allocation decisions that need to be made. But I guess I would ask the whole panel and anyone who wants to comment, how we best protect those ratepayers, how we set up the system in a way to best protect those ratepayers who will not be receiving the huge benefits of this transmission buildup.

Mr. HIBBARD. If I may jump in, Congressman. I think the model that I have been discussing here this morning of requiring that the cost of transmission associated with moving generation from the generation source to market be included in the price that is offered to consumers that will be purchasing it is our first line defense on that. So that if transmission were coming from the Dakotas and being put into New England, the price of that would include not just the cost of developing the generation but also the cost of the transmission. We can then compare that price to other generation prices available to us within the New England market for local renewables, for demand resources, or for more traditional generation, and that ultimately the projects that will go forward will be the ones that benefit ratepayers.

Ms. AZAR. As far as cost allocation I don't think we can actually speak to what would be the best cost allocation at this point in

time. It should be tailor-made to the grid that is essentially planned. As I mentioned in my initial comments, if you pick a specific cost allocation right now, it is likely to steer the plan in a specific direction. And I would rather have the physics drive—the physics and the economics drive the plan, and then we can figure out how to pay for it after the plan is designed. So that is my recommendation.

Mr. COEN. As a Vermont commissioner I would concur with my colleague from Massachusetts. For the naval perspective, we would be looking to take a position case by case as it comes forward.

Mr. WELLINGHOFF. And, again, I would agree with Commissioner Azar. We should not dictate a particular method, number one. But number two, my preference would be to have the States try to work it out ultimately. And if those States that were involved in the line, the line went across the State, but that State could make a case if there wasn't real benefits to that State. So hopefully that solution could be worked out and ultimately resolved in a collaborative way.

But ultimately, at the end of the day, if the decision had to be made and it couldn't be made by the States and the region collectively, I think it would be appropriate for FERC to determine that allocation; and the allocation, in fact, may decide that a particular State like Wisconsin did not benefit, depending upon the definition and breadth of the term "benefit" from a particular line, and, as such, may not be allocated costs.

But, again, you have to provide the flexibility for that kind of a decision to be made. You can't restrict specifically or dictate in a rule how that has to be done. It has to be in a very broad, in a broad way that allows FERC to meet its mandate to ensure that rates are just and reasonable.

Mr. MARKEY. OK. Let me now turn and recognize once again the gentleman from California for another round of questions.

Mr. MCNERNEY. Thank you, Mr. Chairman.

I had a question for Commissioner Azar. You had some recommendations for congressional action to facilitate projects, transmission projects. Do you feel that those recommendations are widely shared across the country by State commissioners.

Ms. AZAR. I have not had the opportunity to float that idea by my colleagues, so I can't speak to that.

Mr. MCNERNEY. Well, that is my only question and I yield back.

Mr. MARKEY. I thank the gentleman.

The Chair will recognize himself just to pursue a few questions here. Mr. Hibbard, perhaps you could deal. Mr. Wellinghoff said that if there was 3,000, 5,000 megawatts of wind brought in from offshore up in New England, that it could cause reliability problems down in Florida. But the converse could also be true with what Florida Power and Light and, hopefully someday, the Southern Company is doing in Florida to generate renewable electricity could cause reliability problems up in New England. How do we resolve that issue?

Mr. HIBBARD. Thank you, Mr. Chairman. The issue, the engineering issue that the Chairman refers to is really one of the size of the transmission and the associated capacity being put onto the

transmission network in the region. So for example, if as Commissioner Azar was referring to you have a 765 kv line and it is—

Mr. MARKEY. You know, can you imagine the audience right now? OK, what is that? What is that?

Mr. HIBBARD. If you have a really extra high-voltage line—

Mr. MARKEY. What does that mean? What does that mean? “Dropping,” what does that mean?

Mr. HIBBARD. Think of it this way.

Mr. MARKEY. OK. Try again.

Mr. HIBBARD. When a transmission line interconnects or it hooks up with the transmission system in New England, it looks like a generating facility. So if you have a really high-voltage line it looks like a really big power plant.

Mr. MARKEY. So when people are riding down the street or out on the highway, and they look off and they see something, explain it in those terms just so they can understand why people’s sensibilities might be affected by what it is that is constructed, so that you can put it in those terms, because 765 kilovolts doesn’t really mean anything to people.

Mr. HIBBARD. What they would actually see is a really big tower. But from the standpoint of how it affects the grid it just puts a lot of electricity onto the grid in a single location. And if that were suddenly to disappear, then there could be problems if the transmission system can’t withstand it, and cause the type of widespread outage that he was referring to.

The value I see in offshore wind technology along the eastern seaboard is it completely overcomes that problem, because it can be built out incrementally at lower voltages that hook on individual lines into the major load centers along the east coast so that we can build it out without the need for increasing the reliability, the potential reliability risk on the underlying transmission system.

So that, while I think if we were to take the path of interconnecting 3,000 megawatts in a single point—that would be the problem that the Chairman is referring to— but that offshore wind has the potential to be dispersed on a much more widespread geographic basis and actually enhance the reliability of the grid.

Mr. MARKEY. Mr. Wellinghoff, would that solve your Florida problem, or, from our perspective, our New England problem?

Mr. WELLINGHOFF. I am not sure that it would, Mr. Chairman.

Mr. MARKEY. Can you explain why?

Mr. WELLINGHOFF. I am not sure that it would, Mr. Chairman. Ultimately, even though you may disperse the 3,000 megawatts over a number of locations, the issue is going to be the variability of that wind and the effect of that variability on reliability across the interconnect with respect to frequency. And I have actually directed our reliability division to commence a study that will look at this issue and determine how that incursions infrequency can affect reliability across both the eastern and/or western interconnects.

Mr. MARKEY. Mr. Hibbard, you are back at a FERC hearing right now; what are you going to say to Mr. Wellinghoff when they raise that issue?

Mr. HIBBARD. First I will commend the Chair and FERC for looking into reliability.

Mr. MARKEY. Good.

Mr. HIBBARD. And I would encourage them to consider in that study the difference between variability of 3,000 or 4,000 or 5,000 megawatts being connected at a single point to the variability, and the impact of it being spread over a very wide geographic region. And whatever the outcome is I am certain it will be the right answer.

Mr. MARKEY. And would you agree that there could be a distinction made between a concentrated renewable source and something that is dispersed over hundreds or thousands of miles?

Mr. WELLINGHOFF. Mr. Chairman I try to not practice electrical engineering without a license, but I would agree there may be a difference between the two.

Mr. MARKEY. Thank you. And by the way, would those same issues exist in a Western State, for example, that might want to produce 3,000 or 4,000 or 10,000 megawatts of renewable in their State and try to move that, for example, into a metropolitan area in another State or several other States? Would it create the very same issue?

Mr. WELLINGHOFF. Yes, it could be applicable in either interconnect.

Mr. MARKEY. So it is an issue that we ultimately have to resolve here. I think that going back to this 765 kilovolt issue is an important thing to understand. Because in my experience, at least on this committee for 33 years, there are corporate entities that really think big; the bigger the facility, the bigger the plan, the better it is. And then there are others that think, well, maybe we can disperse the way in which we generate electricity. Maybe we can do this in a way—and here it is going to be increasingly important—to generate solar and wind and other renewables from more dispersed sources. And that is to a certain extent where the smart grid comes in so that we are doing it. We not only need a smart grid, but we need smart people planning a smart grid so we don't overbuild it and put those burdens back on to the consumer.

And we saw all of that happen back in the 1970s and early 1980s where all of these nuclear power plants that were guaranteed to be needed by the year—if we didn't build 500 new nuclear power plants, they told us, by the year 2000, we would have blackouts all over America.

So we need to think big and put all these costs on the shoulders of ratepayers all across America. In the New England region we really suffered from the overenthusiasm, I will say, of these big central planners. And so we have to be careful here that those types of—we will call it planners—don't control this process, because it is just the opposite era that we hope we are entering in terms of the development.

And I can just feel the hoofbeats of the large central planners moving towards this whole concept. And after 33 years, I am kind of aware of what can happen. There is an old saying that a smart man learns from his own mistakes and a wise person learns from other people's mistakes. But at my age and service in Congress, I am an expert in both areas of mistakes, and so I just don't want to see that happen again. And that overbuilding issue is really something that is quite important to me.

So if you could, Ms. Azar, could you go to the question of AC/DC. And first of all, explain to our viewing audience what that is and why different results occur depending upon the decision which is made.

Ms. AZAR. Yes. The alternating current system is the primary transmission grid we have right now, and it is completely interconnected. So when you put an electron on that AC grid it is going to go to the path of least resistance. With models, you can predict where it is going to go but you can't direct it. The electron goes where it wants to go. On a DC line it is actually very directed. It has one direction.

Mr. MARKEY. So DC means direct current.

Ms. AZAR. Direct current, thank you. The direct current line. You have a lot of control over it. The electron goes in one direction. You know, for instance, when you drop an electron on one end of a DC line, you know where it is going to end up. It is going to end up on the other side of the DC line. Whereas in an AC grid, if you drop an electron at the same point, you are not sure what path it is going to take. The only thing you know is you are pulling power off at certain locations. So there are two very different models.

Mr. MARKEY. And for the purposes of our discussion today, how does that instruct this discussion in terms of the goals that we are seeking to achieve.

Ms. AZAR. I can give two answers to that. One is we need to know what the goals are from Congress. And then we are going to be able to decide which of those, or the combination of the both of them, will solve the problems that you are going to put forth to us.

I can tell you from a personal perspective that the DC lines, if your problem is trying to get power from a fairly localized location, let's just say in the Dakotas, and you are trying to get it far east, as long as you are over 400 miles long, DC lines will likely be a very good solution to that problem.

Mr. MARKEY. Are they more or less expensive?

Ms. AZAR. That is a good question. As a general rule I would say they are less expensive, but it depends on what kind you are building.

Mr. MARKEY. And that should be a decision, in your opinion, made by the regions.

Ms. AZAR. That is correct.

Mr. MARKEY. And that could actually turn on how much burden is placed upon consumers in terms of their electricity bill each month.

Ms. AZAR. That is correct.

Mr. MARKEY. Mr. Wellinghoff, if I may, you heard Mr. Hibbard and others talk about what the impact would be of the Waxman-Markey bill on the marketplace. The signal will be sent to move away from carbon-producing electrical generation; there will be a national renewable electricity standard now as a result encompassing an additional 20 States. And he largely believes that that is going to now force States on a regional basis, because of these national goals, to reach a combination on these new lines, and that the Federal Government is actually going to be less needed in the future, perhaps with the exception of the Federal lands issue, to resolve these issues.

What is your response to that in terms of—because we are trying to create a market-based response. And I will just give you an analogy and perhaps you could—or an analogous situation and perhaps you could reflect upon it.

After we passed the 1996 Telecommunications Act, all of a sudden there was an explosion of broadband deployment across the country. Telephone companies, cable companies, others who had been telling the local PUCs, oh, it is not in fact cost-effective to be deploying fiber optic or broadband technology. We are now in a mad race to do so because there is now a new Federal law which is placing a premium upon it, and by the time we reached 2000 we actually had a dot-com bubble because of the vast and very rapid deployment of broadband across our Nation.

Now, we created thousands of new companies. Some survived, some didn't. But it was great for our country in the long run. Is there any reason to believe that the legislation, as it is now drafted, won't unleash a similar and very, very significant deployment of renewables across the country and kind of press regions and individual utilities to finally resolve their longstanding, call it—no, I won't call it opposition, I will call it skepticism. Because I saw it in the telephone sector, I saw it in the cable sector. They moved overnight to challenging their perspective.

Do you think the legislation will do that, and, as a result, perhaps this Federal role isn't going to be as needed, with the exception of the Federal lands issue?

Mr. WELLINGHOFF. Well, certainly as you are aware, Chairman Markey, there are approximately 29 States now that have renewable portfolio standards. In fact, my State of Nevada is one of those. We have a standard that is 20 percent by 2015, so it is far ahead of most State standards. And those standards have in fact created markets, created markets for renewable energy, and moved renewable energy into those markets very effectively. So I think that is happening already on the one hand.

But on the other hand, I have people coming into my office who tell me that wind is being curtailed in the Midwest because we don't have adequate transmission. So that tells me we have a problem. It is not simply the markets are creating these new markets for renewables, it is the need to somehow ensure that this transmission gets built to make a deliverable. We need to make a deliverable.

Mr. MARKEY. You are saying that the States are not cooperating in the Midwest in the transmission of wind.

Mr. WELLINGHOFF. No, I am not saying necessarily the States or the Federal Government. I think it is a combination of the fact that we have certain barriers, which include issues of planning, siting, and cost allocation that need to be relooked at in ways that we can facilitate more transmission for renewables.

Mr. MARKEY. You are basically saying the Federal Government needs more authority because the States aren't doing the job in moving that wind around in the Midwest.

Mr. WELLINGHOFF. I am saying that ultimately what we need to do is ensure that the States understand—

Mr. MARKEY. And I appreciate that.

Mr. WELLINGHOFF [continuing]. Those priorities, and that in fact—

Mr. MARKEY. But you are saying they will need that,—in addition to the new law which we are passing, which will create all those incentives for utilities to move and for states to move, you are saying that that is not going to be sufficient; that you believe that the States themselves have some built-in inertia, and some of those utilities do as well, and that because they don't move, even though we passed this new law and created these high goals that have to be met by national mandate, that we will still need the Federal Government to come in as a club. Is that what you are saying?

Mr. WELLINGHOFF. I am saying that I am not blaming the States, nor am I saying the Federal Government is the panacea. I am ultimately saying—

Mr. MARKEY. Right. But here is the problem. In terms of—and I appreciate what you are saying, and you are engaging in a bit of terminological inexactitude which is necessary for to you maintain good relationships with the States, and I appreciate the position that I am putting you in. But at the same time, we are going to create a brand new law here that is going to affect all these States.

Mr. WELLINGHOFF. That is correct.

Mr. MARKEY. So we need some evidentiary basis for preempting the States that is based upon a Federal perception of the problem that exists in these States. So while we won't use the word "blame," we need to find some way in which we pinpoint what it is that is occurring that is the problem, and then we can tailor a solution to it. But we can't deal with it in kind of broad generalities. We need to have the specifics, and then even in the report language of the legislation we can ensure that we are explaining the problem as it exists, let's say, in a particular region. And here we are talking about the Midwest and the fact that wind is not moving around, even though it is readily available. So pinpointing what that problem is helps us then to tailor the language to reflect that problem.

So maybe you can elaborate a little bit on that Midwestern problem where the bottlenecks are, what causes it; and then we can kind of contemplate, cogitate, on what might be necessary.

Mr. WELLINGHOFF. And I am suggesting part of the bottlenecks are the fact that, number one, FERC really doesn't have the authority to allocate across boundaries. So between Misol and PGM, for example, we don't have the ability to allocate costs of transmission across these boundaries, and, as such, we are not really getting the types of transmission built.

And I think you are going to hear from Mr. Welch from ITC in the next panel, and he has a very interesting transmission project that I would commend you to explore this with him further, because he is in the Midwest trying to get large amounts of wind out of the Dakotas into the Chicago area. And I think one of his issues he is talking about is cost allocation across two regions.

So what I am suggesting ultimately is that Congress needs to look at an entire structure of planning, siting and cost allocation that is initially deferred to the States, and I would say that the States should in fact ultimately solve that problem. But if they

can't, then the pressure should be there to allow the Federal Government to step in if necessary.

Mr. MARKEY. Thank you. Mr. Wellinghoff. I was the author in 1992 of the wholesale transmission access provisions in the Energy Policy Act that, for the very first time, gave the FERC the ability to force utilities to stop blocking requests for open and nondiscriminatory access to wholesale transmission lines so that there could be more competition in that area.

The FERC then built upon that new law that I created and issued a generic order 888 on transmission access, which is an historic order, and that is based upon my 1992 law.

So I am very sensitive to this issue, but, again, I don't think we should tailor something that goes beyond what is needed. And I say this to you, Chairman Wellinghoff, that part of the problem we have up in Massachusetts, and New England as well, is the—and it is not you, it is your predecessor of FERC that has just left office—but preempting our State and local governments from granting FERC siting authority on wholesale electric transmission lines, that issue is illuminated by the fact that the FERC has seemed to be completely unresponsive to our local concerns when it comes to the siting of the liquefied natural gas facility in Fall River, Massachusetts. I have an LNG facility in my district in Everett, Massachusetts.

Massachusetts, working with the Federal Government, has licensed two LNG facilities about ten miles off of our coastline to bring LNG into our market and into the New England market. It is upwards now of 30 percent of the natural gas that we use in New England, and we support LNG and we have licensed two facilities.

But notwithstanding Massachusetts saying to the FERC, we don't need another one on land, we are doing it offshore and we have licensed them, the FERC—not your FERC—but the FERC up until this point has been saying, no, you are going to have another one in Massachusetts. And even that decision itself could affect the amount of renewables that we need. Notwithstanding the fact that natural gas may be half of the carbon in its use as coal, it is not nearly as good as renewables will be, but it is going to affect our marketplace by having that be forced upon us.

And the FERC has been pressing that now for the last 4 or 5 years. So that kind of calls into question kind of this Federal one-size-fits-all process, where, even when the State is saying back off, the FERC continues to come in and say, no, this is what you are going to have for New England. So how do we reconcile that, Mr. Wellinghoff?

Mr. WELLINGHOFF. Well, Mr. Chairman, I am not suggesting a one-size-fits-all process. Again I am suggesting, unlike the LNG process, where FERC has the primary and initial responsibility with respect to siting and permitting, that in fact States be given the initial opportunity in this regard. And that opportunity I think should be given all the tools necessary for it to succeed.

Mr. MARKEY. Thank you, Mr. Wellinghoff.

Are there other members who wish to ask questions of this panel? Let me recognize the gentlelady from Wisconsin.

Ms. BALDWIN. Thank you. Just one more rather big question. But I appreciate the Chairman for asking our witnesses to make this understandable for a viewing audience.

We had a discussion recently of follow the electrons. And I actually would like to pose a question about following the money. I ask anyone who wants to give just a very brief primer on the economics of transmission, is there a guaranteed rate of return; how is that determined; who decides; and, if so, what is that guaranteed rate of return for transmission?

Mr. WELLINGHOFF. Congresswoman Baldwin, I will attempt that. I like to believe in rate-based regulation and transmission is not—first of all, you have to understand transmission is not a market item, it is an item that we have a limited number of entities who are putting in transmission, and it is under a rate-based cost service scheme.

So they are authorized a return on their investment and they have an opportunity to earn a return. But to earn that return they have to manage their expenses and they have to manage their operations in an efficient way to ensure that their expenses match what their projections are, so that their return comes out to the level that they hope to achieve. The regulators, whether it be a State regulator or a Federal regulator, would authorize a level of return on equity that would be authorized. But, again, that is only an opportunity to earn that level of return.

Ms. BALDWIN. Do you have any averages of what that rate of return might look like?

Mr. WELLINGHOFF. I am sorry; what it might look like?

Ms. BALDWIN. What is the average rate of return? I know there are variables. A ballpark.

Mr. WELLINGHOFF. I can submit that to you in writing but I don't have an average today for you.

Ms. BALDWIN. OK. Thank you.

Mr. MARKEY. I thank the gentlelady. And I thank all of our witnesses. You have been absolutely fantastic.

And you, Mr. Wellinghoff, I want to tell you how much we appreciate your willingness to take on this job. This is one of the toughest jobs we are going to have in America. You have an outstanding record. And I have already had an extensive conversation with you privately, and I really am very very glad you have this job. I think you are going to do a tremendous, tremendous service to our country there in that position. It is very sensitive. It is going to require people like you who are willing to spend the time to get this right so we have a long-term solution. And as we are going forward, especially over the next week or so, we are going to need some specifics to help us to think through this issue in terms of where the problems have been, what has caused the problems, and what would be needed in order to correct those problems.

We will need some examples and some specifics with regard to what has been used as a blocking mechanism to the resolution of these regional issues, because we want to get at that issue. We want to have real competition out there in the marketplace. So for you especially, Mr. Chairman, we hope that we can work with you in the next week. You have an outstanding staff and you are an outstanding individual and I think we can accomplish that.

Mr. WELLINGHOFF. We would be happy to do that Mr. Chairman, and thank you very much for your kind words.

Mr. MARKEY. I thank you. What I am going to do now is to work now in reverse and I am going to give each one of you 1 minute to tell us what you want us to remember as we consider this issue over the next week.

And we will begin down on this end with you, Mr. Halvey. You each have 1 minute apiece.

Mr. HALVEY. Thank you, Mr. Chairman. I think the two things that we would emphasize are the issue of supersizing, which relates directly to the cost allocation issue that we spoke about. It doesn't make a lot of sense for us to use up whatever goodwill we might have trying to locate a line—or, excuse me, locate a line that is undersized.

The second thing is I think the Federal lands issue, the permitting issue, I have elaborated some on that. But this we see as a very large impediment. Those would be the two things that I think we would like you to bear in mind.

Mr. MARKEY. Thank you, sir. Mr. Hibbard.

Mr. HIBBARD. Thank you, Mr. Chairman. I would just say that certainly from our perspective in the Commonwealth, we completely agree with the goals of the ACES legislation. We absolutely have to address the carbon issue and we have to address it now.

What I would urge you to consider from the standpoint of transmission is to try to retain the competitive market structure that delivers benefits to our ratepayers in the designs that you implement going forward. the carbon cap that provides a value or cost, additional marginal costs associated with allowance purchase for fossil generating resources, and a renewable portfolio floor that provides additional revenues to renewable resources should provide the financial incentives needed to get the renewables and the associated transmission built. And that we want to maintain the distinction between who is responsible for paying for transmission if it is a generating facility, and who is responsible if it is needed for reliability.

Mr. MARKEY. Thank you. Commissioner Azar.

Ms. AZAR. Thank you. Number one, define the goals that we need to be with the transmission grid.

Number two, define a State-led process by which we can meet those goals. One of the primary aspects of that needs to be that the decision maker must be beholden only to the public interest.

Number three, ensure there is Federal backstop authority so that we get our job done,

Number four, don't do harm. And with regard to that don't define a specific technology and please don't define a cost allocation process.

Mr. MARKEY. Thank you. Mr. Coen.

Mr. COEN. Thank you, Mr. Chairman. Very, very briefly, I just want to reiterate that the States are here to help. We would like to work closely with your committee in developing some transmission planning, and that Federal preemption of transmission siting should only be used as a last resort.

Mr. MARKEY. Thank you. And, Mr. Wellinghoff.

Mr. WELLINGHOFF. Mr. Chairman, thank you. I would suggest that hopefully you come away with this, number one, that we are not as far apart as we initially seemed to be, I think, when we started out in our testimony. But we all have the same goals: to reduce carbon and to ultimately develop as much renewables as possible to do that.

But I think we need to remember that there are nonmarket barriers that we need to look at how to get that development done. And as part of those nonmarket barriers I think we need to do, put a construct together that would allow the States to initiate the processes of planning, siting and cost allocation, to have the transmission developed to deliver renewables. We also have to have that back pressure of the Federal Government standing there, being able to step in if necessary to make it happen and get it done.

Mr. MARKEY. Thank you, Mr. Wellinghoff, very much.

And in the spirit of what Mr. Wellinghoff said, we may not be as far apart as the initial statements indicated. Let's work towards that goal. Time is of the essence, so all of these conversations now continued outside of this hearing room over the next week or so would be very helpful to us. With the thanks of the committee, this panel is dismissed, and we will ask the next panel to come up to the table.

Mr. MARKEY. We thank you all for being here and we apologize for the delay. This is obviously a very important issue. We may be writing the transmission rules for the next generation of electricity generation in our country. Over the next couple of weeks we will see if that can be accomplished, perhaps it can, perhaps we can't. But your testimony is going to be central to accomplishing that goal. We could not do it without your participation.

We apologize to you for the delay in your panel being recognized and for it being Friday afternoon, getting later as the minutes transpire.

STATEMENTS OF RALPH IZZO, CHAIRMAN AND CEO, PUBLIC SERVICE ENTERPRISE GROUP; JAMES NIPPER, SENIOR VICE PRESIDENT, AMERICAN PUBLIC POWER ASSOCIATION; GLENN ENGLISH, CEO, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION; REID DETCHON, EXECUTIVE DIRECTOR, ENERGY FUTURE COALITION; JOSEPH WELCH, PRESIDENT AND CEO, ITC HOLDINGS CORPORATION; CHRIS MILLER, PRESIDENT, PIEDMONT ENVIRONMENTAL COUNCIL; AND DAVID JOOS, CEO, CMS ENERGY CORPORATION

Mr. MARKEY. We will begin with Ralph Izzo. He is Chairman, President and Chief Executive Officer of the Public Service Enterprise Group, Incorporated. He is a leader within the utility industry in the public policy area. We thank you once again for being here. Mr. Izzo, whenever you are ready please begin.

STATEMENT OF RALPH IZZO

Mr. IZZO. Mr. Chairman, members of the subcommittee, thank you for this opportunity to appear before you today to testify. PSEG distributes electricity and natural gas to more than 2 million customers in New Jersey, and owns and operates electric generating

capacity in the Northeast, Mid-Atlantic and Texas. PSEG has long supported policies to promote renewable generation.

We are planning major investments in solar, offshore wind generation, and in energy storage technology that will make renewable energy more competitive.

The question today is not whether we should vigorously promote renewable generation, but how. Specifically, how should we use transmission policy to promote renewable generation at the lowest possible cost? This would include not just Federal siting authority, but decisions about transmission planning and cost allocation that are fundamental to determining how much transmission is built and where.

There are two competing views on this. One view which I strongly favor is that government should establish prices for externalities such as the cost of emitting greenhouse gases, and let market forces determine which technologies and which locations are most promising for investment. This is the approach taken in the landmark ACES legislation. It establishes a price for carbon through a cap-and-trade program and a market-based subsidy for renewable generation through the Renewable Electricity Standard. With these price signals developers can compare the cost of renewable generation in different locations, including the associated transmission cost.

The alternative view is that some central entity should plan and site transmission that will connect the areas with strong renewable resources to areas of high electric demand via some grand super-highway, paid for by a broad group of taxpayers. Under this model government would essentially pick winning renewable technologies and locations, and build transmission to facilitate them.

I have several concerns about this approach. First, it could lead to unnecessarily expensive outcomes. All business owners know that if they establish their factory at a distant location to keep production costs down, they have to weigh that against shipping costs. But if we socialize shipping costs of renewable generation, we skew decisions away from locally based options that may have a lower total cost.

That is why a bipartisan coalition of ten Northeastern Governors wrote to Congress warning that this policy would undermine their efforts to grow renewable industries. Moreover, building thousands of miles of transmission lines in anticipation of the arrival of renewable generation may lead to an expensive excess of transmission capacity.

Transmission planning is a delivered process meant to respond to long-term reliability and economic concerns. It is not intended to predict and facilitate dynamic markets.

Second, as has been said so many times already, there is no such thing as a green transmission line. Transmission lines carry all electrons without regard to the carbon footprint of the generator. In fact, the dispatchability of renewable resources would suggest you would have a significant underutilization of the transmission line unless you filled it with other forms of generation. So a green transmission line will give market advantage to any power plant fortunate enough to be close to the new line.

Third, creating a new planning process across regions is unnecessary. We already have regional planning processes that are effective and sensitive to local concerns. Cross-regional issues should be addressed through improved coordination between regional planning bodies, which is exactly the approach taken in the committee-passed bill.

Finally, existing tools can help renewable projects connect to the grid without distorting locational price signals and without potentially burdening consumers with an excess of expensive transmission.

For example, if the costs of connecting to the grid and getting power to market are too much for one developer to bear, multiple developers can share costs among their projects. Or FERC can require that ratepayers initially bear these costs, provided they are reimbursed by developers after the projects become operational.

In closing I believe we will meet our long-term carbon reduction goals. But sitting here today, I cannot tell you what renewable technologies, and, more importantly, in what locations, it will take to get us there to serve our customers at the lowest possible cost, and neither can government.

That is why I strongly support policies such as an RES and carbon pricing that send price signals to the market and unleash the creativity and entrepreneurial spirit of the American people. Thank you.

Mr. MARKEY. Thank you, Mr. Izzo, very much.
[The prepared statement of Mr. Izzo follows:]

**TESTIMONY OF RALPH IZZO
CHAIRMAN, PRESIDENT AND CEO
PUBLIC SERVICE ENTERPRISE GROUP INCORPORATED**

**HOUSE COMMITTEE ON ENERGY AND COMMERCE SUBCOMMITTEE ON
ENERGY AND ENVIRONMENT
JUNE 12, 2009**

Chairman Markey and Members of the Subcommittee, my name is Ralph Izzo and I am Chairman, President and CEO of Public Service Enterprise Group.

Our family of companies distributes electricity and natural gas to more than two million utility customers in New Jersey, and owns and operates approximately 17,000 megawatts of electric generating capacity concentrated in the Northeast, Mid-Atlantic and Texas.

Thank you for this opportunity to appear before you today to testify about transmission policy and renewable generation.

Let me state at the outset that PSEG has long supported policies to promote renewable generation. And we are planning major investments in solar and offshore wind generation, as well as an energy storage technology that will help make renewable energy more competitive.

The question we are discussing today is not whether we should vigorously promote renewable generation, but how. Specifically, how should we use transmission policy to promote renewable generation at the lowest possible cost? This would include not just federal siting authority, but decisions about transmission planning and cost allocation that are fundamental to determining how much transmission is built and where.

There are two competing views on this issue.

One view – which I strongly favor – is that government should establish prices for externalities, such as the cost of emitting greenhouse gases, and let market forces determine which technologies and which locations are most promising for investment.

This is the approach taken in the landmark ACES legislation, which establishes a price for carbon through a cap-and-trade program and a market-based subsidy for renewable generation through the Renewable Electricity Standard. With these price signals in place, developers can compare the costs of renewable generation investments in different locations, including the associated transmission costs.

The alternative view is that FERC or another central entity should plan and help site transmission that will connect areas with strong renewable resources to areas of high electric demand via “green transmission superhighways,” paid for by as broad a group of taxpayers as possible. Under this model, government would essentially pick winning renewable technologies and locations and build transmission to facilitate them.

I have several concerns about this approach.

First, it could lead to inefficient and unnecessarily expensive outcomes. All business owners know that if they establish their factory at a distant location to keep production costs down, they have to weigh that against increased shipping costs. But if we socialize the “shipping costs” of renewable generation, we skew decisions away from locally-based options that may have a lower total cost. That is why a bi-partisan coalition of 10 northeastern Governors wrote Congress warning that this policy would undermine their efforts to grow local renewable industries.

Moreover, building thousands of miles of transmission lines in anticipation of the arrival of renewable generation may lead to an expensive excess of transmission capacity. Transmission planning is a deliberate process meant to respond to long-term reliability and economic concerns. It is not intended to predict and facilitate dynamic markets, like renewable generation.

Second, there is no such thing as a “green transmission line.” Transmission lines carry all electrons, without regard to the carbon footprint of the generator. A “green transmission line” will give a market advantage to any power plant fortunate enough to be close to the new line.

Third, creating a new bureaucratic planning process across regions is unnecessary. We already have regional planning processes that are effective and sensitive to local concerns. Cross-regional issues should be addressed through improved coordination between regional planning bodies, which is exactly the approach taken in the Committee-passed bill.

Finally, there are existing tools that can help renewable projects connect to the grid without distorting locational price signals and without potentially burdening customers with an excess of expensive transmission.

For example, if the costs of connecting to the grid and getting power to market are too much for one developer to bear, multiple developers can share those costs among their projects. Moreover, FERC can require that ratepayers initially bear these costs, provided they are reimbursed by developers after projects become operational.

In closing, I believe we will meet our long-term carbon reduction goals. But sitting here today, I cannot tell you what renewable technologies in what locations will get us there at the least cost to customers. And neither can our government. That is why I strongly support policies, such as an RES, with national renewable energy credits, and carbon pricing, that send price signals to the market and unleash the creativity and entrepreneurial spirit of the American people to solve the climate crisis.

Thank you and I'd be pleased to answer any questions.

Mr. MARKEY. Our next witness is Joe Nipper who is the Senior Vice President for Governmental Affairs of the American Public Power Association, representing the Nation's more than 2,000 community-owned electric utilities. We thank you for being here. Whenever you are ready, please begin.

STATEMENT OF JAMES NIPPER

Mr. NIPPER. Thank you, Mr. Chairman, and members of the subcommittee. I appreciate the opportunity to be here today.

APPA, as you mentioned, represents the interests of 2,000 publicly owned State and locally owned utilities across the country, collectively serving 45 million Americans; 110 public power utilities collectively own about 8 percent of the Nation's transmission lines of 138 kilovolts or greater.

However, the great majority of APPA's members are transmission-dependent; that is, dependent on facilities owned by others, in order to acquire the electricity they need for redistribution of their retail customers.

Our members report that more transmission is needed in almost every area of the country to serve a variety of purposes, including increased use of renewable energy, reliability and to enhance competition.

In our view, the single most significant impediment to getting a new transmission built continues to be siting, and we urge Congress to clarify and continue to support the Federal backstop siting authority included in EAct05. EAct05 siting authorities were a major step forward but have been called into question by the recent court decision in the Fourth Circuit Court of Appeals.

As an intervener the side of FERC in this case, APPA believes that legislation should clarify the original congressional intent in EAct05 by expressly providing FERC with the authority to consider backstop transmission siting applications when a State denies an application.

It is important to note for us that as units of local and State government, public power utilities are not typically supportive of Federal policy that diminishes State authority, and we certainly have had concerns about Congress' and FERC's attempt to expand authority in other areas. However, the importance of siting new interstate transmission lines cannot be understated, and thus our continued support of the compromise crafted in EAct05.

There is some misconception, though, that higher voltage lines are always better. In actuality, the interconnected nature of the grid is such that a lower voltage line, located strategically, could have a greater ability to relieve congestion and to enhance reliability than a higher voltage line, and could experience less local resistance to the siting and cost less than a higher voltage line.

Of course there are situations where higher voltage lines is preferable and necessary, but we want to make it clear that bigger is not always better when it comes to the grid. This is one reason why regional planning is so important.

The impact of proposed new higher voltage facilities on an existing transmission network needs to be fully considered so that the optimal mix of facilities can be determined. Encouraging proportional joint ownership of transmission facilities by load-serving en-

tities, including public power utilities in a given region, another way to get more transmission built.

If the responsibility for building and owning the transmission grid is spread more broadly among the entity serving customers in a region, joint transmission planning will be facilitated simply because there are more participants at the planning table supporting the immediate projects.

If network customers of a dominant regional transmission provider are encouraged to own their load ratio share of the transmission system, transmission usage and ownership will be more closely aligned, and the friction between transmission-dependent utilities and transmission owners can be reduced. There are many examples, Mr. Chairman, where that is the case.

With respect to planning, APPA supports the transmission planning provisions, including the committee-passed version of the American Clean Energy and Security Act, as we believe they will bolster rather than duplicate or further complicate the existing and extensive transmission planning process under FERC Order 890 occurring at the regional and subregional levels across the country.

The manner in which transmission facilities' costs are allocated among generators, transmission owners, transmission-dependent utilities and other stakeholders is one of the most controversial topics related to transmission.

APPA strongly supported the language included in EPAct that underscores FERC's flexibility in determining the appropriate transmission pricing methodology. We don't always agree with the decisions made by FERC on cost allocation. We continue to believe that Congress had it right in leaving these decisions with appropriate stakeholder input and administrative due process to FERC to determine under sections 205 and 206 of the Federal Power Act.

The issue of who pays for transmission facilities to provide regional benefits is a difficult one. Such facilities can provide Presidents future system benefits that extend well beyond the specific entities wherein the facilities are constructed. Therefore APPA urges FERC to provide greater guidance on cost allocation for new major transmission facilities that afford regional benefits.

APPA does not support the allocation of costs of facilities to regions, subregions or entities that will receive little or no benefit from the facilities, and therefore opposes a Federal statutory requirement to allocate such costs on an interconnection-wide basis.

And lastly, Mr. Chairman, APPA has concerns with respect to FERC's application of its incentive rate authority provided under EPAct05, for it seems to regard section 219 as a statutory requirement to offer a variety of different transmission incentives to applicants. It appears that these entities have been helping themselves to those incentives and that the Commission has not taken a sufficiently disciplined approach to awarding rate incentives.

We appreciate your long-held concern in this area and your recent letter to FERC asking for an explanation of their use of their incentives, and we look forward to their response and to working with the Chairman on that issue. Thank you very much.

Mr. MARKEY. Thank you, Mr. Nipper, very much. And I appreciate the very diplomatic way in which you used the word "entity" in your testimony.

[The prepared statement of Mr. Nipper follows:]



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**Statement
Of the
AMERICAN PUBLIC POWER ASSOCIATION (APPA)
For the
HOUSE ENERGY AND COMMERCE COMMITTEE'S SUBCOMMITTEE ON
ENERGY AND ENVIRONMENT
Hearing on "The Future of the Grid: Proposals for Reforming National
Transmission Policy"
June 12, 2009**

The American Public Power Association (APPA) appreciates the opportunity to provide the following testimony for the Subcommittee on Energy and Environment's hearing on "The Future of the Grid: Proposals for Reforming National Transmission Policy." I am Joe Nipper, Senior Vice President of Government Relations for APPA.

APPA represents the interests of more than 2,000 publicly-owned electric utility systems across the country, serving approximately 45 million Americans. APPA member utilities include state public power agencies and municipal electric utilities that serve some of the nation's largest cities. However, the vast majority of these publicly-owned electric utilities serve small and medium-sized communities in 49 states, all but Hawaii. In fact, 70 percent of our member systems serve communities with populations of 10,000 people or less.

Overall, public power systems' primary purpose is to provide reliable, efficient service to their local customers at the lowest possible cost, consistent with good environmental stewardship. Like hospitals, public schools, police and fire departments, and publicly-owned water and waste-water utilities, public power systems are locally created governmental institutions that address a basic community need: they operate on a not-for-profit basis to provide an essential public service, reliably and efficiently, at a reasonable price.

The great majority of APPA's members are "transmission dependent," meaning that they must pay third parties for access to the bulk transmission system in order to acquire electricity from power plants for distribution to their retail customers. There are, however, a number of public power systems that own a significant amount of bulk transmission facilities – including the Los Angeles Department of Water and Power (LADWP) and the Nebraska Public Power District, among others.

Because the Energy Information Administration (EIA) stopped collecting transmission data from public power, cooperative and federal utilities in recent years, 2003 data are the latest comprehensive statistics available by utility. Based on the 2003 data, APPA estimates that approximately 110 public power utilities own approximately eight percent of the nation's transmission lines of 138 kilovolts (kV) or greater.

Because of EIA's decision to discontinue collecting data from the entire electric utility industry, the only up-to-date comprehensive information on existing transmission investment and ownership is NERC's data on total transmission miles of lines 230 kV or greater summarized by NERC regions and sub-regions. Other information sources only cover part of the industry (for example, the Federal Energy Regulatory Commission's (FERC) Form 1 transmission data covers only FERC-regulated "public utilities," primarily investor-owned utilities – **not** publicly-owned and operated electric utilities collectively known as public power systems) or are published in inconsistent formats (for example, RTO or company announcements of billions of dollars in planned investments over a several year period). Consistent, industry-wide data would be very useful in assessing actual progress in getting needed new transmission facilities built.

As will be evident from the testimony below, there are a number of issues encompassed by the broad topic of "transmission" that are significant enough to merit their own hearings – the problems with RTO-run centralized wholesale power markets, and the implementation issues that have plagued the federal backstop siting process for transmission enacted in the Energy Policy Act of 2005 (EPAct05), to name only two – and APPA would urge the committee to consider holding such hearings.

APPA was asked to discuss the primary components of transmission policy -- planning, siting and cost allocation – but we will also address related issues such as incentive rates, joint ownership, regional transmission organizations, and the concept of "green transmission." APPA's policy on planning, siting, cost allocation and joint ownership is guided by the attached resolution, adopted in February of this year, and underpins our comments below.

Transmission Investment Is Needed

It is widely recognized that our current transmission system is not sufficient to meet future needs and, in many regions, is highly constrained. The weaknesses of the transmission grid not only threaten reliability, they undermine the ability of all types of generation, including renewable generation, to be developed and brought to market. Well-planned, cost-effective transmission improvements can increase the overall

efficiency and reliability of the system. While improvements could increase the transmission rate paid by an end-user, the same end-user would benefit from increased reliability. Since generation and transmission are interdependent, the end-user could also benefit from lower-priced generation that would be made available with additional transmission access.

Historically, the challenges to improving the transmission grid have been obtaining rights-of way, environmental and land use concerns about where the transmission lines are sited, and the sheer complexity of state and local siting procedures. While these challenges still exist, one major positive development did occur in 2005 – the enactment of federal “back-stop” siting authority for transmission lines. As the Subcommittee knows, this authority was granted in Section 1221 of EPAct05, which added new Section 216 to the Federal Power Act (FPA). This section sets up a process under which: 1) the Department of Energy (DOE) designates certain corridors where transmission is highly constrained or congested as National Interest Electric Transmission Corridors (NIETCs); 2) FERC can grant siting and construction permits employing federal eminent domain authority for transmission facilities in these NIETCs if, after a certain period passes, state authorities have withheld approval of such proposed transmission facilities, a state does not have the authority to approve the siting of such facilities or to consider the interstate benefits, or the applicant is a transmitting utility that does not serve end-use customers in the state where the project is proposed. FERC must take certain issues into consideration when using its backstop siting authority. It must find that the proposed facilities will: significantly reduce transmission congestion in interstate commerce; protect or benefit consumers; be consistent with the public interest; and enhance energy independence. The proposed construction or modification must also be consistent with sound national energy policy.

DOE has completed its first proceeding designating NIETCs, and FERC has finalized its backstop transmission siting regulations. Both DOE and FERC, however, have been embroiled in litigation with states, environmental groups, and landowner groups seeking to overturn their determinations and regulations. Unfortunately, the United States Court of Appeals for the Fourth Circuit’s February 18, 2009 decision in *Piedmont Environmental Council v. FERC*, No. 07-1651, has substantially undermined FERC’s backstop siting authority. In that case, the Fourth Circuit held that the phrase “withheld approval” in FPA § 216(b)(1)(C)(i) does not encompass a state public utility commission’s (PUC) denial of a transmission siting application for facilities within an NIETC, but only refers to a state PUC’s failure to act. Hence, if a state PUC decides within one year simply to deny an application to construct transmission facilities in an NIETC, FERC has no authority to consider a backstop transmission siting application. As an intervenor on the side of FERC in this case, APPA believes that any federal transmission legislation should clarify congressional intent in EPAct05 by expressly providing FERC with the authority to consider backstop transmission siting applications when a state PUC denies an application. It is important to note that, as units of local and state government, public power utilities are not uniformly supportive of federal policy that diminishes state authority, and we have had our concerns about Congress’ and FERC’s attempts to expand that authority in other areas. However, the importance to the

electricity industry and the customers we serve of siting interstate transmission lines cannot be understated, and resulted in our support of the compromise crafted in EPAAct05.

APPA also believes that the NIETC process should be reconsidered given the controversy and litigation accompanying DOE's designation of the initial corridors. A variety of options could be considered, including: eliminating the corridor process altogether, and allowing FERC's backstop siting authority to be used, if needed, for any interstate transmission project; or retaining the corridor process, but expanding the criteria DOE considers in designating corridors, including consideration of where significant renewable resources are available but require transmission facilities to move the renewable power to market.

If new electric generation resources, especially renewable resources, are going to be brought to market to meet increasing demand and to address climate-related concerns, substantial new transmission facilities are going to be required. Both the public and Congress must understand the need to balance the concerns of states, landowners and other groups opposing specific transmission projects against the larger public good. As some in the industry have quipped, "if you are going to love renewables, you can't hate transmission."

Finally, there is a misconception, fostered by some in the industry, that higher voltage lines are always better. In actuality, the interconnected nature of the grid is such that a lower voltage line, if located strategically, could have a greater ability to relieve congestion and to enhance reliability than a higher voltage line, and could experience less local resistance to siting and cost less than a higher voltage line. Of course, there are situations where an "extra-high-voltage" line is preferable and necessary, but we want to make it clear that "bigger isn't always better" when it comes to the grid. This is one reason why regional transmission planning is so important; the impact of proposed new higher voltage facilities on the existing transmission network needs to be fully considered, so that the optimal mix of facilities can be determined.

The Markets Operated by Regional Transmission Organizations (RTOs) Have Not Significantly Aided in Infrastructure Investment

APPA and its members have long expressed their disappointment with the current "Day 2" regional transmission organizations (RTOs)/Independent System Operators (ISOs) that operate wholesale electricity markets in certain parts of the country.¹

¹ **PJM Interconnection** -- Parts of Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, plus Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia and the District of Columbia.

Midwest Independent System Operator -- Parts of Illinois, Indiana, Ohio, Missouri, South Dakota plus Iowa, Michigan, Minnesota, Missouri, North Dakota, and Wisconsin, and the Canadian Province of Manitoba.

New York Independent System Operator -- New York only.

APPA believes that FERC has effectively delegated a significant amount of its regulatory authority to these RTOs, with too little oversight or review of the actual impact of these organizations on retail electric consumers. While much of the attention on these markets has focused on high prices, other features of these markets adversely impact transmission expansion, as I discuss below.

While expressing strong concerns with the centralized RTO-run “Day 2” wholesale power supply markets, APPA recognizes that RTOs provide services that have substantial value. Such positive features include: administration of regional open access transmission tariffs (OATTs) on a non-discriminatory basis; elimination of pancaked transmission rates (allowing transactions to take place over a broader geographic area); and strengthening of regional transmission planning processes. But these substantial accomplishments have been overshadowed by the costs and problems created by the centralized day-ahead and real-time spot markets for energy, ancillary services, and capacity.

APPA is concerned that the operation of such highly complex markets has distracted the RTOs’ attention away from their core mission of ensuring adequate investment in the regional transmission system. RTOs have instead largely relied on the use of “price signals,” such as locational pricing, to achieve needed transmission investment. A central element of RTO-operated energy markets is “locational marginal pricing” (LMP), under which electricity prices set in the RTO’s spot markets vary by system location. When demand for use of specific transmission facilities exceeds those facilities’ physical capacity to move power (known as congestion), it is not possible for electricity to reach every part of the system at the lowest overall cost. In the constrained portion of the grid, prices rise when only higher cost generators are able to deliver electricity to the customer, even if generators offering lower prices exist elsewhere in the RTO’s footprint.

Advocates of LMP, including the RTOs and FERC itself, argue that the higher costs charged when congestion occurs on the transmission system provide “price signals” to market participants to fund the construction of new generation and transmission facilities to alleviate transmission congestion. FERC stated over 10 years ago that LMP would “send price signals that are likely to encourage efficient location of new generating resources, dispatch of new and existing generating resources, and *expansion of the transmission system.*”² (Emphasis added.)

ISO New England – Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

Southwest Power Pool – All or part of Arkansas, Oklahoma, Missouri, Kansas, Louisiana, Nebraska, New Mexico, and Texas. SPP has announced its intent to implement a Day Two market in 2012.

California Independent System Operator – California only.

The Electric Reliability Council of Texas (ERCOT) – Texas only, and it is not subject to FERC oversight because the Texas electric power grid does not interconnect with other states.

² In its original November 25, 1997 order accepting the PJM Interconnection’s (PJM) filing to restructure the PJM Pool to implement LMP, the Commission found: “We believe that the LMP model will promote efficient trading and be compatible with competitive market mechanisms. In this regard, we find that the LMP approach will reflect the opportunity costs of using congested paths, encourage efficient use of the transmission system, and facilitate the development of competitive electricity markets. By pricing the use of constrained transmission capacity on the basis of opportunity costs, the proposal will also send price

The RTOs themselves make the claim that the markets produce “accurate price signals that reflect the value of electricity across time and place, revealing both resource scarcity and transmission congestion.”³ There is no real disagreement that the use of LMPs “reveals” transmission congestion; rather, the dispute is over whether the use of LMP has actually spurred substantial new transmission facilities investments. When discussing actual transmission investments in their regions, RTOs attribute such investments to the success of their regional transmission planning processes⁴ – processes that are not necessarily connected to or reliant on the LMP-based markets.

Pricing differentials produced in hourly spot markets, given their short-term nature and substantial volatility over time, are not necessarily the best guide to making very long-lived capital investments in transmission and generation facilities. Other factors, including the regional mix of generation, estimated growth in demands, state renewable portfolio standards and utility resource plans, provide a better foundation for long-term investments.

Market participants in certain regions without Day 2 RTO markets have implemented innovative regional approaches to transmission system management and planning. An example of a promising approach is the ColumbiaGrid in the Northwestern United States. This is a not-for-profit membership corporation formed in 2006. ColumbiaGrid does not own transmission; its members and the parties to its agreements own and operate an extensive network of transmission facilities. ColumbiaGrid provides single-utility based transmission planning for the combined network of its participating utilities.⁵ In April 2007, FERC accepted ColumbiaGrid’s proposal to coordinate transmission planning and expansion in the Pacific Northwest.⁶ While different models may be appropriate for different regions, new initiatives such as ColumbiaGrid demonstrate that there are effective and consumer-friendly alternatives to the use of RTO-based market regimes to manage regional grids.

APPA has advocated that FERC place a moratorium on the establishment of any new Day 2 RTOs and on the establishment of new RTO-run markets for additional products and services within existing RTOs, unless accompanied by a demonstration of net benefits to consumers from those new markets. APPA also recommends that the current Day 2 RTOs be restructured to enhance the transmission and reliability focus of RTOs, and to put more emphasis on bilateral contracting, rather than centralized energy markets. We have proposed a plan, the Competitive

signals that are likely to encourage efficient location of new generating resources, dispatch of new and existing generating resources, and expansion of the transmission system.” *Pennsylvania-New Jersey-Maryland Interconnection*, 81 FERC ¶ 61,257 (1997) at p. 81, *on rehearing*, 92 FERC ¶ 61,282 (2000), *vacated and remanded on other grounds, Atlantic City Electric Co., et al. v. FERC*, 295 F.3d 1 (D.C.Cir. 2002), *on remand*, 101 FERC ¶ 61,138 (2002), *on rehearing*, 103 FERC ¶ 61,170 (2003), *on petitioners’ petition to enforce mandate, Atlantic City Electric Co., et al. v. FERC*, D.C.Cir. No. 97-1097 (May 20, 2003)

³ *Progress of Organized Wholesale Electricity Markets in North America*, ISO/RTO Council, October 16, 2007, p. 4, http://www.isorto.org/atf/cf/%7B5B4E85C6-7EAC40A08DC3003829518EBD%7D/IRC_State_of_the_Markets_Report_103007.pdf

⁴ ISO/RTO Council, October 16, 2007, section beginning on p. 5 titled “Regional System Planning Processes Are Producing Much-Needed Transmission Upgrades”

⁵ For more information on Columbia Grid, see www.columbiagrid.org

⁶ <http://www.ferc.gov/news/news-releases/2007/2007-1/04-03-07.asp#skipnavsub>

Market Plan (attached), that outlines one possible way achieve these reforms. APPA believes that electricity should be bought and sold primarily through bilateral contracts, with spot markets being used primarily for balancing and optimization functions. Deemphasizing the operation of complex centralized markets would allow RTOs to focus on their core transmission functions, including independent and collaborative regional transmission and generation interconnection facilities planning. Such planning should involve affected stakeholders, including state authorities, thus building the regional support required to obtain siting authority for needed new transmission facilities and upgrades.

Transmission Incentives Are Being Over-used as a Tool to Spur New Transmission Investment

New Section 219 of the Federal Power Act (FPA) was added by Section 1241 of EPAct05. Section 219(a) required FERC to establish by rule incentive-based rate treatments for the transmission of electric energy in interstate commerce by FERC-regulated “public utilities” (this is a defined term under the FPA and generally covers investor-owned utilities, **not** publicly owned and operated public power systems). The purpose of the incentives is to ensure reliability and reduce the cost of delivered power by reducing transmission congestion. Section 219(d), however, made clear that these incentive rate treatments were to be subject to the requirements of FPA Sections 205 and 206 that rates be just, reasonable, and not unduly discriminatory.

FERC in its Order Nos. 679 and 679-A⁷ fulfilled its statutory requirement to issue a rule regarding incentive-based rate treatments for public utility-owned transmission facilities. In so doing, however, it seemed to regard Section 219 as a statutory requirement to offer a smorgasbord of different transmission rate incentives to public utility TOs, including rate of return on equity (ROE) adders, recovery of construction work in progress (CWIP), hypothetical capital structures, accelerated depreciation, and recovery of abandoned project costs. Despite the strong concerns expressed by APPA and other consumer-side interests regarding the potential adverse cumulative impact on consumers of offering all of these incentives, the Commission brushed aside such considerations, saying that an applicant would be required to demonstrate that the total package of incentives it sought were tailored to address the demonstrable risks faced by the applicant in undertaking the project.

Unfortunately, it appears that public utility TOs have been helping themselves to the incentives smorgasbord, and that the Commission has not taken a sufficiently disciplined approach to awarding transmission rate incentives. Furthermore, while prior to this year, then-FERC Commissioner Jon Wellinghoff and Commissioner Sudeen Kelly issued a series of strong dissents to Commission orders granting transmission rate incentives for various transmission projects,⁸ a recent granting of an array of transmission rate

⁷ *Promoting Transmission Investment through Pricing Reform*, Order No. 679, 71 Fed. Reg. 43,294 (July 31, 2006), FERC Stats. and Regs. ¶ 31,222 (2006); Order No. 679-A, 72 Fed. Reg. 1152 (January 10, 2007), FERC Stats. and Regs. 31, 236 (2007); Order on Rehearing, 119 FERC ¶ 61,062 (2007).

⁸ See, for example, *Baltimore Gas and Electric Co.*, 121 FERC ¶ 61,167 (2007); *PPL Electric Utilities Corporation, et al.*, 123 FERC ¶ 61,068 (2008); *Bangor Hydro-Electric Co., et al.*, 122 FERC ¶ 61,265 (2008).

incentives to the proposed Green Power Express project in an order the Commission issued on April 10, 2009, in Docket No. ER09-681⁹ indicates that such concerns may still be merited, notwithstanding the change in leadership at the Commission. The Commission approved a menu of incentives for the Green Power Express project, including recovery of abandoned plant costs, deferred cost recovery through the creation of “regulatory assets,” inclusion of 100% of construction work in progress (CWIP) in rate base, use of formula rates, use of a hypothetical capital structure, and a total of 160 basis points (1.6%) in add-ons to its proposed rate of return on equity (resulting in an overall ROE of 12.38%). The Commission “pre-granted” these incentive rate treatments even though this high voltage transmission project was initially developed outside any Commission-approved regional transmission planning process. Orders such as this one lead APPA to be concerned that the granting of transmission rate incentives has become the “new normal” standard for transmission ratemaking at the Commission. APPA is not totally opposed to the use of transmission rate incentives. The federal government should consider the judicious use of incentives when they would spur construction of facilities that will substantially enhance reliability or provide broad access to more economical power supplies not currently available to the market. But regional assessments of needed new transmission facilities should consider both higher and lower voltage transmission requirements to ensure that reliable and economic power supplies in fact reach regional retail consumers. Moreover, the total package of transmission rate incentives granted should be no more than required to reduce the overall risk of the project to acceptable levels.

For these reasons, we appreciate the letter recently sent to FERC by Chairman Markey inquiring about its policy of granting of transmission rate incentives, and urge the Subcommittee to further investigate FERC’s ratemaking practices in this area.

Proposals to Mandate a Limitation on the Types of Electricity Generation to Be Transmitted over Transmission Lines Fail to Recognize the Integrated Nature of the Grid and the Urgent Necessity for Additional Transmission to Support All Types of Generation

Until intermittent renewable energy resources can be used reliably at anytime (as opposed to when the wind blows or the sun shines), base-load generating plants like those powered by large-scale hydropower, natural gas, nuclear energy, and coal must be used to produce electricity, to “firm up” intermittent renewable resources. As the CEO of the North American Electric Reliability Corporation (NERC) remarked last year, renewables “need a dance partner.”¹⁰ With that in mind, legislative initiatives that would mandate renewable usage or otherwise prescribe what generation sources can interconnect to a given bulk transmission line are not feasible from an operational or reliability standpoint. Furthermore, once these lines interconnect to the rest of the grid, such a requirement would be extremely hard to enforce. The laws of physics are such that electrons will flow where they will. Subsequent high voltage additions could well change transmission

⁹ *Green Power Express LP*, 127 FERC ¶ 61,031 (2009), *rehearing pending*.

¹⁰ *Electric Utility Week*, July 28, 2008 edition at 13 (reporting on Rick Sergel’s July 20, 2008 presentation to the collaborative of the National Association of Regulatory Utility Commissioners and FERC on Demand Response).

system configurations substantially, causing changed power flows -- some of which would be non-renewable -- that even the engineers did not anticipate in advance.

In addition, the variability of available generation resources and transmission assets from region to region dictates the need for regional, rather than national, solutions. Even the federal back-stop siting authority that APPA strongly supports as delineated above envisions extensive state and regional consideration before the federal government steps in using its backstop authority. Significant initiatives to access renewable energy have occurred and are continuing at the state and regional levels. APPA members have participated in and will continue to participate in these types of initiatives, as well as others initiated by public power entities.

APPA has strong concerns about congressional mandates to build transmission to support only certain types of generation resources when the focus should instead be on getting transmission built pursuant to regional transmission planning processes.

Regional Planning and Appropriate Regional Cost Allocation Strategies Are Essential to Getting More Transmission Built

As I have already discussed, transmission improvements should be made to provide the greatest benefit to the regional system as a whole. Because of the physical properties of electricity, an improvement at one point in the regional system can increase (or decrease) system efficiency in a different part of the region. Optimally, utilities should construct transmission facilities based on where the greatest benefits would occur, and these decisions should be made in consultation with other regional utilities. This is doubly true because of the substantial political and policy barriers to transmission siting. Successful regional planning has occurred throughout the country, but not at the pace or volume necessary to meet demand for electricity while maintaining high reliability.

Regional planning and support from a broad array of stakeholders is equally important to siting transmission to renewable facilities as it is to traditional power plants. The major difference between traditional power plants and some renewable generation facilities is that often renewable facilities, like wind projects, for example, must be sited remotely from population centers because that is where the resource is located. Hence, an added challenge to siting transmission lines to most renewable facilities is the length of the lines and the remoteness of the locations. Public power systems, like LADWP, have taken a lead role in promoting transmission projects to renewable facilities. Two LADWP transmission projects are in the planning phases that will enable southern California to access thousands of megawatts of new renewable generation capacity. One of these projects is a joint ownership arrangement as noted below:

1. **Barren Ridge Renewable Transmission Project:** LADWP is proposing the Barren Ridge Renewable Transmission Project to access renewable energy resources in the Tehachapi Mountain and Mojave Desert areas of Southern California. The project is in Kern and Los Angeles Counties, and is approximately 75 miles in length from Barren Ridge Switching Station to Rinaldi substation and 12 miles in

length from Castaic power plant to the proposed Haskell Switching Station. The project will consist of:

- Construction of a 230 kilovolt (kV) transmission line from the LADWP Barren Ridge Switching Station to Haskell Canyon on double-circuit structures (involving approximately 13 miles of National Forest Service (FS) lands and four miles of Bureau of Land Management (BLM) managed public lands);
 - Addition of a 230 kV circuit on the existing double-circuit structures from Haskell Canyon to the Castaic power plant (involving approximately four miles of FS lands and 300 feet of BLM managed public lands);
 - Upgrade the existing Owens Gorge-Rinaldi 230 kV transmission line with larger capacity conductors between the Barren Ridge Switching Station to Rinaldi Substation (involving approximately 13 miles of FS lands and four miles of BLM managed public lands);
 - Construction of a new electrical switching station at Haskell Canyon.
2. Green Path North Project: The Green Path North Project (GPNP) is a proposed new electrical transmission system being developed by interested parties: the City of Los Angeles Department of Water and Power (LADWP), Imperial Irrigation District (IID), and the Southern California Public Power Authority (SCPPA). The goal of GPNP is to connect to world-class geothermal renewable energy, as well as solar and wind power resources from the Salton Sea area of Imperial Valley. The proposed line is in the early planning stages and no decisions have been made regarding the route, or other specific elements of the project. LADWP is looking at a variety of alternative routes and technologies. Generally, the line would be designed to connect a new electric switching station, or substation, near Hesperia with a new substation to be built near Palm Springs.

APPA appreciates the transmission planning provisions included in the committee-passed version of the American Clean Energy and Security Act, as we believe that they will bolster, rather than duplicate or further complicate, the existing and extensive transmission planning processes occurring at the regional and sub-regional levels across the country.

The manner in which transmission facilities' costs are allocated among generators, transmission owners, transmission dependent utilities and other stakeholders is one of the most controversial topics related to transmission, and getting it wrong can have an extremely adverse impact on getting transmission built. APPA, along with numerous other electricity stakeholders, strongly supported the language included in Section 1242 of EPAct05 that underscores FERC's flexibility in determining the appropriate transmission pricing methodology, and does not impose the one-size-fits-all participant funding mandate that was considered during the lead-up to passage of the bill. While APPA does not always agree with the decisions made by FERC on transmission cost

allocation issues, we continue to believe that Congress had it right in leaving these decisions, with appropriate stakeholder input and administrative due process, to FERC to determine under Sections 205 and 206 of the Federal Power Act.

The issue of who pays for major new transmission facilities that provide regional benefits is a difficult one as such facilities can provide present and future system benefits that extend well beyond the specific entities for whom the facilities are constructed. Therefore, APPA urges FERC to provide greater guidance on cost allocation for major new transmission facilities that afford regional benefits. The costs of such facilities should be recovered through cost-based rates that are just and reasonable, and not unduly discriminatory, consistent with cost-of-service ratemaking principles. APPA does not support allocation of the costs of such facilities to regions, sub-regions or entities that will receive little or no benefit from the facilities, and therefore opposes a federal statutory requirement to allocate such costs on an interconnection-wide basis.

Joint Ownership Would Improve Transmission Investment

Encouraging proportional joint ownership of transmission facilities by those load-serving entities, including public power utilities, providing electric service in a given region is another way to get more transmission built. If the responsibility for building and owning the transmission grid is spread more broadly among those entities serving loads (*i.e.* demand) in a region, then joint transmission planning will be facilitated, simply because there are more participants at the planning table supporting the needed projects. If network service transmission customers of a dominant regional transmission provider are encouraged to own their load ratio share of the transmission system, transmission usage and ownership will be more closely aligned, and the frictions between transmission-dependent utilities and transmission owners can be reduced.

Public power utilities have participated in jointly-owned transmission arrangements for many years. One model of joint ownership that has worked for public power is investment in a transmission-only company. A second model is ownership in a shared transmission system. There are two transmission-only companies that are partially owned by public power utilities. These are the American Transmission Company in Wisconsin and the Vermont Electric Power Company. In shared or joint transmission systems, two or more load-serving utilities combine their transmission facilities into a single integrated system. Examples of public power participation in shared transmission systems are found in Indiana, Georgia, Minnesota, and the upper Midwest region. Unfortunately, not all investor-owned utilities see the benefits of jointly owning transmission facilities with other load-serving entities in their regions.

One impediment to expansion of joint transmission facilities ownership is the “private use” restriction imposed on tax-exempt financing that I discuss in more detail below. While public power systems can use other types of financing mechanisms when private use restrictions apply, this situation is not ideal from a parity standpoint with investor-owned utilities that have federal financial incentives at their disposal for building new transmission facilities.

Removing Limits on the Use of Tax-Exempt Financing Would Help Get More Public Power-Owned Transmission Built

Traditionally, our federalist system of government has respected the right of state and local governments to pursue activities that are in the public interest and the interests of the citizens they serve. Congress has promoted and protected the right of government to issue municipal bonds for “government owned and operated projects and activities.” Public power systems are just that – government-owned and -operated systems similar to other local infrastructure projects such as water systems, prisons, hospitals, and transportation lines.

While outside the scope of this committee’s jurisdiction, APPA wants to emphasize that Congress should continue to recognize a basic tenet of the federal system of government - the constitutional doctrine of reciprocal immunity. Under this doctrine, the federal government cannot tax the interest on obligations issued by state and local governments for public purposes and state and local governments cannot tax the interest on federal obligations.

In addition to continued access to tax-exempt bonds to finance electricity infrastructure, it is important that Congress provide adequate flexibility for public power utilities to partner with private entities in the financing and use of certain facilities, as is discussed above. Congress has recognized this necessary flexibility by allowing a certain amount of “private use” from output facilities financed with tax-exempt bonds. Prior to the 1986 Tax Reform Act, the limitation on private use was set at 25 percent for all governmental issuers. However, the 1986 legislation reduced the amount of private use to 10 percent. In addition to the reduction of the private use limitation from 25 percent, the federal tax code also provides that for certain output facilities – public power and public natural gas generation and transmission facilities – the private use limit is the lesser of 10 percent or \$15 million. Private use restrictions limiting the benefits available to private entities from publicly financed facilities are based on sound and appropriate public policy considerations. However, the restrictions should apply equally to all governmentally financed and operated facilities.

The special \$15 million private-use limitation that applies only to publicly owned electric and gas facilities is not supported by any public policy justification. It may force local governments that provide transmitting facilities to have their surplus capacity sit idle rather than having it sold to others in order to avoid the private use limitation. This provision should be repealed because it is discriminatory and it encourages practices that are neither environmentally nor economically sound. It also discourages an expansion of the joint ownership model that has been so successful in some regions, and could be used to improve the bulk transmission system in others.

Conclusion

The major impediments to getting new transmission built continue to be siting and cost allocation. I urge Congress to clarify and strengthen the federal back-stop siting authority included in EPAAct05. Because of the local and state opposition to siting

transmission lines, as many regional electricity stakeholders as possible should be included in their planning and ownership. Joint ownership of transmission facilities help address thorny transmission cost allocation issues. Congress should therefore encourage and support joint ownership of transmission and should eliminate financial barriers to such ownership like the private use restrictions for tax-exempt financing. Finally, in the rush to support construction of new transmission facilities, the need to maintain existing transmission facilities should not be forgotten. Existing transmission facilities should be upgraded and maintained based on the requirement to serve as opposed to the availability (or non-availability) of transmission rate incentives.

Resolution 09-01**Sponsor: APPA Transmission Working Group****Improving the Bulk Electric Transmission System**

1 Congressional efforts are expected in 2009 to address issues involving the bulk electric
2 transmission system. The last time major changes were made to the Federal Power Act
3 (FPA), the law governing the bulk transmission system, was in the Energy Policy Act of
4 2005 (EPA05), and the results have been mixed. Since 2005, there has been increasing
5 emphasis on getting transmission facilities built to interconnect remotely-located
6 renewable generation and deliver it to loads. Addressing this new challenge will layer
7 additional complications on an already complex policy situation.

8

9 The American Public Power Association (APPA) believes that in many regions of the
10 country, transmission siting constraints and cost allocation issues continue to pose
11 significant challenges to getting new transmission facilities built. There are also a
12 number of other areas that Congress can and should review that, if addressed, could
13 improve the ability of the bulk electric transmission system to meet current and future
14 needs. Including siting and cost allocation, these other areas are:

15

16 Siting: While the federal government has had limited back-stop transmission siting
17 authority since 2005, states still play a major role. Public opposition to the siting of new
18 lines is a significant hurdle to getting transmission built. In addition, a better definition
19 of the respective roles of the different siting authorities (the Federal Energy Regulatory

20 Commission (FERC) and state public service commissions (PSCs), for example), needs
21 to be established.

22

23 Cost Allocation: The issue of who pays for major new transmission facilities that provide
24 regional benefits is a difficult one as such facilities can provide present and future system
25 benefits that extend well beyond the specific entities for whom the facilities are
26 constructed.

27

28 Joint Ownership: Some of the problems involved in regional transmission planning and
29 cost allocation could be resolved if new or upgraded transmission facilities were jointly
30 owned by those utilities using those facilities to serve load. While there are parts of the
31 country in which joint ownership is common, it is the exception rather than the rule in
32 other regions. A number of APPA members that have been willing and able to finance
33 and own their share of needed new transmission have been turned down by investor-
34 owned utilities (IOUs) to form such partnerships while at the same these IOU
35 transmission owners have sought equity return incentives from regulators in order to
36 build.

37

38 Regional Transmission Planning: Because of the variety of stakeholders involved in the
39 electric utility industry, the “not in my backyard” syndrome, and the interconnected
40 nature of transmission systems, regional planning for major transmission lines is
41 essential. Despite the regional planning process, state PSCs significantly influence the
42 outcome as to which regional priority projects get implemented. The Federal Energy

43 Regulatory Commission (FERC) has attempted to use its legal authorities under the FPA
44 to promote regional transmission planning, but it is not yet clear whether its efforts are
45 bearing fruit.

46

47 Transmission for Renewable Energy Resources and other Needs: New transmission is
48 needed to provide access to remote renewable resources, and also for reliability and
49 adequacy of supply, including ensuring that long-term transmission rights are available to
50 load-serving entities for new resources and to ensure that adequate capacity continues to
51 be available for existing power supply resources. Renewable generation sites are often
52 located remotely from load centers, making new and longer transmission lines necessary
53 to access that generation. However, because the “wind doesn’t always blow and the sun
54 doesn’t always shine,” other types of generation that can be called upon to run 24 hours a
55 day and seven days a week must be available to “firm up” intermittent resources. This
56 need must be taken into account in planning a reliable bulk power system.

57

58 **NOW, THEREFORE, BE IT RESOLVED:** That APPA believes one of the most
59 significant impediments to getting new transmission facilities built continues to be siting
60 and that the EPAct05 federal backstop siting authorities should be improved, supported
61 and protected from repeal;

62

63 **BE IT FURTHER RESOLVED:** That as new electric generation resources, especially
64 renewable resources, are developed to meet increasing demand and to address climate
65 change, substantial new transmission facilities will be required. APPA therefore urges

66 the public, states and Congress to balance the concerns of specific states, landowners and
67 other groups opposing specific transmission projects against the larger public good of an
68 entire region;

69

70 **BE IT FURTHER RESOLVED:** That APPA supports inclusive, transparent planning
71 processes to meet the needs of all load-serving entities;

72

73 **BE IT FURTHER RESOLVED:** That one of the best ways to decrease financial
74 burdens and overcome opposition to significant new transmission facilities is to broaden
75 the transmission ownership base, by expanding ownership opportunities to entities with
76 different business models (including not-for-profit utilities). APPA therefore urges
77 Congress to encourage and support joint ownership of transmission by load-serving
78 utilities, including public power systems, and to eliminate financial barriers to public
79 power system ownership, such as the private use restrictions for tax-exempt financing;
80 and

81

82 **BE IT FURTHER RESOLVED:** That APPA urges FERC to provide greater guidance
83 on cost allocation for major new transmission facilities that afford regional benefits. The
84 costs of such facilities should be recovered through cost-based rates that are just and
85 reasonable, and not unduly discriminatory, consistent with cost-of-service ratemaking
86 principles. APPA does not support allocation of the costs of such facilities to regions,
87 sub-regions or entities that will receive little or no benefit from the facilities, and

88 therefore opposes a federal statutory requirement to allocate such costs on an
89 interconnection-wide basis.

Mr. MARKEY. Our next witness is Glenn English. He is the Chief Executive Officer of the National Rural Electric Cooperative Association. But more significantly, he served in the United States Congress for ten terms as one of our most distinguished members. And it is our honor to have you back before the subcommittee. Glenn, whenever you are ready please begin.

STATEMENT OF GLENN ENGLISH

Mr. ENGLISH. Thank you very much, Mr. Chairman. I appreciate that. I am not sure my board of directors would agree with the "more significantly," but I appreciate that and understand where you are coming from on that.

Mr. MARKEY. I think the one thing that the board and I can share in comment is that we will each reserve to ourselves which of us believes that you had a more important job.

Mr. ENGLISH. Well, I appreciate both of you thinking I have an important job.

Mr. MARKEY. The fact that you are so important to both of us.

Mr. ENGLISH. You are very kind Mr. Chairman. I appreciate that.

As I think the members of the committee know, electrical cooperatives are consumer-owned. We are in 47 States across the country and we serve, however, 7 percent of the population through about three-quarters of the land mass of the United States. So when we talk about transmission and when we talk about the fact that you are talking about generating renewable energy in this country, it is most likely going to come from areas that are served by electric cooperatives. So we have a big stake in that. We plan to have a big part of the future as we move forward in that general direction.

Mr. MARKEY. Can you just repeat that number again; 7 percent of the customers, but—

Mr. ENGLISH. We have got three-quarters of the land mass.

Mr. MARKEY. OK. Thank you.

Mr. ENGLISH. And it is all owned by those individual consumers throughout those 47 States, Mr. Chairman.

Also I think we can all agree that the signing of the American Clean Energy and Security Act of 2009 is going to bring about a profound change in the way that not only energy is generated in this country, but the way that we use energy in this country. It is going to change our lives.

And with that understanding, I hope that we can also recognize that we have got to be prepared for that kind of a dramatic change. The transmission system as it he exists today was certainly not designed for this kind of change. In fact, it wasn't designed for the 1992 Energy Act with the deregulation on the wholesale level, so we are still trying to adjust to that.

What we would suggest, Mr. Chairman, is that we need a sense of urgency here. And certainly we need transmission as a part of this act. It needs to be addressed in this act. And as a result of that, we think there are some very basic principles that need to be incorporated as you move forward with any kind of legislative language as it applies to this new transmission system, new transmission policy, that the country is going to be following.

As I think you know, Mr. Chairman, we have established now a National Renewable Cooperative so each cooperative in every one of those 47 States can participate in any renewable project in any part of that three-quarters of land mass of the United States. So a wind project in South Dakota, for instance, may be invested by people from Wisconsin, co-ops from Wisconsin, or they may be from Alabama or Georgia or wherever. They can own a piece of that.

And what we are looking for is a way in which we can generate that power through renewables in the most efficient way possible, no matter where it is located. We should be looking for the most cost-effective way in which we can do that. And just as we know that certain wind corridors exist that will provide us with a great amount of production of wind energy throughout the Great Plains, not every farm is the same, not every State is the same, that we also then have got to make sure that when we locate that kind of generation in those areas that we can move that power out of those regions. So we need an efficient and effective transmission system to do it.

But we also, I think, have to be very aware of the fact that—and it has been our experience that bottom-up planning works the best. So you need local regional planning, you need local folks putting this plan together to determine what is the best way to move forward on this. And so that is a principle I think we need to adhere to, a bottom-up rather than top-down as far as planning the transmission system of this country.

I would also suggest that under these conditions, and given the fact that we are going to have to move in a more efficient transmission system, we are going to have to move that transmission across State lines, that we may run into difficulties and encumbrances, we may run into delays that, quite frankly, the national best interest is not being served.

So I think we have got to, while we are having that local planning, we have got to also make sure that we don't have impediments put in the way that are going to prevent that local planning from being implemented. We have got to make sure that the overall national policy of moving across State lines is dealt with. And for that reason we do think that there is going to have to be some authority on the Federal level as far as siting is concerned. But, again, it should be focused on certain qualifiers as we look at that siting authority.

First of all, it should be facilities that are only identified on regional planning. It should be facilities that are interstate projects. In fact, the owners of those facilities should not be eligible for enhanced rates or any other financial incentives as far as where they are building that transmission. And the cost of facilities should be fairly and broadly allocated, along with the use of the facilities, should not be limited to just one kind of power.

It should not just be renewables only. And that is mainly because of the fact that the law of physics, as we have heard expressed here today, doesn't distinguish between electrons. They are all the same once they get into that transmission system.

And we would also suggest that the law which we are proposing this become a part of, would in fact itself dictate the direction that

we would be manufacturing or generating those particular electrons.

Also we would suggest there needs to be broad fair-cost allocation. We think that is a very important point. Obviously those of us who are electric cooperatives are very sensitive about that. We would have a few people. And all the costs being dumped on those few people would be unbearable, so it should be allocated on the basis of who is getting the benefit, who are the folks that are receiving the benefits of that energy that is being generated and produced.

Also, we would suggest, Mr. Chairman, that we move forward and recognize the fact that there are more benefits to building such a transmission system across this country in different areas of this country than just the movement of that power. The right-of-ways for any kind of transmission like that would become extremely valuable. And it would also be a way in which it would in fact. Become a new technologies right-of-way; ways in which you could move new technologies. And I know you are particularly interested in the smart grid. And obviously there are many uses that could be incorporated into any new transmission system along those lines. Fiber between the towers is obviously another way in which we can make good use of that transmission system.

So, Mr. Chairman, I would suggest to you that we need a new transmission system to go along with the legislation that is being proposed.

Mr. MARKEY. Thank you, Glenn, very much.

[The prepared statement of Mr. English follows.]

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U.S. House of Representatives

Committee on Energy and Commerce
Subcommittee on Energy and Environment

Hearing on the Electricity Grid and the National Transmission Policy

June 12, 2009

Testimony of the Honorable Glenn English
Chief Executive Officer
National Rural Electric Cooperative Association



Introduction

Thank you for inviting me to provide the views of electric cooperatives on transmission policy. NRECA is the not-for-profit national service organization representing approximately 930 not-for-profit, member-owned electric cooperatives (co-ops). The great majority of these cooperatives are distribution cooperatives, which provide retail service to over 42 million consumers in 47 states. Kilowatt-hour sales by electric cooperatives account for approximately 10 percent of total electricity sales in the United States. NRECA's members also include approximately 65 generation and transmission (G&T) cooperatives, which supply wholesale power to their distribution cooperative owner-members. Both distribution and G&T cooperatives were formed to provide reliable electric service to their owner-members at the lowest reasonable cost.

Cooperatives still average fewer than seven customers per mile of electric distribution line, the lowest density in the industry. Low population densities, together with the issues of traversing vast expanses of remote and often rugged topography, present unique economic and engineering challenges for electric cooperatives. Co-ops own only approximately six percent of the nation's interstate transmission lines, making them by and large transmission-dependent.

During the months leading to the Committee's passage of the landmark "American Clean Energy and Security Act of 2009" (ACES), NRECA has worked diligently with the Committee to arrive at legislation that treats all electricity consumers fairly, maintains affordable electric power for consumers and businesses, and is effective at reducing global greenhouse gas emissions. NRECA appreciates the Committee's commitment to discussing transmission issues in today's hearing and recognition that

transforming the nation's energy future depends in part on a comprehensive, effective national transmission policy.

The Nation Needs a Comprehensive Transmission Policy

NRECA supports efforts to expand the transmission grid to meet the needs of consumers, including delivery of renewable resources from remote locations to high-consumption urban load centers. As it happens, many of these renewable energy-rich remote locations are within the service area of NRECA's member electric cooperatives, many of whom have joined together in the National Renewables Cooperative Organization (NRCO) to facilitate the development of renewable generation.

In order to effectively utilize and increase the nation's current supply of economic renewable energy, Congress must provide a comprehensive, effective national transmission policy which addresses and provides solutions to four key issues: planning; siting; cost allocation and recovery; and integration of renewable resources.

Open, Inclusive Bottom-up Planning Benefits the Grid and Consumers

Experience has taught NRECA that bottom-up planning - with full participation by load serving entities (LSEs) - is far preferable to top-down planning. State and federal governments lack the staff, resources, and operational experience required to perform the highly technical tasks involved in transmission planning.

As it stands, ACES adopts an effective bottom-up transmission planning process that appropriately builds up from existing local and regional transmission planning efforts and that is focused on meeting consumer needs reliably and affordably, as well as meeting national environmental priorities. The legislation appropriately limits federal

involvement in the planning process to coordination and loose oversight to ensure that national priorities are addressed by the planning entities.

As the ACES transmission provisions evolve, the Committee should continue to embrace the guiding principles of openness and inclusiveness. The Committee should also resist any push to create a large federal bureaucracy to conduct planning and be wary of claims that bottom-up planning is unsuited to developing transmission that spans many regions across an interconnection. In fact, only through bottom-up planning can the industry ensure that new transmission infrastructure operates effectively, efficiently and reliably with the existing transmission grid. Because the electric grid in each interconnection is a single complex machine, an overlay system planned in isolation from the existing grid and the long-term plans of the stakeholders involved in existing transmission planning processes would impose enormous unnecessary costs on American consumers and undermine the reliability of the existing transmission system.

With Conditions, Federal Siting Authority is Appropriate

At this time, ACES is silent on the critical issue of siting. NRECA believes there are instances where the federal government should have siting authority and the ability to over-ride state decisions. NRECA has consistently supported the backstop siting authority granted to the Federal Energy Regulatory Commission (FERC) in the Energy Policy Act of 2005. This authority allowed FERC to site both conventional, as well as extra-high voltage (EHV) transmission facilities within “National Electric Interest Transmission Corridors” designated by the Department of Energy (DOE).

NRECA also supports federal authority to site EHV transmission facilities anywhere in the country provided (1) the facilities are identified in a regional planning

process as needed to ensure reliability or provide consumers power more economically; (2) the facilities are interstate projects (to provide due regard for the authority of state siting agencies); (3) the owners of the facilities are not eligible for enhanced rates of return or other financial incentives that raise the cost of the facilities for consumers; (4) the costs of the facilities are fairly and broadly allocated (5) use of the facilities is not limited to renewable resources.

NRECA proposes that the Committee add a new section on EHV siting that permits entities wishing to build EHV facilities meeting these conditions to petition FERC for a federal certificate of convenience and necessity and federal eminent domain authority.

With Conditions, Broad Cost Allocation and Recovery Benefits Consumers

NRECA recognizes that expanding the transmission grid to meet consumer needs, including the integration of renewable resources, may result in substantial costs. Experts believe that new transmission could cost, on average, approximately one million dollars per mile. NRECA member cooperatives primarily serve load in rural areas, the location of many renewable generation sources. Co-ops must not be made to bear more than a fair share of the cost of EHV transmission to deliver renewable energy to higher population load centers.

NRECA urges the Committee to develop cost allocation policies that are fair and take into consideration the benefits received from any new transmission facilities. NRECA proposes that the Committee add a new section on cost allocation that provides for broad sharing of the cost of new extra high voltage interstate transmission facilities that arise from the transmission planning process defined in the legislation, as well as the

cost of any lower voltage facility upgrades required for the reliable interconnection and operation of interstate extra high voltage (EHV) facilities. Broad cost allocation should be conditioned on: the facilities arising from the planning process; a right for any entity to own a share of the facilities; limits on rate “incentives” available to those who build the facilities; and, consideration for those consumers in regions that may not obtain any benefit from the investments.

Integrate Renewable Electricity without Extending Preferential Treatment

While federal legislation may call for the construction and financing of “renewable-only” lines, it is impossible, in an integrated grid, to segregate renewable electricity from conventional electricity. The Committee should resist adding any such provision to ACES. No element of the integrated transmission system is physically able to distinguish which form of generation produced the current. The only way to assure the delivery of purely “green” electrons would be to construct an isolated line directly from a renewable generation source to its customer.

As well, renewable resources should not have preferential access to transmission. Giving preference to renewable resources could disrupt planning processes, interfere with priority-of-service rules and undermine distribution utilities’ ability to obtain the long-term firm transmission rights needed to reliably deliver power to consumers. Such preferences would unnecessarily increase the cost of power for consumers, reduce the use of expensive transmission facilities, and undermine reliability on the grid. The Committee also should not add provisions establishing incentives for lines that give priority access to renewable resources.

In the ACES planning process, public policies favoring renewable resources, including renewable energy standards, climate legislation, and financial incentives for investments in renewable energy will all be taken into account, ensuring that adequate transmission infrastructure will be built to deliver renewable energy to load. Once that transmission has been built, it must be operated as part of the broader integrated system in order to ensure the reliable and efficient delivery of power to consumers.

Flexibility Needed for Complementary Policies on Rights-of-Way and Smart Grid

EHV transmission lines will bring consumers other benefits apart from much-needed new transmission capacity. Valuable rights-of-way assets will also be created along the lines. Consumers will benefit even more if those who build or operate the EHV system can deploy and facilitate additional new technologies along the rights-of-way. For instance, those who build or operate an EHV system should be able to run fiber on the new towers. Policies such as this can help speed the arrival of the “smart grid.”

NRECA understands the high levels of enthusiasm for new technologies like the smart grid. However, the Committee should resist implementing any transmission policy that requires new lines to incorporate smart grid technologies. As recognized in the American Recovery and Reinvestment Act of 2009, smart grid technology is still in the demonstration and development phase. Requiring its inclusion in major transmission lines will force premature technology and standards decisions and waste consumers’ money.

Conclusion

Again, thank you for the opportunity to testify at today’s hearing. Chairman Markey and Ranking Member Upton, I appreciate the opportunity to submit NRECA’s

views on transmission policy. NRECA looks forward to working with Members of the Subcommittee and the full Committee on transmission policy and other issues critical to maintaining the nation's supply of affordable, reliable electricity while pursuing environmental objectives. I look forward to answering the Committee's questions.

Mr. MARKEY. Our next witness is Reid Detchon. He is Executive Director of the Energy Future Coalition, a nonprofit organization that seeks to reform U.S. energy policy. We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF REID DETCHON

Mr. DETCHON. Mr. Chairman, thank you for inviting me to testify today on this important and timely topic. I find a great deal of agreement across the table, and particularly with Congressman English.

Last year, in partnership with the Center for American Progress and the Energy Foundation, the Energy Future Coalition undertook a series of listening sessions with a diverse group of stakeholders including Federal agencies, grid operators, transmission companies, utilities and environmental groups, and we found broad support for changes in Federal law to facilitate the transmission needed to bring stranded renewable resources to market.

Wind in the great plains; solar in the desert Southwest; and yes, offshore wind in the East.

Our vision statement for the national clean energy smart grid, which is attached to my full statement, was endorsed by some 55 organizations, including the AFL-CIO, the Council on Competitiveness and the Digital Energy Solutions Campaign, along with many renewable energy advocates and environmental groups, including the Sierra Club, who are not usually prone to supporting new transmission capacity.

What brought these environmental groups to the table and ultimately to agreement was the imperative of action to address with urgency the growing climate crisis. Time is running out for the world to avoid serious harm from climate change.

Mr. Chairman, you understand this challenge very well, and we owe a great debt of gratitude to you and Chairman Waxman for your leadership and acumen in advancing H.R. 2454, the American Clean Energy and Security Act. You have set the appropriate long-term target for emissions reductions, more than 80 percent by 2050.

The changes in our energy system needed to reach this goal are profound. We need to begin planning today to reach those reductions by 2050. And one thing is clear, we cannot deliver that much low-carbon energy without changes to the grid. Low carbon electricity will be expected to power not only our homes and businesses but also an increasing portion of our vehicle fleet.

The system we have today for planning, permitting and financing transmission lines was not designed to respond quickly to a challenge of this magnitude, moving many thousands of megawatts of renewable energy from remote areas to load centers.

Our discussions with those who must deliver on this promise, renewable energy developers and transmission companies, quickly focused on the obstacles of planning, siting, and cost allocation that we have heard repeatedly today. Of these, planning turned out to be the linchpin, as our group concluded the better planning could reduce the difficulty of siting and financing new lines.

We recommended enlarging the scale of the planning process to the two principal power grids in the United States, the Eastern

and Western Interconnections, for two reasons. First, long-distance transmission is needed to support development of some major renewable energy resources and necessarily will cross State and regional boundaries. For example, almost 300,000 megawatts, an enormous amount of wind, 300,000 megawatts of proposed wind projects, which is more than enough to meet 20 percent of our electricity needs, are waiting to connect to the grid because there is inadequate transmission capacity to carry the electricity they would produce.

Second, planning for transmission to support the renewable energy standards of State and Federal legislation must occur on a broad regional basis, just as the benefits of such investments will be shared on a broad regional basis. Your discussion of the impact of wind resources and ease is a good illustration of the need for planning across the entire interconnection.

An enhanced regional planning process of this kind should build on, not replace, the current engagement of stakeholders, including States, grid operators, utilities, consumer and environmental interests and landowner groups.

This will remain a State not a Federal process. Siting authority would rest with FERC, but the States collectively would have more power not less than they do now, because their plans would govern the exercise of that Federal authority. Only if planning process breaks down would FERC have the ability to resolve disputes and get transmission built to bring renewable energy to market.

We have been gratified to see many of our recommendations reflected in H.R. 2211, introduced by Congressman Inslee, a system of interconnection wire transmission planning supported by broadbased cost allocation and underpinned by Federal siting authority. We would be pleased to work with the committee on further legislative language if you think that would be helpful.

Mr. Chairman, you and your colleagues have taken an enormous step forward by reporting legislation that will begin the process of transforming our Nation's energy system to deal with the threat of global climate change. Expanding and modernizing our transmission grid is essential to that transformation. By addressing transmission directly and comprehensively, you can help our common goal of a clean-energy future become a reality and not be left stranded by regulatory impediments. Our economy, environment and national security deserve no less. Thank you very much.

[The prepared statement of Mr. Detchon follows:]

**Testimony of Reid Detchon
Executive Director, Energy Future Coalition**

**Subcommittee on Energy and the Environment
Committee on Energy and Commerce
June 12, 2009**

Summary

Mr. Chairman, thank you for inviting me to testify today on this important and timely topic. I am the Executive Director of the Energy Future Coalition, a non-partisan public policy group that works to bring together business, labor, and environmental groups around common objectives.

Last year, in partnership with the Center for American Progress and the Energy Foundation, we undertook a series of listening sessions with a diverse group of stakeholders, including federal agencies, grid operators, transmission companies, utilities, and environmental groups, and found broad support for changes in Federal law to facilitate the transmission needed to bring stranded renewable energy resources to market – wind in the Great Plains, solar in the desert Southwest, offshore wind in the East.

We concluded that dramatic transformation of the nation's electricity system will be needed to achieve the nation's renewable energy, energy efficiency and climate change goals, and that rethinking the way electricity transmission is planned, sited, and supported will be critical to this process.

Our vision statement for the National Clean Energy Smart Grid was endorsed by some 55 organizations, including the AFL-CIO, the Council on Competitiveness, and the Digital Energy Solutions Campaign, along with many renewable energy advocates and environmental groups who are not usually prone to supporting new transmission lines.

What brought these environmental groups to the table and ultimately to agreement was the imperative of action to address with urgency the growing climate crisis. Time is running out for the world to avoid serious harm from climate change. Mr. Chairman, you understand this challenge very well, and we owe a great debt of gratitude to you and Chairman Waxman for the leadership and acumen you have shown in advancing H.R. 2454, the American Clean Energy and Security Act. You have set the appropriate long-term target for emissions reductions – more than 80% by 2050.

The changes in our energy system needed to reach this goal are profound. We need to begin planning today to reach those reductions by 2050, and one thing is clear: We cannot deliver that much low-carbon energy without changes to the grid. Low-carbon electricity will be expected to power not only our homes and businesses, but also an increasing portion of our vehicle fleet.

The system we have today for planning, permitting, and financing transmission lines was not designed to respond quickly to a challenge of this magnitude – moving many

thousands of megawatts of renewable energy from remote areas to load centers. Our discussions with those who must deliver on that promise – renewable energy developers and transmission companies – quickly focused on three principal obstacles: planning, siting, and cost allocation. Of these, planning turned out to be the linchpin, as our group concluded that better planning could reduce the difficulty of siting and financing new lines.

We recommended enlarging the scale of the planning process to the two principal power grids in the United States – the Eastern and Western Interconnections – for two reasons:

- Long-distance transmission to support development of some major renewable energy resources will cross state and regional boundaries.
- Planning for transmission to support the renewable energy requirements contained in state and national legislation must occur on a broad regional basis, and the benefits of such investments will be shared on a broad regional basis.

The planning process should build upon, not replace, the current engagement of stakeholders (including States, grid operators (ISOs/RTOs), utilities, consumer and environmental interests, and landowner groups). Siting authority would rest with FERC, but the states collectively would have more power, not less, than they do now, because their plans would govern the exercise of that federal authority. Only if the planning process breaks down would FERC have the ability to resolve disputes and get transmission built to move renewable energy to market.

We have been gratified to see many of our recommendations reflected in H.R. 2211, introduced by Congressman Inslee – a system of interconnection-wide transmission planning, supported by broad-based cost allocation and underpinned by federal siting authority.

Mr. Chairman, you and your colleagues have taken an enormous step forward by reporting legislation that will begin the process of transforming our nation's energy system to deal with the threat of global climate change. Expanding and modernizing our transmission grid is essential to that transformation. By addressing transmission directly and comprehensively, you can help our common goal of a clean energy future become a reality and not be left stranded by regulatory impediments. Our economy, environment, and national security deserve no less.

Thank you very much.

**Testimony of Reid Detchon
Executive Director, Energy Future Coalition**

**“The Future of the Grid: Proposals for Reforming National Transmission Policy”
Subcommittee on Energy and the Environment
Committee on Energy and Commerce
U.S. House of Representatives
June 12, 2009**

Mr. Chairman, thank you for inviting me to testify today on this important and timely subject. I am the Executive Director of the Energy Future Coalition, a non-partisan public policy group, supported by foundations, that works to bring together business, labor, and environmental groups around common energy policy objectives.

The Energy Future Coalition was formed seven years ago, in the wake of the 9/11 attack, because of concerns that U.S. energy policy was not adequately addressing issues of national security and climate change. The condition of the nation’s electric power grid was an immediate topic of concern and the focus of one of our initial working groups. Since that time, we have advocated for advanced transmission and smart grid technologies, and have applauded action by this Committee and Congress as a whole on these issues in the Energy Policy Act of 2005, the Energy Independence and Security Act of 2007, and the American Recovery and Reinvestment Act of 2009.

A year ago, it became apparent that, thanks in part to the advocacy of T. Boone Pickens, a new groundswell of support was emerging for modernizing the nation’s transmission grid and expanding it to serve stranded large-scale renewable energy resources. Without such steps, it would be challenging to meet a meaningful and robust national renewable energy standard, such as the 25x’25 target that we have long supported.

Accordingly, the Energy Future Coalition, in partnership with the Center for American Progress and later the Energy Foundation, began a series of listening sessions with a diverse group of stakeholders, including federal agencies, grid operators, transmission companies, utilities, and environmental organizations, to determine where the areas of agreement and disagreement were. We found broad support for changes in Federal law to facilitate the development of transmission projects to bring stranded renewable energy resources to market – such as wind in the Great Plains, solar in the desert Southwest, and offshore wind in the East.

Out of this stakeholder dialogue, we crafted a vision statement for the National Clean Energy Smart Grid, which I will describe in some detail. We concluded that dramatic transformation of the nation’s electricity system will be needed to achieve the nation’s renewable energy, energy efficiency and climate change goals, and that rethinking the way electricity transmission is planned, sited, and supported will be critical to this process.

Our vision statement, attached in full, has been endorsed by some 55 organizations, a list of which is also attached. These include the AFL-CIO, the Council on Competitiveness, and the Digital Energy Solutions Campaign, along with renewable energy advocates, including the American Wind Energy Association, the Solar Energy Industries Association, and the Geothermal Energy Association, and environmental groups, including the National Wildlife Federation, Natural Resources Defense Council, Sierra Club, National Audubon Society, the Wilderness Society, and the Union of Concerned Scientists.

What brought these environmental groups to the table and ultimately to agreement was the imperative of action to address with urgency the growing global climate crisis. Time is running out for the world to avoid serious harm from climate change. Scientific reports show that the levels of carbon dioxide in the atmosphere are rising faster than anticipated and that the effects are already far-reaching – on temperature patterns, extreme weather events, glacial melting, and acidification of the oceans. Further delay in responding to these warnings increases the risk of a catastrophic and irreversible shift in the global climate system. In this race against time, we must rethink old ways of doing business – even when they have served us well in the past.

Mr. Chairman, you understand this challenge very well, and we owe a great debt of gratitude to you and Chairman Waxman for the leadership and acumen you have shown in advancing H.R. 2454, the American Clean Energy and Security Act of 2009. You have set the appropriate long-term target for greenhouse gas emissions reductions – more than 80% by 2050.

The changes in our energy system needed to reach this goal are profound. We need to begin planning today to reach those reductions by 2050, and one thing is clear: We cannot deliver that much low-carbon energy without changes to the grid. Low-carbon electricity will be expected to power not only our homes and businesses, but also an increasing portion of our vehicle fleet.

The system we have today for planning, permitting, and financing transmission lines was not designed to respond quickly to a challenge of this magnitude – moving many thousands of megawatts of renewable energy from remote areas to load centers. Our discussions with those who must deliver on that promise – renewable energy developers and transmission companies – identified inadequate transmission infrastructure as a key obstacle to project development and focused on three principal obstacles to rapidly deploying new transmission capacity for renewable energy: planning, siting, and cost allocation. Of these, planning turned out to be the linchpin, as our group concluded that better planning could reduce the difficulty of siting new lines and provide the basis for an equitable allocation of costs.

It is not obvious today what specific changes will be needed to support the coming transformation of the U.S. electricity system. What is obvious is that we need a planning system that identifies what is needed in the national interest, and a regulatory structure that allows those projects to get built in a timely way – whether that means long-distance

cross-country lines, offshore collector systems, or a combination of local renewables, demand reduction, and transmission.

Our group recommended enlarging the scale of the planning process to the two principal power grids in the United States – the Western Interconnection, which comprises the states of Washington, Oregon, California, Idaho, Nevada, Utah, Arizona, Colorado, Wyoming, and portions of Montana, South Dakota, New Mexico and Texas; and the Eastern Interconnection, which includes the remaining states in the Lower 48, excluding Texas. The reasons were straightforward:

- Long-distance transmission to support development of some major renewable energy resources will cross state and regional boundaries.
- Planning for transmission to support the renewable energy requirements contained in state and national legislation must occur on a broad regional basis, and the benefits of such investments will be shared on a broad regional basis.

This interconnection-wide planning process should build upon, not replace, the current engagement of stakeholders (including States, grid operators (ISOs/RTOs), utilities, consumer and environmental interests, and landowner groups) and be supported by federal agencies, with adequate funding support to do the necessary analysis.

A sound approach to transmission planning is not, by itself, sufficient. Without authority to address cost allocation and siting for projects that are determined to be needed in the transmission planning process, planning is only a paper exercise. Under our approach, the cost of new transmission for renewables would be broadly shared by ratepayers – just as the economic, environmental, and security benefits of renewable energy are widely shared. This mechanism would also lower the cost of capital to developers and thus the cost to consumers.

Under our approach, transmission projects identified in the plan would be subject to a single consolidated certification process administered by the Federal Energy Regulatory Commission. However, we would give a special role to States in proposing siting- and mitigation-related conditions to be imposed on such certificates.

The process should reflect clear policy goals (such as carbon reduction targets, renewable electricity and energy efficiency standards, environmental protection, and economic development), provide clear guidance on how to plan, pay for, and site facilities, and provide the financial, administrative and technical support needed to achieve those goals quickly.

Some observers have expressed concern that local renewable resources would be displaced by distant renewable resources made artificially cheaper by new transmission. This argument is easily addressed:

1. To meet the renewable energy and emissions reductions goals of H.R. 2454, we will need all the renewable energy we can get, at least cost. This is not an either-or choice.
2. Some of the stranded renewable resources may be local – for example, offshore wind in the East. They, too, will need transmission.
3. Transmission planning should take into account both Federal and state renewable energy requirements (including any state policies concerning use of local renewable energy resources) and should use delivered prices as the basis for planning decisions.

What are some of the benefits of a modernized grid?

- According to the Department of Energy, obtaining 20% of U.S. electricity from wind in 2030 would reduce electric sector CO₂ emissions by 25% – the equivalent of taking 140 million cars off the road – while creating 500,000 jobs and \$450 billion in economic impact.
- Almost 300,000 MW of proposed wind projects, more than enough to meet 20% of our electricity needs, are waiting to connect to the grid because there is inadequate transmission capacity to carry the electricity they would produce. California alone has over 18,000 MW of wind plants and almost 30,000 MW of solar plants waiting to connect to the grid.
- The Electric Power Research Institute estimates that making the grid smarter with modern control technology could reduce electricity consumption by 5-10%, carbon dioxide emissions by 13-25%, and the cost of power-related disturbances to business (estimated to be more than \$100 billion per year) by 87%.

These investments in transmission are not only essential to respond to climate change, they are also good investments in renewing America's economic growth and reducing the cost of the energy we need:

- Transmission planners in the Eastern Interconnection asked what it would take to get 20% of their power from wind, and found that an \$80 billion investment in new high-voltage transmission lines would reduce electricity costs by \$41 billion per year by 2024 – an annualized benefit-to-cost ratio of more than three to one.
- An analysis of the benefits and costs of building transmission in Texas by the grid operator, ERCOT, found that an investment of \$4.9 billion in transmission for wind power would save \$1.7 billion per year in fuel costs, repaying the initial investment in 2.9 years.
- The U.S. transmission grid requires significant investment to replace aging infrastructure and to address capacity issues under any scenario. The choice is not whether to invest or not invest in transmission, but whether we should invest

purposefully with a clear national strategy or maintain a piecemeal system that lacks vision.

- Even a substantial transmission expansion requires a relatively modest investment compared to the scale of the power system, the scale of annual sales, and most importantly the economic, reliability, and environmental benefits that it would deliver.

Our discussions with stakeholders concluded that a national Clean Energy Smart Grid is an economic, environmental, and national security imperative – vital to renewing America’s economic growth, strengthening national security, and addressing the threat of global climate change. Investments are needed in both transmission and in smart grid technologies to make the system more reliable, resilient, and secure, to accommodate renewable power and enable more energy efficiency by individuals and businesses.

The 55 stakeholders endorsing the common vision for a Clean Energy Smart Grid agreed on the following principal policy needs:

1. Interconnection-wide planning for transmission upgrades needed to efficiently and reliably move renewable power from remote areas to population centers, using a participatory and analytically robust process designed to engage all interested parties early and avoid later conflicts, minimize environmental impacts, and overcome the geographic and procedural limitations of current planning approaches.
2. A simple mechanism to pay for transmission investments and smart grid transmission upgrades identified as needed in the interconnection-wide plans, which would minimize individual economic impacts by allocating costs broadly among ratepayers.
3. Consolidated certification authority to expedite transmission projects identified as needed in the interconnection-wide plans to serve urgently needed renewable energy resources, with a special role for States in developing local impact mitigation requirements.
4. New policies to make electric grid security a priority, and to coordinate and pay for investments that will rapidly reduce the grid’s vulnerability to cyber and physical attacks and natural disasters.
5. Strong financial incentives for rapid deployment of smart grid distribution and metering technologies.
6. Education and training to create the workforce we will need to build, manage and maintain the National Clean Energy Smart Grid.

Recognizing the complex nature of the electric grid, its importance to the future of our economy, and its impact on our environment, these new policies and authorities should be developed and implemented in accordance with several key principles:

- Interconnection-wide grid planning should not duplicate or supplant already ongoing planning efforts at the utility and regional level, but rather should build on them.
- The interconnection-wide planning process should take into account: opportunities for improved end-use energy efficiency, customer demand response, clean distributed generation, and energy storage; opportunities to improve the efficiency of the grid; and opportunities to diversify and transform the Nation's power supply resources.
- New transmission plans should dramatically enhance our capacity to meet steep greenhouse gas emission reduction goals by targeting new clean renewable energy resources, and policy should seek to ensure that new transmission lines emerging from this process would not support development of new high-emitting generation.

Similar conclusions were also reflected in a white paper entitled "Wired for Progress," prepared by Bracken Hendricks for our partner organization in this project, the Center for American Progress, and available on the Internet at:
http://www.americanprogress.org/issues/2009/04/wired_for_progress2.0.html.

We have been gratified to see many of these recommendations reflected in H.R. 2211, introduced by Congressman Inslee – notably, a system of interconnection-wide transmission planning under strict timetables, supported by broad-based cost allocation and underpinned by consolidated federal siting authority. The bill gives preference to renewable energy by limiting access to new transmission lines built with these special authorities to energy generators whose greenhouse gas emissions are no greater than that of a single-cycle natural gas-fired combustion turbine – on the basis that gas-fired generation will be needed on the lines to address the variability of intermittent renewable resources.

Legislation should also address the security of the grid, especially against cybersecurity threats, the importance of which was recognized in Title XIII of EISA. It is vitally important that the electricity grid be capable of real-time management and instant correction, in order to minimize the risk of disruption and the time for recovery, if a terrorist attack on the system does occur. This will require the ability to monitor the status of the grid on a real-time basis, to instantly recognize and diagnose any unusual events on the system, and to respond intelligently with adaptive changes in power flows, generating unit operations, and load management.

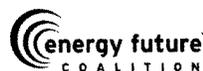
The Defense Science Board's 2008 report on energy, "More Fight – Less Fuel," found that "critical national security and homeland defense missions are at an unacceptably high

risk of extended outage from failure of the grid.” The report warns: “Informed and capable saboteurs can inflict damage that would take down significant portions of the grid and other critical infrastructure for long periods and make restoration, even work-around measures, difficult, costly, time consuming and marginally effective. ... Armed with the right knowledge, a small number of people could shut down electricity over significant areas for an extended period of time, including power to critical DoD missions. The grid is not designed to withstand a coordinated multi-pronged or wide-area attack.”

This situation represents an unacceptable threat to our national security. Addressing it by modernizing the grid with smarter technology to serve a digital economy would pay immediate dividends. In the last Congress, the House Energy and Commerce Committee prepared draft legislation to address the cybersecurity threat in particular; that is a good place to start.

Mr. Chairman, you and your colleagues have taken an enormous step forward by reporting H.R. 2454, legislation that will begin the process of transforming our nation’s energy system to deal with the threat of global climate change and support a substantial expansion of renewable energy use. Expanding and modernizing our transmission grid is essential to that transformation. By addressing transmission directly and comprehensively, you can help ensure that our common goal of a clean energy future becomes a reality and is not left stranded by regulatory impediments. Our economy, environment, and national security deserve no less.

Thank you very much.



The National Clean Energy Smart Grid: An Economic, Environmental, and National Security Imperative

Expanding and upgrading our electric power transmission and distribution system are vital to renewing America's economic growth, strengthening national security, and addressing the threat of global climate change. Two critical investments are needed: (1) Efficient, secure and reliable interstate transmission networks – incorporating renewable collection lines and extra-high voltage (EHV) backbone facilities – which will enable massive domestic renewable energy resources currently stranded in our country's remote areas to be developed and delivered to population centers; and (2) "Smart Grid" technologies to make the transmission and distribution grid more reliable, resilient, and secure, and to accommodate renewable power and enable more energy efficiency by consumers and businesses.

At a time of serious economic distress and mounting pressure to address the widespread environmental, economic, and geopolitical consequences of our excessive reliance on fossil fuels, the case for a National Clean Energy Smart Grid has never been stronger. We recommend that Congress and the President move rapidly to adopt the following policies:

- Interconnection-wide planning for transmission networks to move renewable power from remote areas to population centers while ensuring the efficiency and reliability of the transmission grid, using a participatory and analytically robust process designed to engage all interested parties early and avoid later conflicts, minimize environmental impacts, and overcome the geographic and procedural limitations of current planning approaches.
- A simple mechanism to pay for transmission investments and smart grid transmission upgrades identified in the interconnection-wide plans, which would minimize individual economic impacts by allocating costs broadly among ratepayers.
- Consolidated certification and siting authority to expedite transmission projects identified in the interconnection-wide plans to serve urgently-needed renewable energy resources while ensuring the efficiency and reliability of the transmission grid.
- New policies to make electric grid security a priority, and to coordinate and pay for investments that will rapidly reduce the grid's vulnerability to cyber and physical attacks and natural disasters.
- Provide strong financial incentives for rapid deployment of smart grid distribution and metering technologies.
- Invest in education and training to create the workforce we will need to build, manage and maintain the National Clean Energy Smart Grid.

Recognizing the complex nature of the electric grid, its importance to the future of our economy, and its impact on our environment, these new policies and authorities should be developed and implemented in accordance with several key principles:

- Interconnection-wide grid planning should not duplicate or supplant already ongoing planning efforts at the utility and regional level, but rather should build on them.
- The interconnection-wide planning process should take into account: opportunities for improved end-use energy efficiency, customer demand response, clean distributed generation, and energy storage; opportunities to improve the efficiency of the grid; and opportunities to diversify and transform the Nation's power supply resources.
- New transmission plans should dramatically enhance our capacity to meet steep greenhouse gas emission reduction goals by targeting new clean renewable energy resources and limiting interconnection for new high-emitting generation (while still ensuring reliability).
- Use of federal project certification and siting procedures to expedite construction of new grid facilities identified in interconnection-wide transmission plans is critical to reliable and efficient delivery of remote renewable energy to load centers, with a special role for state and local agencies on siting considerations to minimize adverse impacts.



The National Clean Energy Smart Grid: An Economic, Environmental, and National Security Imperative

Expanding and upgrading our electric power transmission and distribution system are vital to renewing America's economic growth, strengthening national security, and addressing the threat of global climate change. Specifically, we must make two critical investments in our electric grid: (1) Efficient, secure and reliable interstate transmission networks – incorporating renewable collection lines and extra-high voltage (EHV) backbone facilities – which will enable massive domestic renewable energy resources currently stranded in our country's remote areas to be developed and delivered to population centers; and (2) "Smart Grid" technologies to make the transmission and distribution grid more reliable, resilient, and secure, and to accommodate renewable power and enable more energy efficiency by consumers and businesses. These critical grid investments are complements to – not substitutes for – investments in building energy efficiency, customer demand response, clean distributed generation, and energy storage. At a time of serious economic distress and mounting pressure to address the widespread environmental, economic, and geopolitical consequences of our excessive reliance on fossil fuels, the case for a National Clean Energy Smart Grid has never been stronger.

States and regions across the country have already adopted policies aimed at reducing the carbon footprint of electric power, increasing clean and renewable electric generation, and improving end use energy efficiency. With consideration of new and ambitious national policies on climate change, renewable energy, and energy efficiency to follow, these investments could position the country to secure the benefits of any such initiatives in a timely, efficient and cost effective manner. None of these policies can achieve their goals without rapid and transformative investments in transmission and smart grid resources on a national scale.

Even setting aside the national imperatives for clean energy and climate change, a National Clean Energy Smart Grid will provide huge economic and national security benefits. EHV transmission lines have the potential to dramatically cut line losses and improve the efficiency of the system. Smart grid technologies allow more efficient and dynamic management of electric flows – reducing waste, improving reliability and better accommodating renewable power, distributed generation, demand response, and a broad range of customer-based resources like smart appliances and plug-in hybrid vehicles. Smart meters and two-way communication lay the foundation for a quantum leap in automated demand management and electric grid control that could save consumers and businesses billions of dollars per year on their electricity bills. Digital smart grid technologies would dramatically reduce the grid's vulnerability to cyber attacks and other disruptions, and enhance grid operations.



Why Don't We Already Have a National Clean Energy Smart Grid?

Standing in the way of 21st century energy solutions is a 20th century electric grid – and the increasingly outdated patchwork of policies and institutions that govern it:

- Our existing framework for planning, developing and financing transmission infrastructure is too geographically fragmented, near-term focused, and procedurally cumbersome to support the development of a reliable integrated transmission grid capable of delivering remote renewable resources to load. Participatory and transparent planning at a national scale is essential to addressing national policy goals and maximizing broad societal value.
- Our historic policies for allocating the cost of transmission investments make it exceedingly difficult to identify what projects should be advanced and who should pay for the cost of such investments.
- Most state level processes, by their nature, do not have the scope to recognize regional or inter-regional transmission needs.
- Siting multi-state transmission facilities is a long and contentious process, often involving numerous state and local regulators and Federal lands agencies, each with the power to block an entire project.
- The current process misses opportunities to cooperatively analyze and identify corridors for transmission that bypass sensitive areas.
- Proven and cost-effective smart grid technologies have not achieved significant market penetration due to lack of funding for Congressionally authorized smart grid pilot and demonstration projects, insufficient federal deployment incentives, and state regulatory environments that often provide poor incentives for utilities and customers to invest in smart grid, demand response, and energy efficiency technologies.
- New policies are needed to make grid security a priority, and to coordinate and provide incentives for investments that will rapidly reduce the grid's vulnerability to cyber and physical attacks and natural disasters.

What Policy Changes are Needed to Foster a National Clean Energy Smart Grid?

National policy makers have a unique opportunity to clear the way for large-scale private sector investments in National Clean Energy Smart Grid infrastructure by updating transmission planning, siting, and cost allocation policies, creating incentives for accelerated deployment of a broad range of efficient smart grid technologies, and setting clear priorities for improving grid security. Just as it would have been nearly impossible to build the interstate highway system without federal leadership 50 years ago, creating an interstate electric grid that can support our National vision of a cleaner and more efficient electricity system will likewise require forward-looking leadership by Congress and the President.



Develop New National Scale Transmission Plans to Bring Clean and Renewable Power to Population Centers

Coherent plans for extra-high-voltage transmission, covering the two large multi-state regions of the eastern and western interconnections, are needed to determine how best to connect vast renewable energy resources in remote areas with population centers and integrate them into the existing EHV grid. Specifically, the planning process should:

- Identify essential new transmission resources, including backbone EHV projects, and renewable collection lines needed to support dramatic increases in the penetration of renewable electricity generation while ensuring the efficiency, security, and reliability of the interstate transmission networks.
- Incorporate rigorous and transparent analysis of a comprehensive set of considerations and alternatives, so as to optimize the economic, technical and environmental performance of the grid.
- Involve a broad array of stakeholders, including states, generation developers, transmission owners and developers, environmental interests, consumer interests, and labor, to address concerns up front and avoid snags later in the process.
- Recognize the importance of interstate and inter-regional planning of the transmission system to maximize the integration of renewable resources while ensuring the reliability and efficiency of the grid.
- Take into account analysis and planning already undertaken by states, Regional Transmission Organizations (RTOs), utilities, and others (notably some larger regional initiatives now in progress).
- Ensure that new transmission plans are environmentally responsible by avoiding development on sensitive lands or important natural resources.
- Utilize transmission planning principles to advance national policies on renewable energy, energy efficiency, and climate change.
- Consider innovative technology options, such as use of superconductors.
- Produce new transmission plans that dramatically enhance our capacity to meet steep greenhouse gas emission reduction targets by enabling new renewable energy resources and supporting electrification of the transportation sector (e.g., plug-in hybrid vehicles).

Interconnection-wide transmission planning would be done under Federal authority and according to guidelines and timeframes established by the Federal Energy Regulatory Commission (FERC). States within each interconnection would be invited to collaboratively develop the plans in consultation with RTOs, utilities, and others, and under the oversight of the FERC. Such planning efforts would have access to interconnection-wide ratepayer resources to conduct a participatory, transparent, and analytically robust planning process on an aggressive timeline consistent with meeting urgent national economic, environmental and national security goals.



Make a National Investment in the National Clean Energy Smart Grid

Just as local electric ratepayers currently fund local electricity infrastructure investments, broad based groups of ratepayers should cover the costs of national grid investments which provide broad-based national benefits. This will ensure all beneficiaries of the National Clean Energy Smart Grid support the cost of its development. Broad-based ratepayer support would be limited to: funding a participatory, transparent, and analytically robust planning process; recovering costs of new investments determined to be needed in the comprehensive transmission plans; and incentives and support for broad-based deployment of smart grid technologies on the transmission system. Cost allocation policies should be as simple as possible (e.g., allocating designated costs proportionately to all load in the interconnection) to avoid lengthy regulatory proceedings and provide greater predictability for developers and ratepayers. Clear cost allocation policies will provide transmission developers and investors with the certainty they need to move projects forward.

Consolidate Siting for the National Clean Energy Smart Grid

The patchwork of siting authorities would be consolidated and streamlined for National Clean Energy Smart Grid projects identified in the planning process. Best management practices would be required for siting and construction in order to balance infrastructure requirements with the need to avoid unique and environmentally sensitive lands, optimize use of existing corridors, minimize impacts on private property, and provide wildlife and habitat protection. Project certification and siting for those projects identified in the planning process would:

- Be decided in a single consolidated proceeding conducted by FERC.
- Build on the findings concerning need and appropriate corridors emerging from the planning process.
- Enable state agencies with local expertise to offer input and conditions relating to detailed “on the ground” routing choices and mitigation requirements. Incorporate such state conditions except where FERC finds that a condition conflicts with the National interest in developing the projects identified in the plan.

To properly implement this new siting process, federal, state and local government agencies will require substantially increased resources for data collection, mapping, pro-actively categorizing land for use or avoidance (with stakeholder input), and fast track permitting for pre-approved lands.

Ensure Grid Additions Serve our Environmental Purposes

The planning and siting processes described above are intended to ensure that new transmission projects will advance the policy goal of enabling much greater reliance on renewable energy resources, while minimizing the environmental disruptions caused by building and maintaining new grid infrastructure. Applying an appropriate greenhouse gas emissions standard to new generators connecting to transmission facilities built with the benefit of these special cost recovery and siting provisions would further assure that clean energy infrastructure development



is the result of these policies. Emissions-related restrictions on generators interconnecting with new grid facilities must not interfere with the operational reliability of the grid, and must accommodate the need for dispatchable resources to balance variable renewable resources.

Create New National Incentives for Investments in Smart Grid Technologies

While Congress recognized the importance and promise of smart grid technologies in Title XIII of the Energy Independence and Security Act of 2007, federal incentives are needed to accelerate investments in a broad suite of smart grid technologies that allow for dynamic management of electric flows and better integration of diverse energy resources, allow two-way flow of electricity and information, digitize our electrical system controls, and improve management of everything from power plants to home and office energy use. In order to accelerate the deployment of smart grid technologies, Congress should:

- Increase the authorization for the Smart Grid Regional Demonstration Initiative and the Smart Grid Investment Matching Grant Program, and fully fund these programs.
- Fully fund the development of an interoperability framework for smart grid devices and systems, and establish national policies that ensure state governments adopt these standards.
- Provide a 30% investment tax credit for smart grid technologies.
- Reduce the tax depreciation life for smart meters and smart distribution grid technologies to five years.
- Fund a basic national network of time synchronous measurement/monitoring devices to provide the foundation for monitoring grid performance at a national level, and drive optimal smart grid investments and transmission siting for the future.
- Provide homeowners and small businesses with rebates and tax incentives that encourage the purchase of smart grid enabled energy management systems.

Make Grid Security a Priority

Computers controlling the electric power grid are vulnerable to hostile or malicious intrusions. The cybersecurity of the U.S. electric system is a key issue for national security, and enhanced protection is an urgent matter for the civilian economy and for Defense Department (DOD) installations dependent on the grid for electric power. Hardening the grid to terrorist attack, and using technology to better monitor and manage electricity flows and make a more adaptive and self-healing energy grid, should be top priorities, justifying additional grid investments. The security priority should be codified in new national policies, including appropriate federal regulations, incentives and cost recovery policies.

Supporters of the Clean Energy Smart Grid Vision

As of June 8, 2009

Vision Statement Planning Group and Endorsers

American Wind Energy Association
 Center for American Progress
 Energy Future Coalition
 Iberdrola Renewables
 ITC Holdings
 Mesa Power
 National Wildlife Federation
 Natural Resources Defense Council
 Project for Sustainable FERC Energy Policy
 Sierra Club
 Solar Energy Industries Association

Other Endorsers

AFL-CIO	Mainstream Renewable Power
American Council on Renewable Energy (ACORE)	MMA Renewable Ventures
Ausra	National Audubon Society
Babcock & Brown	National Hydropower Association
BrightSource Energy	Northwest Energy Coalition
California Wind Energy Association	Oerlikon Solar
Center for Rural Affairs	OptiSolar
Citizens Utility Board of Wisconsin	Pace Energy and Climate Center
Climate Solutions	Puget Sound Energy
Council on Competitiveness	Sharp Solar
Digital Energy Solutions Campaign	Solar Nation
E.ON Climate & Renewables North America Inc.	Solutia, Inc.
enXco	Sun Action Solar, LLC
Geothermal Energy Association	Sundt Construction, Inc.
GlobalSmartEnergy	The Solar Alliance
GreenVolts, Inc.	The Stella Group
Horizon Wind Energy	Union of Concerned Scientists
Infinia	Vestas
Intel Corporation	Vote Solar Initiative
InterWest Energy Alliance	Western Grid Group
Invenergy	Wilderness Society
Large-scale Solar Association	Wind on the Wires
	Windustry

For more information, please check our website:

<http://www.energyfuturecoalition.org/What-Were-Doing/-Smart-Grid>

Mr. MARKEY. Thank you so much for your testimony.

Our next witness is Joseph Welch, chairman and president and chief executive officer of ITC Holdings. That is the Nation's first independent transmission company.

We welcome you sir, please begin.

STATEMENT OF JOSEPH WELCH

Mr. WELCH. Thank you and good afternoon.

Mr. MARKEY. Could you move the microphone in a little closer and turn it on?

Mr. WELCH. Thank you and good afternoon, Chairman Markey, and members of the subcommittee.

As the Chairman said, my name is Joseph Welch. I am chairman, CEO and president of ITC holdings, the Nation's first and only independent transmission company in the United States.

Being independent means that we are not affiliated with any market participant. We have no ownership or have any dealings in energy transactions. Our job is to facilitate the market, to facilitate the interconnection of any sources of generation that are put before us, and to make sure that we connect the loads and reliably do so.

We own and operate about 15,000 miles of high-voltage lines in Iowa, Minnesota, Illinois, Missouri, Michigan and our developing regional transmission projects in Kansas and Oklahoma. As we have worked through these various States, each time we come to the point where we need to build transmission, for whatever reason, we have come up against a set of obstacles, each one different in every State.

Probably that is as it as should be, but when we get to the outcome of where we want to go in this country, this is going to become a major impediment for us to move forward as a country who dearly and necessarily needs to seek energy independence.

I brought with me today a report from the Council on Competitiveness and Energy Sustainability which I believe is a good framework, and I will leave it with you all for you to read. I think it offers a lot of information which is very consistent with the very principles and items that you are considering here.

But going to the fundamental principles that we need, and at the top of the list, and I want to go to right to the top of the list, we need a policy for energy in this country. We have talked about all the things underneath, and we debate about whether it is right or wrong, but the fundamental issue is that we need a policy and something to plan to.

With that policy in place, the rest of the items become a lot clearer and a lot more succinct. And a lot of the debates that we hear from all of us who really are closer than further apart really start to come together. For instance, with a policy, then the planners, and when I say the planners, and we have talked about this in the item I support and my company supports, is that we need independent planning authority. We need to take the policy and get the policy implemented in a very clear and succinct way.

Secondly, if you have the policy, then the cost allocation can be dictated by the policy itself, meaning that from that policy, we now know where we want to go. We now know who are the benefactors

and what those benefactor issues are. And so that policy sits at the top and we need that.

And last but not least, when we get down to the very bones, I always tell people being in the transmission business it is a great business until I do one of two things, and the first item is build new transmission lines. The minute we start to build them, it becomes a nightmare. And the process a hard, and it is long. And what we need is true Federal backstop siding authority. That is not meant to cut the States out of the process. The States should be involved in the process. They are the most knowledgeable about local issues. But at the end of the day, we have to get a regional transmission grid built.

As you have heard here, there are literally thousands upon thousands of megawatts of renewable energy that this country needs to deploy, and we need to deploy it now. And if we start now, we are years and years away from our goal line. So please let's have this conclusion and bring it to an end, and I thank you very much for my opportunity to speak here today.

[The prepared statement of Mr. Welch follows:]



BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON ENERGY AND THE ENVIRONMENT

TESTIMONY OF JOSEPH L. WELCH
CHAIRMAN, PRESIDENT AND CEO OF ITC HOLDINGS CORP.

The Future Of The Grid: Proposals For Reforming National Transmission Policy

June 12, 2009

Good morning Chairman Markey, Ranking Member Upton, and Members of the Subcommittee. My name is Joseph L. Welch, and I am chairman, president and CEO of ITC Holdings Corp. ("ITC"), the nation's first – and only – independent electric transmission company. I am honored by the opportunity to speak before you this morning to offer my perspective on legislation regarding transmission regulation.

Role of Independence

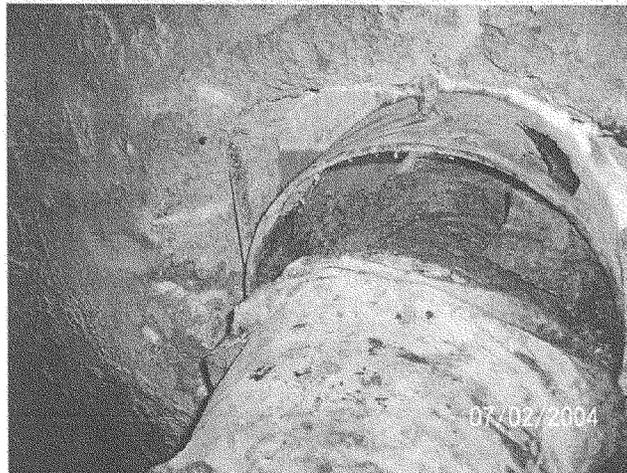
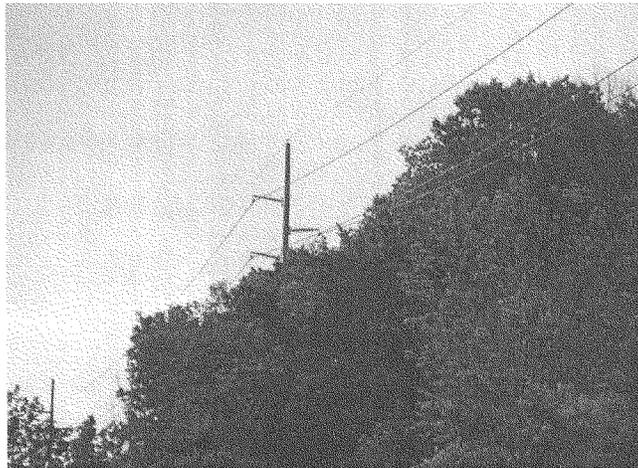
Before I begin I would like to provide some background as to the significance of the independent transmission company business model as I believe it is relevant to today's discussion. As an independent transmission company, ITC is singularly focused on ownership, operation, maintenance and construction of transmission facilities as its single line of business. ITC has never invested in generation. All of ITC's revenue is directed back to transmission rather than in any market activities. ITC is now the eighth largest transmission-owning company in the U.S., in terms of load served.

"Independence" means that there is de minimis or truly passive ownership by market participants and that there is minimal operating dependence on, and ongoing relationships or affiliation with, any market participant. To safeguard ITC's independence, the company and its employees do not hold any market participant investments.

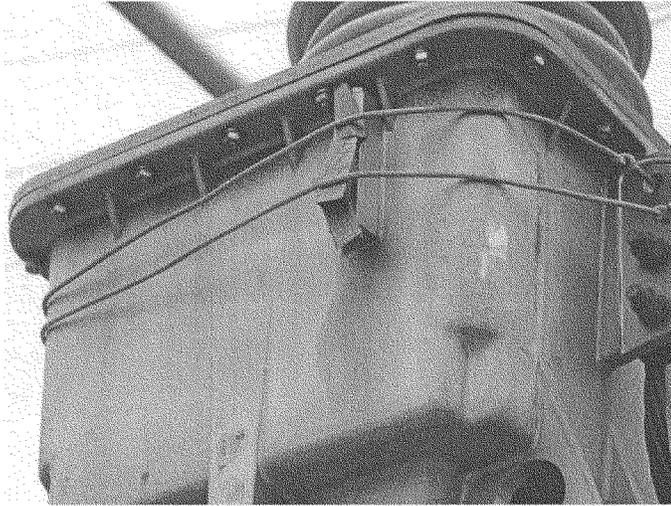
Through its independence, ITC has been able to maintain its focus on improving transmission: making it more reliable, more efficient, lowering the cost and ensuring non-discriminatory access. To that end, in its five or so years in existence, ITC has invested approximately \$1.2 billion in transmission system upgrades. In essence, the independent model aligns the interests of the company and its shareholders with those of electricity consumers.

This is markedly different than a vertically integrated utility that owns generation and distribution in addition to transmission. In fact, this vertically integrated utility business model is at the very center for why there has been a 30-year trend of underinvestment in the grid. Examples of underinvestment can be found in the following pictures of transmission equipment and assets that are typical of examples of underinvestment in the transmission grid.

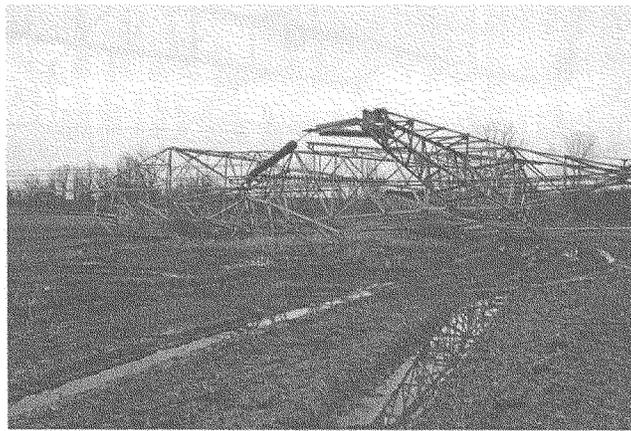
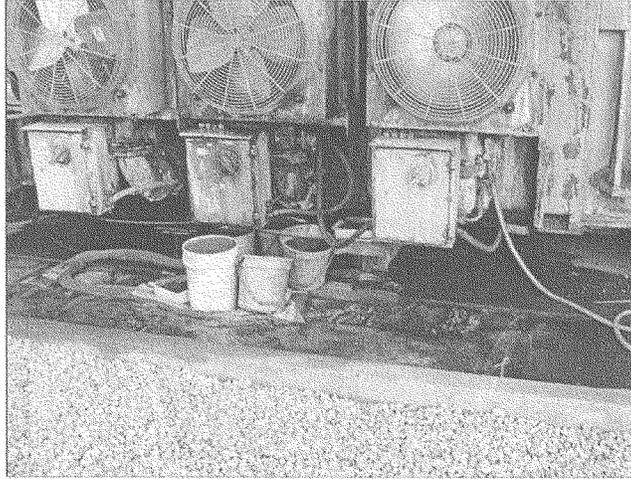
Graphics 1 – 6: Typical Examples of Transmission System Underinvestment



Graphics 1 – 6: Typical Examples of Transmission System Underinvestment (cont.)



Graphics 1 – 6: Typical Examples of Transmission System Underinvestment (cont.)



That is not to say that lack of independence will always result in underinvestment. It is more accurate to say that the lack of independence of a vertically integrated utility may result in transmission being used as leverage to manipulate markets. As previously alluded to, this can be done by minimizing transmission system investment in order to maintain levels of congestion needed to protect high-cost generation.

Conversely, a vertically integrated utility with significant generation resources may want to build transmission as a means to bring its generation to market while perhaps not providing the same opportunity to other generators. It is for these very same reasons that

the Federal Energy Regulatory Commission (“FERC”) decided to form independent transmission companies to promote the non-discriminatory transmission access.

This independence is of particular importance as it relates to decision-making for field and control room operations, generator interconnections and both local and regional planning. A non-independent transmission owner faces competing interests. As such, independence from the energy market influence is critical in consideration to the electric transmission grid; however, the concept of independence should not be limited to the electric transmission companies. Equally essential is the independence of any regional planning organization with supporting governance and decision-making processes established in a manner that do not provide undue opportunity to thwart transmission development by stakeholders.

Overview of Legislative Issues

Today’s subcommittee hearing gets at the very heart of the policy issues facing the electric utility industry, and specifically to the challenges impeding the construction of regional transmission. Right now, the outdated laws that govern our electricity grid are standing in the way of America’s energy goals. If Congress is serious about making renewable resources available, reducing our dependence on foreign oil, meeting renewable energy standards, and addressing climate change and other environmental challenges, they need to start by modernizing the rules that govern the grid. In other words, due to the historical underinvestment in the nation’s grid, transmission, which should be the enabler, today is the roadblock to renewable resources.

Many of the issues set forth in today’s hearing are the symptoms of one fundamental problem: the lack of a national energy policy to guide planning. This national energy policy should clearly define national energy priorities such as the establishment of a federal renewable portfolio standard and federal regulation of greenhouse gas emissions. Having this information codified would greatly enhance our ability to plan for the regional transmission network that this country needs.

A critical component to grid modernization is rational cost allocation. The market participant-driven processes used to develop cost allocation rules have resulted on methodologies that are a barrier to transmission expansion. The Federal Energy Regulatory Commission should be directed to undertaking a rulemaking process to determine the appropriate region or subregion for allocating costs for large, multi-state transmission projects based on the benefits realized by individual entities within the region. ITC believes that the costs for a regional transmission project should be harmonized across a broad geography in recognition of the multitude of benefits as well as increased system optionality provided by having a robust and highly-interconnected transmission grid.

The other two needed reforms are improved planning and siting rules, which will be discussed in greater detail.

Regional Planning under Today's Regulatory Constructs

ITC's operating companies (Michigan Electric Transmission Company, LLC, ITC Midwest LLC and International Transmission Company ("ITCTransmission") are members of the Midwest Independent Transmission System Operator, Inc. ("Midwest ISO"), and in ITC's estimation the Midwest ISO has established a first rate technical staff and done a noble job working within the confines of the existing system that was thrust upon them to develop consensus around the Midwest ISO Transmission Expansion Plans. However, the Midwest ISO and its peers face significant challenges in their ability to develop truly regional transmission improvement plans under the current regulatory stakeholder framework. It is the endeavor for a transparent planning process that has ultimately led to the undue influence of market participants driven by voluntary membership and the subsequent derailment of true regional transmission plans.

The problems that prevent the development of truly regional transmission plans, however, can be solved by Congress or by the FERC. You may ask: how can it be said that there is no independent regional transmission planning given all the attention that the FERC has devoted to the creation and governance of Regional Transmission Organizations ("RTO") and Independent System Operators ("ISO")?

Voluntary Membership

The largest challenge that independent planning faces under the current model is that membership in RTOs, and thus participation in regional planning and cost sharing, is voluntary. If the regional/public interest and the interest of an individual member diverge, market participant stakeholders may endorse solutions that are not optimal for the region but rather satisfy the stakeholders' individual interests. If the RTO attempts to impose a solution that is in the regional interest, the stakeholder may threaten to leave the RTO potentially using membership fees as leverage. Additionally, individual states have the potential to leverage the voluntary membership to pressure its local utilities to leave the RTO if the state does not support a planned project and its associated cost. Another form of leverage that has been used by state regulators is the threat of not passing through the cost of a particular transmission project or the RTO membership fee.

Conflicts of Energy Markets and Transmission Planning

Additionally, another challenge faced by RTOs is related to their respective governance structures. Owning responsibility for both planning transmission and running the energy market may present competing interests.

This conflict of interest often results in RTOs relying on re-dispatch solutions instead of re-enforcing the transmission system. Indeed, one inadvertent byproduct of LMP markets is that the ability to purchase rights to "buy through" congestion effectively prevents building the transmission that would avoid the congestion in the first place. The consequences of doing business this way are evident. To begin, transmission and distribution losses nearly doubled between 1970 and 2001 (from 5 percent to 9.5 percent) due to heavier utilization and congestion. This is exacerbated by the belief that modeling can be done to such a level that all of the benefits of transmission additions can be accurately calculated.

Influence of Market Participants

The challenges inherent with the existing governance structure and stakeholder driven planning processes have one notable result – little to no true regional transmission has been planned or built. As alluded to earlier in the discussion of the voluntary nature of RTOs, the existing governance structures and stakeholder processes compromise the RTOs’ ability to independently plan the transmission system due to the influence of market participants. The regulatory framework permitting voluntary membership and the ability of market participants to play critical roles in RTO decision-making, RTOs cannot plan the transmission system from a truly independent perspective.

The stakeholder processes to which RTOs are bound, and to which the Commission continues to defer in Order No. 890, for example, can never be independent because the “stakeholders,” by definition are operating on behalf of their own needs and can “vote with their feet”. In fact, several Midwest ISO TOs have submitted letters of potential withdrawal ostensibly as a means to keep pressure on the RTO to protect their interests. A truly independent planning entity, under which membership would be mandatory, would be able to effectively identify needed regional transmission infrastructure without the threat of incumbent transmission owners threatening to withdraw from the organization.

The existing stakeholder processes result in transmission planning and related cost allocation protocols focused on the least common denominator rather than on developing a robust regional plan with a well-developed regional cost allocation mechanism. As a result, transmission plans have a narrow scope rather than having a regional focus, and the corresponding cost allocation protocols are complex and generally do not promote development of regional transmission.

In addition to categorizing transmission investments in a somewhat arbitrary fashion (e.g., economic, reliability, transmission service request, generator interconnection, etc., each transmission upgrade is viewed as having winners and losers. Even stakeholders from the same sectors have varying interests. For example, generators in high cost areas have an incentive to frustrate transmission plans as a means to maintain existing constraints whereas generators in low cost areas want to remove existing constraints as a means to broaden their access to markets. Conversely, load regions with high costs want to remove the constraints in order to access more economic sources of energy while load regions with low costs are incented to maintain existing constraints as a means to insulate their area from market prices.

In these cases, some individual state regulators have had a parochial view and attempted to exert influence over the planning process as a means to optimize conditions for their individual state. This presents a case of competing interests because national policy issues such as climate change and a focus on environmental stewardship, energy security, regional reliability and market competitiveness cannot be addressed state-by-state.

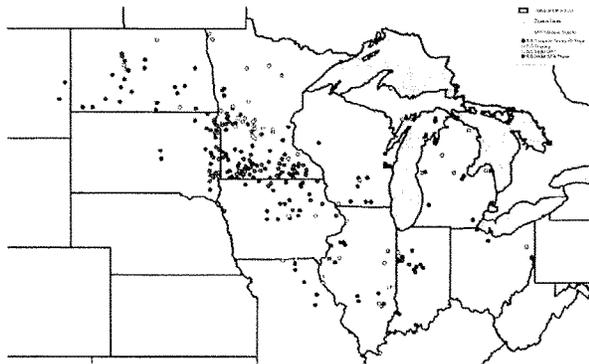
Another example in which individual interests come directly in conflict with regional planning is as it relates to how costs are allocated for a particular project. As I mentioned

earlier in my testimony, regional planning goes hand in hand with cost allocation. The lack of a cost allocation mechanism can drive sub-optimal regional planning.

Generator Interconnection Queue

As the demand for the integration of wind and other renewable resources grows, the ability to effectively develop regional plans to interconnect these resources where the best source of wind is located is stifled. As shown in the map below, the current planning processes within the Midwest ISO do not support the level of demand for the integration of the wind resources in the Upper Midwest, a region with some of the most efficient wind resources in the United States. According to some estimates, a new generator would potentially have to wait up to 46 years in the generation interconnection queue before its project can be studied by the Midwest ISO. Clearly, reactive planning under the current configuration will not work as a means to build regional transmission.¹

Graphic 7: Midwest ISO Generator Interconnection Queue²



In sum the fundamental issues facing transmission planning under the current RTO configuration are directly related to the voluntary nature of RTO membership and the stakeholder-driven planning process that promotes an undue influence of market participants in the development of regional plans.

Moving Forward on Regional Planning

¹ The Midwest ISO has attempted to address this problem with its proposed Forward Looking Interconnection Project (FLIP) process. The link to the related Midwest ISO whitepaper can be found at http://www.midwestmarket.org/publish/Document/20b78d_11ef44fc9c0_-7bfb0a48324a/Midwest%20ISO%20Draft%20FLIP%20Whitepaper%20v2%20020609%20clean.pdf?action=download&_property=Attachment.

² http://www.midwestmarket.org/publish/Document/735a38_109988af51a_-7f5e0a48324a/MISO_Queue_Map.pdf?action=download&_property=Attachment

ITC's experience as an independent transmission company has given us unique insight into the value of independence in transmission operations and planning. This independence should not be limited to the transmission owning entity but should be extended to regional planning by the RTOs. ITC is not calling for general mandatory RTO membership; we are calling for mandatory planning. Where RTOs exist, RTO membership should be mandatory for purposes of transmission planning and cost allocation. Where RTOs do not exist, FERC's existing authority under Order 890 should be strengthened. As such, all transmission owners would then be required to pay an assessment to cover the costs of planning that would be the same regardless of which RTO the utility participates in, or if they are outside an RTO, thereby mitigating the risk of utilities voting with their feet.

In addition to ensuring mandatory and independent planning of the grid, Congress must also act to provide for broader planning regions. RTOs and other regional planning entities should continue to exercise their planning functions and roll those plans up to FERC. FERC should then have responsibility for coordinating and integrated regional plans within each interconnection to assure development of a single, cohesive plan for the nation's high priority transmission system. A broader planning region will facilitate the kinds of multi-state projects that are needed to deliver renewable resources to load centers and to establish a strong backbone system for the grid. However, provisions should be made in order that this new planning process serves to facilitate, not delay, projects that are already in process. Only then when we have a robust and flexible regional electric transmission grid that does not provide discriminatory access to any one party will the U.S. be able to benefit from the vast energy resources available and achieve energy independence.

Federal Siting Authority

Currently, transmission rates are regulated on a federal level by the FERC, but siting is regulated by individual states that naturally are focused on benefits to their respective state, not the region or the nation. For this reason, the building of significant regional transmission lines is virtually impossible. In many cases, transmission projects are delayed for years through cumbersome state siting processes. The FERC should be given a more significant role in transmission siting so that infrastructure development that is needed for the good of the entire country can go forward expeditiously.

This can be accomplished in one of two ways. FERC can assume responsibility for issues a Certification of Need for projects that come through the new, robust planning process. Under this approach, states would continue to have authority to route project as they are best informed on zoning, land use and other local concerns. Such an approach also avoids potential delays in creating the federal staff needed to undertake routing decisions across the country. There would need to be a reasonable federal back stop in place should a state fail to assume its responsibility to route the project.

The same result could be accomplished through expanding and strengthening FERC's existing backstop siting authority. Therefore, regional transmission projects approved by

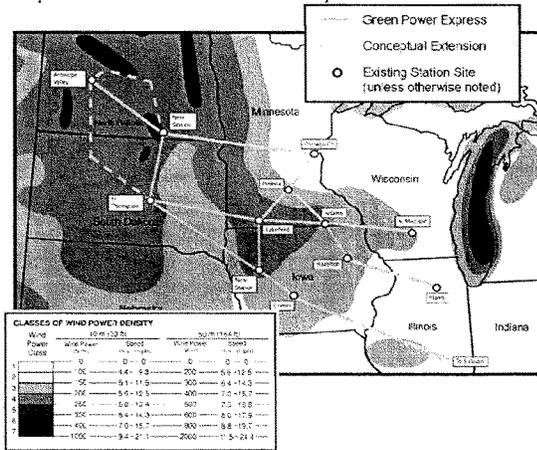
the regional planning entity would continue to subject to state review, but if a state fails to act on, or rejects, a project within a year, the federal government can step in. This option has the potential of being more complex, could result in delays in siting, and will no doubt be subject to litigation.

ITC’s Green Power Express as Forcing Function on Policy Issues

A more tangible example of the value of independent regional planning can be found in ITC’s recently announced “Green Power Express”. While this project is still in its very early stages, the question of DC has already arisen. The Green Power Express is a broad network of 765 kV transmission facilities that has been designed to efficiently move vast amounts of renewable energy in wind-rich areas to major Midwest load centers. The Green Power Express is consistent with the vision outlined by President Obama in his national energy agenda. President Obama specifically mentioned his desire “to get wind power from North Dakota to population centers, like Chicago.”³

The Green Power Express will allow this goal to be met as well as set the stage for the integration of off-shore wind in the Great Lakes in the future. By having a robust extra high voltage (“EHV”) grid that serves as a transmission backbone in various regions, the geographically diverse wind becomes readily accessible and more economic thereby mitigating two of the major challenges with this naturally intermittent resource.

Graphic 8: ITC’s Green Power Express



We recently received the results of an independent study conducted by the Brattle Group, entitled “Transmission Super Highway: Benefits of Extra High Voltage Transmission Overlays,” which demonstrates that wind power becomes economically competitive

³ Transcript from appearance on Rachael Maddow Show of October 28, 2008: <http://www.msnbc.msn.com/id/27464980/>.

when it is generated from areas with the highest capacity levels. The study uses ITC's proposed Green Power Express development project as a model for examining the potential benefits of adding a high voltage overlay to our existing transmission system. It concludes that between 2010 and 2030, the Green Power Express alone could deliver up to approximately 12,000 MW of new wind energy, avoiding significant amount of carbon emissions.

The Green Power Express was designed to be an EHV backbone that would gather the wind from the disparate wind abundant areas and transport it eastward. In other words the Green Power Express as an alternating current ("AC") solution provides many on- and off-ramps to gather and distribute the wind power across a broad region. With DC there would be less flexibility for how wind would be integrated into the network. Additionally, DC presents some reliability concerns if used as the initial phase of an EHV backbone. Because it does not allow for easy redirection of power in the case of a line outage, at this point a DC solution would make the system reliability vulnerable.

In effect, through the development of the Green Power Express, ITC filled a gap that exists within the industry due the existing RTO governance that does not currently give the RTOs direction to do regional planning without undue influence of market participants. The absence of market participant influence and ITC's independence from undue market participant influence was critical in developing the right solution that improves electric reliability, effectively and efficiently integrates high capacity renewable energy to promote a cleaner environment, protects national security, and the environment. However, it should be recognized that while ITC was able to develop this plan free from undue market participant influence, the project will likely face the same challenges related to pressure from stakeholders related to individual interests as ITC shepherds the Green Power Express through an Order No. 890 compliant process.

As envisioned the Green Power Express will touch seven states, or seven distinct siting jurisdictions. Under the current siting system, this could mean that the project could get held up in court siting procedures for an indefinite amount of time. In order to realize the vast economic, environmental and reliability benefits of the Green Power Express in a timely manner, it is imperative that there is some form of backstop siting authority to compel the project forward.

It is widely recognized that the Upper Midwest is a region that has great potential to develop wind energy facilities. There are other regions that have similar opportunities such as wind in the Great Plains region or solar energy in the Southwest. Generation from these potential resources is intermittent due to the variable nature of wind and solar "fuel". As such, regional diversity will provide significant benefits as a means to dampen the impact of this resource intermittency. Consequently, independent regional transmission planning is essential as a means to identify and capitalize on the vast amount of renewable resources economically while protecting the overall reliability of the grid.

Conclusion

Our country is trying to tackle 21st Century energy challenges with an electric transmission grid largely built more than 30 years ago while operating under an outdated regulatory system. To put it simply, we will not meet our goals if we don't change how we do business. We urgently need to reform how we plan, locate and pay for new transmission. This requires moving beyond the parochial interests and fractured regulatory structure that has led to decades of underinvestment in our electricity grid. Congress and federal regulators have the ability to modernize the rules to allow private companies such as ITC and others to make much-needed investments. These are solutions that don't require an infusion of taxpayer dollars but will create new jobs and help address our looming energy and environmental crises.

There are a variety of stakeholders that support these types of reform. Attached to my testimony are examples of support for these policy changes needed to promote a robust and modern grid.

A modern grid will solve our environmental and renewable energy challenges *and* improve reliability and associated costs to the economy. Now is the time for Congress to encourage private investment in America's energy infrastructure.

Again, thank you, Chairman Markey, Ranking Member Upton and Members of the Subcommittee. I sincerely appreciate the focus that you are providing to the critical issue of the impediments to building regional transmission as the facilitator of an energy policy vision for a brighter, cleaner tomorrow.

EXHIBIT 1

Letter from Detroit Regional Chamber to Senator Stabenow

MAY-05-2009 02:25 AM

P. 01



May 4, 2009

The Honorable Debbie Stabenow Facsimile # 202-228-0325
 United States Senate
 133 Hart Senate Office Building
 Washington, DC 20510

Dear Senator Stabenow:

I am writing on behalf of the Detroit Regional Chamber regarding legislation authored by Senator Jeff Bingaman pending before the Senate Energy and Natural Resources Committee aimed at expediting and improving regulation of electric transmission development. I encourage you, as a member of this committee, to support the interests of Michigan by voting in support of reforms to promote needed transmission expansion.

Removing impediments to transmission development means long-term job creation in Michigan and across the country. Transmission projects stimulate job creation in construction, engineering, and a variety of equipment sectors. Further, transmission facilities need to be maintained thereby supporting the existing work force we already have in the state. These are good paying jobs for trained workers.

Electric transmission is important to economic development in the state because it provides access to lower-cost power to fuel manufacturing facilities and run other businesses, keeping Michigan competitive, while reducing transmission congestion costs that increase consumer bills. Finally, a strong transmission system also helps ensure reliable delivery of electricity to business and customers, which is essential to prevent the significant economic losses that even a short interruption in power delivery can cause.

ITC Holdings Corp employs over 900 permanent and contract employees in the state of Michigan, many of who work and live in the greater Detroit area in Wayne, Oakland, and Macomb County. In 2008 alone, ITC paid over \$33 million in tax dollar to the state and is projecting to invest an additional \$180 million on infrastructure improvements.

On behalf of our 20,000-plus members, I encourage you to support legislative reform in three critical areas: transmission planning, siting and cost allocation. Independent transmission planning needs to be coordinated across a broader geographic region than it is today, while building on ongoing planning processes. This change is essential so that large projects, like ITC Holdings Corp.'s Green Power Express Project, can be realized. ITC estimates that this project will create an average of 18,000 construction jobs in North and South Dakota over a 4 year period – with additional job creation in the 4 other states the project will transverse. The additional investment in the Dakotas and other states means growth in ITC's headquarters operations which are located in Novi, Michigan. States should continue to have a leadership role in determining where transmission facilities within their borders are located. But, in determining whether a regionally

MAY-05-2009 02:26 AM

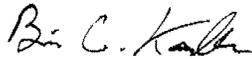
P. 02

beneficial transmission project is needed, the Federal Energy Regulatory Commission is the appropriate forum for making such a determination. Finally, the costs of building large transmission projects with broad, multi-state benefits should be allocated broadly as well. Without a more rationale approach to cost allocation large transmission projects will simply not be built despite their economic and reliability benefits and their contribution to meeting the nation's energy and environmental goals.

We recognize that transmission reform will likely be part of a larger legislative package dealing with potentially controversial issues. It is for this reason we need strong leadership to ensure we do not miss this job creation opportunity that will come, at no cost to taxpayers, from reform of existing transmission rules.

I urge your support of the provisions encompassed in language offered by Senator Bingaman.

Sincerely,



Brian A. Kandler
Director, Government Relations
Detroit Regional Chamber

Cc: The Honorable Thaddeus McCotter
Thaddeus.McCotter@mail.house.gov
Facsimile # 202-225-2667

EXHIBIT 2

**Letter from Oakland County Executive L. Brooks Patterson
to U.S. Senator Stabenow**



L. BROOKS PATTERSON, OAKLAND COUNTY EXECUTIVE

May 4, 2009

The Honorable Debbie Stabenow
 United States Senate
 133 Hart Senate Office Building
 Washington, DC 20510

Facsimile # 202-228-0325

Dear Senator Stabenow:

I am writing on behalf of Oakland County regarding legislation authored by Senator Jeff Bingaman pending before the Senate Energy and Natural Resources Committee aimed at expediting and improving regulation of electric transmission development. I encourage you, as a member of this committee, to support the interests of residents of Oakland County and Michigan by voting in support of reforms to promote needed transmission expansion.

Removing impediments to transmission development means long-term job creation in Michigan and across the country. Transmission projects stimulate job creation in construction, engineering, and a variety of equipment sectors. Further, transmission facilities need to be maintained thereby supporting the existing work force we already have in the state. These are good paying jobs for trained workers.

Electric transmission is important to economic development in the state because it provides access to lower-cost power to fuel manufacturing facilities and run other businesses, keeping Michigan competitive, while reducing transmission congestion costs that increase consumer bills. Finally, a strong transmission system also helps ensure reliable delivery of electricity to business and customers, which is essential to prevent the significant economic losses that even a short interruption in power delivery can cause.

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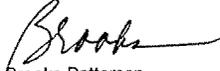
On behalf of Oakland County, I encourage you to support legislative reform in three critical areas: transmission planning, siting and cost allocation. Independent transmission planning needs to be coordinated across a border geographic region than it is today, while building on ongoing planning processes. This change is essential so that large projects, like ITC Holdings Corp.'s Green Power Express Project, can be realized. ITC estimates that this project will create an average of 18,000 construction jobs in North and South Dakota over a 4 year period – with additional job creation in the 4 other states the project will transverse. The additional investment in the Dakotas and other states means growth in ITC's headquarters operations which are located in Novi, Michigan. States should continue to have a leadership role in determining where transmission facilities within their borders are located. But, in determining whether a regionally beneficial transmission project is needed, the Federal Energy Regulatory Commission is the appropriate forum for making such a determination. Finally, the costs of building large transmission projects with broad, multi-state benefits should be allocated broadly as well. Without a more rationale approach to cost allocation large transmission projects will simply not be built despite their economic and reliability benefits and their contribution to meeting the nation's energy and environmental goals.

May 4, 2009
Page Two

Oakland County and Michigan recognize that transmission reform will likely be part of a larger legislative package dealing with potentially controversial issues. It is for this reason we need strong leadership to ensure we do not miss this job creation opportunity that will come, at no cost to taxpayers, from reform of existing transmission rules.

I urge your support of the provisions encompassed in language offered by Senator Bingamon.

Sincerely,



L. Brooks Patterson
Oakland County Executive

cc: The Honorable Thaddeus McCotter
Thaddeus.McCotter@mail.house.gov
Facsimile # 202-225-2667

*DEB - THIS IS REALLY IMPORTANT
LEGISLATION FOR MICHIGAN - PLEASE HELP.*



EXHIBIT 3

**Letter from Oakland County Executive L. Brooks Patterson
to U.S. Representative Rogers**



L. BROOKS PATTERSON, OAKLAND COUNTY EXECUTIVE

May 4, 2009

The Honorable Mike Rogers
 United States House of Representatives
 133 Cannon House Office Building
 Washington, DC 20515

Facsimile # 202-225-5820

Dear Congressman Rogers:

I am writing on behalf of the residents and businesses in Oakland County regarding legislation authored by Representatives Henry Waxman and Ed Markey pending before the House Energy and Commerce Committee. I am aware this bill has very controversial provisions, but the provisions everyone should be able to support are those aimed at expediting and improving regulation of electric transmission development.

Removing impediments to transmission development means long-term job creation in Michigan and across the country. Transmission projects stimulate job creation in construction, engineering, and a variety of equipment sectors. Further, transmission facilities need to be maintained thereby supporting the existing work force we already have in the state. These are good paying jobs for trained workers.

Electric transmission is important to economic development in the state because it provides access to lower-cost power to fuel manufacturing facilities and run other businesses, keeping Michigan competitive, while reducing transmission congestion costs that increase consumer bills. Finally, a strong transmission system also helps ensure reliable delivery of electricity to business and customers, which is essential to prevent the significant economic losses that even a short interruption in power delivery can cause.

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May 4, 2009
Page Two

Oakland County and Michigan recognize that transmission reform will likely be part of a larger legislative package dealing with potentially controversial issues. It is for this reason we need strong leadership to ensure we do not miss this job creation opportunity that will come, at no cost to taxpayers, from reform of existing transmission rules.

I urge your support of inclusion of language to address transmission reforms as part of energy legislation before your committee.

Sincerely,



L. Brooks Patterson
Oakland County Executive

cc: The Honorable Thaddeus McCotter
Thaddeus.McCotter@mail.house.gov
Facsimile # 202-225-2667

Mike -
NEED YOUR HELP ON THIS
ONE PAC.
B

EXHIBIT 4

**Letter from Oakland County Executive L. Brooks Patterson
to U.S. Representative Upton**



L. BROOKS PATTERSON, OAKLAND COUNTY EXECUTIVE

May 4, 2009

The Honorable Fred Upton
 United States House of Representatives
 2183 Rayburn House Office Building
 Washington, DC 20515

Facsimile # 202-225-4986

Dear Congressman Upton:

I am writing on behalf of the residents and businesses in Oakland County regarding legislation authored by Representatives Henry Waxman and Ed Markey pending before the House Energy and Commerce Committee. I am aware this bill has very controversial provisions, but the provisions everyone should be able to support are those aimed at expediting and improving regulation of electric transmission development.

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May 4, 2009
Page 2

Oakland County and Michigan recognize that transmission reform will likely be part of a larger legislative package dealing with potentially controversial issues. It is for this reason we need strong leadership to ensure we do not miss this job creation opportunity that will come, at no cost to taxpayers, from reform of existing transmission rules.

I urge your support of inclusion of language to address transmission reforms as part of energy legislation before your committee.

Sincerely,



L. Brooks Patterson
Oakland County Executive

cc: The Honorable Thaddeus McCotter
Thaddeus.McCotter@mail.house.gov
Facsimile # 202-225-2667

Fred - THIS IS REALLY IMPORTANT
LEGISLATION FOR MICHIGAN - PLEASE
HELP.
B.

EXHIBIT 5
Letter from Utility Workers Union of America
to U.S. Senator Stabenow

Apr 20 09 04:22p

p.2

UTILITY WORKERS UNION OF AMERICA

D. MICHAEL LANGFORD
PRESIDENT

STEVEN VANSLOOTEN
EXECUTIVE VICE PRESIDENT

Affiliated with AFL-CIO

GARY M. RUFFNER
SECRETARY-TREASURER

JOHN DUFFY
VICE PRESIDENT



815 SIXTEENTH ST. N.W.
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DAN HURLEY	MONTE KOTLER	RICH MATA	LUCIA PIGRANO
CHARLIE G. RITTENHOUSE	MARTA RODRIGUEZ-HARRIS	JOHN SUGRUE	GARY SULLIVAN

April 20, 2009

The Honorable Debbie Stabenow
United States Senate
133 Hart Senate Office Building
Washington, DC 20510

Dear Senator Stabenow:

I am writing on behalf of UWUA's 10,000 members in the state of Michigan regarding legislation authored by Senator Jeff Bingaman pending before the Senate Energy and Natural Resources Committee aimed at expediting and improving regulation of electric transmission development. We encourage you, as a member of this committee, to support the interests of organized labor in your home state by voting in support of reforms to promote needed transmission expansion.

Removing impediments to transmission development means long-term job creation in Michigan and across the country. Transmission projects stimulate job creation in construction, engineering, and a variety of equipment sectors. Further, transmission facilities need to be maintained thereby supporting the existing work force we already have in the state. These are good paying jobs for trained workers.

Electric transmission is critical to economic development in the state because it provides access to lower-cost power to fuel manufacturing facilities and run other businesses, keeping Michigan competitive, while reducing transmission congestion costs that increase consumer bills. Finally, a strong transmission system also helps ensure reliable delivery of electricity to business and customers, which is essential to prevent the significant economic losses that even a short interruption in power delivery can cause.

UWUA strongly encourages you to support legislative reform in three critical areas: transmission planning, siting and cost allocation. Independent transmission planning needs to be coordinated across a border geographic region than it is today, while building on ongoing planning processes. This change is essential so large projects, like ITC Holdings Corp.'s Green Power Express Project, can be realized. States should continue to have a leadership role in determining where transmission facilities within their borders are located. But, in determining whether a regionally beneficial transmission project is needed, the Federal Energy Regulatory Commission is the appropriate forum for making such a determination. Finally, the costs of building large transmission project with broad, multi-state benefits should be allocated broadly as well. Without a more rationale approach to cost allocation large transmission projects will simply not be built despite their economic and reliability benefits and their contribution to meeting the nation's energy and environmental goals.

UWUA recognizes that transmission reform will likely be part of a larger legislative package dealing with potentially controversial issues. It is for this reason we need strong leadership to ensure we do not miss this job creation opportunity that will come, at no cost to taxpayers, from reform of existing transmission rules.

Sincerely,

D. Michael Langford
President



**BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES**

SUBCOMMITTEE ON ENERGY AND THE ENVIRONMENT

**POST-HEARING COMMENTS OF JOSEPH L. WELCH
CHAIRMAN, PRESIDENT AND CEO OF ITC HOLDINGS CORP.**

**The Future of the Grid: Proposals for Reforming National Transmission Policy
July 13, 2009**

Introduction

ITC Holdings Corp. (ITC) is the first and largest fully independent transmission company in the United States. ITC is focused on ownership, operation, maintenance and construction of transmission facilities as its single line of business; there is no internal competition for capital. ITC is now the eighth largest transmission-owning company in the U.S., in terms of load served. ITC owns and operates more than 15,000 miles of high voltage transmission in Iowa, Minnesota, Illinois, Missouri and Michigan and is developing regional transmission projects in Kansas and Oklahoma.

On June 12, 2009, the United States House of Representatives Subcommittee on Energy and the Environment held a hearing entitled, "The Future of the Grid: Proposals for Reforming National Transmission Policy" as a means to provide several opportunities to provide their view on energy policy in light of energy legislation currently being discussed in the United States Congress. Joseph L. Welch, ITC's chairman, president and CEO, participated in person and provided written comments articulating the companies' position on the topic at this event. ITC's written and verbal testimony spoke to its support of legislation that will create independent regional planning authorities that perform interconnection-wide planning, a regional cost allocation method that recognizes the national need for long-term energy reliability and sustainability in the United States as supported by regional electric transmission networks and a federal siting authority with state involvement for regional transmission development.

Other companies, organizations and individuals did the same, and ITC provides the following comments for the Subcommittee's consideration in response to some of the written comments submitted and oral testimony provided in an effort to more fully develop the issues raised therein. Specifically, ITC's response will discuss the need for the creation of independence-based incentives, the value of independence both at the regional planning and transmission company levels, how ITC has taken steps over the past five years to make the transmission network "smarter" and what sort of benefits can be expected through the creation of independent transmission companies.

National Energy Vision

The recent Subcommittee hearing was at the very heart of the policy issues facing the electric utility industry, and specifically to the challenges impeding the construction of regional transmission. Right now, the outdated laws that govern our electricity grid are standing in the way of America's energy goals. If Congress is serious about making renewable resources available, reducing our dependence on foreign oil, meeting renewable energy standards, and addressing climate change and other environmental challenges, they need to start by modernizing the rules that govern the grid. In other words, due to the historical underinvestment in the nation's grid, transmission is the roadblock to electric reliability, efficiency and renewable resources rather than the facilitator.

Many of the issues set forth in the Subcommittee hearing are the symptoms of one fundamental problem: the lack of a national energy policy. This national energy policy should clearly define national energy priorities such as the establishment of a federal renewable portfolio standard and federal regulation of greenhouse gas emissions. Having this information codified would greatly enhance our ability to plan for the regional transmission network that this country needs.

Need for Incentives

Not quite six years ago, Mr. Welch on behalf of ITC had the opportunity to speak before the Subcommittee in response to the August 14, 2003, blackout that affected 50 million electric customers. This blackout came after a 30-year trend of underinvestment in our nation's grid. While ITC has made great strides toward improving the electric reliability of its service territories, as a nation we are still a long way off from addressing the historical underinvestment and even further off of developing a regional grid that support today's changing needs.

In the six short years since the blackout, it seems that many electric utility industry leaders have forgotten about this defining industry event that should have served as a wake-up call. Fortunately, the United States Congress and the Federal Energy Regulatory Commission (FERC) have not forgotten and have continued to be solid advocates for developing policies that support investment in the transmission grid.

During the hearing on June 12, 2009, an industry colleague referred to these policies as being "overgenerous"¹, apparently taking issue with the incentives provided to electric utilities to build the needed transmission investment. ITC believes that this thinking is a misguided attempt to perpetuate the status quo rather than moving the ball forward.

One incentive granted by the FERC is a 50 basis point adder to transmission owning utilities for joining a regional transmission organization (RTO). To understand why this

¹ The Future of the Grid: Proposals for Reforming National Transmission Policy: Hearings before the Subcommittee on Energy and the Environment, of the House Committee on Energy and Commerce, 111st Cong., 1st Sess. (2009) (testimony of David W. Joos).

is important, we must first step back and review one specific tenet that drove the creation of RTOs: to create truly independent organizations that would be responsible for transmission planning.

Unfortunately, this process has become horribly bogged down. If Congress creates in legislation a truly independent regional transmission planning authority where participation in regional planning is mandatory, the 50 basis point adder for joining an RTO would no longer be needed. A regional transmission planning authority would not necessitate the creation of new organizations and structures but in fact, would simply require a modification to the governance and funding of existing RTOs. In other words the planning function would need to be separated from the energy market function, and all utilities would be required to pay a special regional planning assessment that would serve as the basis for the authority's budget. Doing so would result in a truly independent regional planning process.

Independence is central to regional planning, but equally important is the independence of the transmission-owning companies. ITC believes that Congress should also support incentive adders for developing independent transmission companies such as ITC. This would spur the creation of these independent organizations that are singularly focused on rebuilding the grid in support of whatever energy vision Congress ultimately chooses to advance. In the following sections, this document will lay out the rationale for why independence is important and the tangible benefits that can be expected through independent transmission companies.

The Importance of Independence

The lack of independence has concrete consequences. Included in Mr. Welch's original written testimony were pictures that showed the condition of the transmission systems upon their acquisition by ITC. Unfortunately, ITC literally has thousands of photos such as those; however, it would be incorrect to assume that the issues are a problem localized to the systems purchased by ITC. These are simply a demonstration of an endemic problem facing our country that clearly shows why so many people and organizations have been vocal about the need to rebuild the electric transmission system. These photos tell the story of why we need to do this for the good of the country.

There are a few things that the photos don't show. These pictures do not show the aged workforce that performs the maintenance on the nation's grid. In 2007 according to the North American Electric Reliability Corporation (NERC), a Hay Group study reported that "40 percent of senior electrical engineers and shift supervisors in the electricity industry will be eligible to retire in 2009." A subsequent study by NERC that same year showed that there is expected to be a 25 percent growth in demand for industry workers by 2015.²

² *Key Issues: Aging Workforce*. (n.d.). Retrieved July 3, 2009, from North American Electric Reliability Corporation Web Site: <http://www.nerc.com/page.php?cid=4|53|55>

Some opponents to transmission grid investment have questioned the need for incentives that encourage grid investment. When an independent transmission company such as ITC receives incentives meant to encourage transmission investment, how does it use the funds? The answer is simple. We invest it in the grid to facilitate the policies set by Congress and the FERC. By example over the last five years, ITC has averaged more than 200 percent of free cash flow invested into the transmission system. Since 2003 ITC has invested over \$1.2 billion in grid improvements in the systems we currently own. ITC has also worked tirelessly to serve in its role as a non-discriminatory provider of transmission access. In fact, in 2008 ITC interconnected over 10 percent of all of the wind generation resources in the United States last year. It is this level of investment that has led to the significantly increased reliability that is covered later in this document.

ITC has also taken significant steps toward addressing the aging workforce issue since 2003. For example we have established training programs with 11 junior colleges in Michigan and Iowa in order to educate and train new electrical maintenance personnel to work on the equipment. We currently have 105 people enrolled in the program and believe this to be the largest program in the U.S. As ITC has grown, we have also successfully trained and qualified 15 new individuals as NERC-certified system operators, which comprises almost 50 percent of our total control room workforce.

In short ITC has and continues to demonstrate that every dollar that we have earned, we have put back to work to rebuild the grid, train new people or interconnect renewable resources.

Checks and Balances

Some would argue that an independent transmission company provides free license to invest in the transmission system without regard to need. That is a categorically false representation that fails to recognize the many layers of input, review and approval involved with each and every transmission project. Every project that ITC and other transmission-owning members of RTOs have built or attempted to build has gone through a rigorous review by the RTO as part of a transmission expansion plan in an open and transparent stakeholder forum.

It is only after the RTO recommends approval of the plan to its board, and the board in turn approves the projects identified in the plan that the transmission owner can move forward with building. Through this existing process, other utilities, state commissions, customers, etc., all have an opportunity to provide input to the project. Without the review and recommendation for approval, ITC would not invest in the project.

However, this review process is not independent and not without bias. For instance, very important benefits created by transmission are by rule not considered. Some of these benefits are tangible, while others are more difficult to quantify. Nonetheless, the current system does not include in its cost/benefit analysis any consideration for overall increased grid efficiency, the amount of generation capacity that can be deferred as a result of the transmission investment, the reductions in generation reserves and other similar benefits.

As an example ITC had one proposal for an extra-high voltage transmission loop in Michigan that would result in reduced system losses by 250 megawatts. Think about that; that is one half of a coal fired generation unit that would never have to be built or run just because the grid is more efficient. Yet, under the current system for evaluating regional cost-recovery eligibility for economic projects, these benefits were not considered in the cost/benefit analysis of the project.

It is for the reasons outlined above that Congress should focus on the development of an independent regional transmission planning authority that would provide adequate stakeholder input yet empower the organization to make decisions in support for what is best for the grid and the nation in concert with a national energy vision.

Smart Grid

Recently, there has been much discussion about concept of “Smart Grid”, and yet there seems to be little cohesive understanding as to what this technology is. While there is an abundance of variations for how Smart Grid is defined, ITC has concluded that the Smart Grid is simply the convergence of electrical and new “intelligent” infrastructure.

This convergence includes the two-way flow of electricity and information that strengthens reliability and resource management; data, control, and automation providing increased efficiencies, responsiveness, flexibility, and resiliency; “time-based” decisions and transactions between energy suppliers, buyers, and markets; market-side resources operating with traditional supply-side resources as a portfolio; and, sustainability – environmental compliance and resource stewardship benefits.

ITC believes that Smart Grid is something that the Congress should absolutely consider so that if implemented, it can be done in a cost effective manner that maximizes the increased efficiency that can be achieved. However, this technology is not a panacea for an aging infrastructure. In other words the Smart Grid does not replace the “real grid” and is not a substitute for making the needed transmission investments to provide robust and reliable transmission service.

ITC has implemented Smart Grid elements at the transmission level by focusing on three fundamental areas. These include the development of a robust communications network using a secure broadband logical network; a real-time monitoring and control system that uses sensors and intelligent devices to enhance real-time observation and rapid analysis and response to system disturbances; and event analysis that incorporates enhanced monitoring and data analytics for robust system event analysis. These improvements help ensure that a “smart” transmission grid is reliable, responsive and efficient.

Tangible Results

Have there been tangible results to all of this work? The short answer is, “Yes.” To better understand how ITC’s independence has resulted in tangible results, let us look at some of the measureable successes we have had.

One of the biggest challenges facing the grid is costly system congestion. A couple of years ago ITC built its "Jewell-Spokane Project" in Southeast Michigan. This project represented a one-time \$10 million investment that provided greater access to more economic sources of generation resulting in \$64.4 million in annual energy savings. In other words the project paid for itself six times over in one year.

All of these investments have resulted in significant improvements in electric reliability. The first transmission system that ITC acquired, and has operated independently for five years, has now achieved top decile reliability performance in 2008. These results were measured against other U.S. transmission systems in terms of sustained and momentary outages by SGS Statistical Services, an outside independent benchmarking company.

These results are impressive, but how does this stack up on a relative cost basis? Using data collected by the Energy Information Administration, the transmission portion of average end-use consumer bill can be calculated to be approximately 7 percent. In Southeast Michigan on the system that ITC has owned, operated and maintained since 2003, transmission constituted 3.8 percent of the average customer bill. In 2009 transmission for that same system constitutes 4.4 percent of the average customer bill. For our system on the western side of Michigan where ITC has really just begun its work in 2008, transmission was 4.1 percent. In 2009 transmission represented 4.6 percent of the average customer bill. For these modest increases customers have enjoyed increased reliability, greater access to markets and more efficient operations.

As mentioned earlier within this document, there is much discussion around incentives to invest in transmission; however, if the incentives were removed from these calculations, this would result in approximately a 0.2 percent reduction on the transmission component of the bill. In other words the incentives represent an insignificant portion of the total bill, and yet in ITC's experience, these incentives help to encourage the needed investments. As Congress moves forward on developing its national energy vision and supporting policies, these incentives will be all the more important in bringing about the desired changes and improvements to the grid.

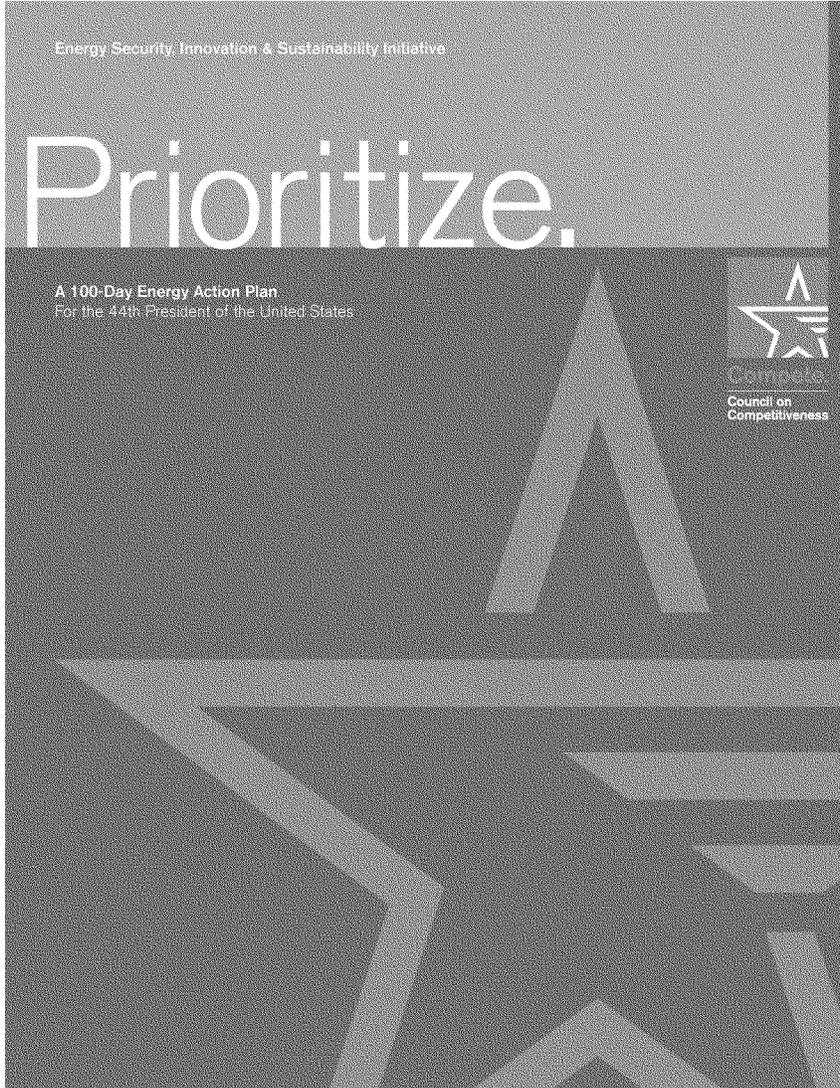
Closing

For your added input, included in the Appendix to this document is an electric copy of a report produced by the Compete Council on Competitiveness that serves as their view of the nation's 100-day energy action plan. Contained within this report is interesting reading that provides a high-level industry view of the needed energy policy changes.

Thank you, Chairman Markey, Ranking Member Upton and members of the Subcommittee for your invitation to Mr. Welch to speak at the hearing about this important matter and for your continued consideration and support in the creation of the needed legislation that will help the United States develop an energy infrastructure that promotes reliability, efficiency, national security and sustainability.

APPENDIX 1

**“Prioritize. A 100-Day Energy Action Plan
for the 44th President of the United States” by Complete Council on Competitiveness**



The Council on Competitiveness recognizes that energy will be a defining challenge for the new Administration—for economic competitiveness, national security and long-term environmental sustainability. Energy price and supply volatility impact economic growth, global trade and investment, the location of industrial production and job creation, retention and loss. Over four decades, Administrations have emphasized the need for sustainable and secure sources of energy to little avail. The new President must effect real change. Economic, environmental, geopolitical and technological forces—concurrent with the impending political transition—have converged forcefully to create a tipping point and sense of urgency in the public and private sectors about the need and opportunity to act now.

The Council launched the Energy Security, Innovation & Sustainability (ESIS) Initiative in July 2007 with the firm belief that the crucial role of private sector demand in driving energy system transformation has gone largely unrecognized and unaddressed in prior policy initiatives. The government has the power to greatly strengthen the business case for investment and innovation in sustainable energy solutions. There is no one single policy that will mobilize market forces and assure a successful transformation of our energy system. The enabling conditions must be set simultaneously on a number of interdependent fronts—including energy efficiency, technology, investment, infrastructure and workforce readiness.

The Council puts forth the following recommendations to the 44th President as the critical measures for immediate action upon taking office. It is important to stress that these actions mark the beginning, not the end, of a concerted commitment to ensure the United States achieves energy security in a sustainable manner, while ensuring the competitiveness of its workers, industries and economy. The Council will issue a comprehensive set of recommendations, addressing the need for both public and private sector action, at a National Energy Summit on June 22-23, 2009. The New President and his cabinet will be invited to this important meeting.

Setting the Global Bar for Energy Efficiency

Issue an executive order mandating that the Federal Government use the procurement process to lead the market toward efficient energy standards for goods and services, as well as in the construction and retrofitting of facilities, while reducing the carbon load. Using its purchasing power, the government can move the marketplace.

- Direct the Secretaries of Energy and Commerce and the Administrators of the Environmental Protection Agency and General Services Administration, in coordination with the Secretaries of State and Defense and the U.S. Trade Representative, to work together with private sector standard-setting bodies to accelerate the development, rapid adoption and international recognition of the world's leading energy efficiency standards, together with a labeling, measurement and verification system.
- Direct all federal agencies and U.S. Government contractors to procure the most advanced and cost-competitive energy efficient equipment and

vehicle fleets and to purchase low carbon fuel and electric power where available.

- Direct the Administrator of the General Services Administration, the Secretary of Defense and the Administrator of the National Aeronautics and Space Administration to amend the Federal Acquisition Regulation to require comprehensive energy efficiency compliance provisions in all U.S. Government contracts, without undue regulatory burden on small and medium-sized businesses.

Assuring Access to Clean and Competitive Energy

Immediately develop and utilize all sources of energy in America in sustainable ways—including oil, gas, coal, nuclear, hydro, wind, solar, biofuels, geothermal, laser fusion-fission and other advanced energy sources—and level the playing field on subsidies while creating incentives to discover and deploy new energy sources, consistent with environmental standards and safeguards.

- Direct the Secretary of Treasury to lead a Cabinet-level working group on "Clean Energy Incentives" to construct a transparent, non-discriminatory, long-term and consistent investment framework to promote affordable clean energy, taking into account full life-cycle costs and environmental impact, as well as regulatory compliance, legal liability, tax rates, incentives and depreciation schedules and market distortion from global trade subsidies and tariffs.
- Direct the Office of Management and Budget to create a cross-governmental task group to identify barriers to various sources of energy production and to issue a Presidential Executive Order, or propose legislation as necessary, to optimize federal agency regulatory regimes.

Jumpstarting Energy Infrastructure Investments
Throughout history, our government has set aside loans for Americans to afford homes, start small businesses and pursue higher education in order to strengthen and stabilize our nation. Today, our country requires a \$200 billion National Clean Energy Bank to provide debt financing and drive private investment in the development of sustainable energy solutions and supporting infrastructure.

- Direct the Secretaries of Treasury and Energy to propose legislation to establish and capitalize a \$200 billion National Clean Energy Bank, modeled on the U.S. Export-Import Bank and Overseas Private Investment Corporation, to provide long-term financing—including loan guarantees, lines of credit, equity investments and insurance—for the market deployment of breakthrough energy efficiency and clean energy products, technologies, services and projects that reduce, avoid or sequester carbon.

Spawning Technological Breakthroughs and Entrepreneurship

From the Great Depression to 9/11, Americans have come together to address threats to our nation's security and prosperity. Today, energy is the biggest national and economic security issue facing our country, and America needs to answer the call again. To ensure the American way of life is preserved, we

need to drastically ramp up investment in R&D and market commercialization to deliver secure, sustainable and affordable clean energy while generating well paying domestic jobs.

Direct the Secretary of Energy to create the "21st Century Clean Energy Leadership Initiative," a public-private partnership funded at \$250 million and matched by state and private sector investments, to create regionally-based R&D test-beds and large-scale commercial pilots, while leveraging the existing federal R&D infrastructure.

- Expand the Small Business Innovation and Research (SBIR) Program, which allocates 2.5 percent of eleven cabinet agencies' extramural R&D budgets, to provide critical "Phase III" mezzanine financing for clean energy start-up businesses.
- Create a Small Business Administration "Clean Energy Entrepreneurs Initiative" to support the job engines of America's economy—small- and medium-sized businesses—in the development and deployment of clean energy technologies.
- Allocate at least 10 percent of the existing funding for technology pre-commercialization programs across all federal agencies to accelerate development and deployment of mature clean energy technologies across the R&D portfolio.
- Triple the current federal investment in basic and applied energy R&D across all federal agencies and departments.
- Direct the Secretary of Energy to establish and operate a web-based "Clean Energy Resource Center" to serve as a one-stop clearinghouse for information on all federally-funded energy programs, pilots, test-beds, projects and RD&D and to track international energy initiatives and developments.

Mobilizing a World-Class Energy Workforce

Much as computer scientists and aerospace engineers were crucial to winning the space race in the 1960s, we will win the clean energy race by educating the next generation of science and technology researchers, game-changing innovators and profes-

sionally trained workers, thereby filling the workforce pipeline with a new generation of skilled talent.

- Direct the Secretary of Labor to create a \$300 million "Clean Energy Workforce Readiness Program," augmented by state and private sector funding, to foster partnerships between the energy industry, universities, community colleges, workforce boards, technical schools, labor unions and the U.S. military to attract, train and retain the full range of skilled workers for America's clean energy industries.
- Require all federal agencies to commit 1 percent of their R&D budgets to competitive, portable undergraduate and graduate fellowships in energy-related disciplines for American students.
- Direct the Secretary of Labor to assess, classify and widely publicize the demand-driven needs for energy-related occupations and align federal workforce investment programs and state-directed resources to support skills training and career path development in energy fields for American citizens.

Clearing Obstacles to a National Transmission Superhighway

As with the interstate highway system and the information superhighway, our leaders must knit together

the current patchwork of regulations and oversight into a seamlessly connected electrical power highway that is technologically capable of allowing both on and off ramps for all energy sources in the 21st century, while retaining and strengthening current consumer and worker protections.

- Direct the Federal Energy Regulatory Commission (FERC) to appoint a fully independent regional planning entity for the transmission superhighway, with FERC having final regulatory authority on determining the need for siting of transmission facilities.
- Direct the FERC to set national interconnection standards for a 21st century interoperable grid and transmission system capable of connecting multiple new energy sources and devices to the system.
- Direct the President's Science Advisor to establish the "High-Performance Computing Transmission Initiative," creating a consortium of national laboratories, universities, industry and organized labor to model and simulate the design, construction and operation of an intelligent, self-healing, electrical grid—integral to a national high-performance transmission system.

The next President is invited to join with the Council on Competitiveness as the ESIS Initiative continues to address these critical issues and to attend a National Energy Summit on June 22-23, 2009. This event will convene chief executive officers, university presidents, labor leaders, governors and other thought leaders to forge a comprehensive roadmap for a secure, sustainable and competitive energy future.

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The Council on Competitiveness launched the Energy Security, Innovation & Sustainability (ESIS) Initiative in July 2007 with the firm belief that the crucial role of private sector demand in driving the way America produces and uses energy has gone largely unrecognized in prior policy initiatives. The ESIS Initiative, which was called for in the Council's 2004 seminal report *Innovate America*, is led by a Steering Committee comprised of 41 chief executives from U.S. industry, academia, government laboratories and organized labor, and has benefited from the guidance of more than 200 executive-level energy experts.

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Mr. MARKEY. Thank you, Mr. Welch.

Our next witness is Christopher Miller. He is president of the Piedmont Environmental Council, an environmental organization focused on conservation issues in the Piedmont region of Virginia.

We thank you for being here, sir.

STATEMENT OF CHRIS MILLER

Mr. MILLER. Thank you, Congressman Markey. Thank you for the opportunity to testify on behalf of the Piedmont Environmental Council, also for land trusts and land conservation organizations across the country. We are a very active member of the Land Trust Alliance and are working hard on this issue with them. And they have asked us to express some of their concerns.

I have a couple of maps which I hope the staff can put up, because I think they will help instruct this conversation.

We appreciate the time and attention that this committee is taking to consider the complex issues associated with the transmission. We appreciate the willingness of the committee to deal with transmission as part of a broader energy policy and not as an end in itself.

From our perspective, transmission is only a tool for moving electricity from the source of generation to the end user, but much more important are the policies that will reduce demand for electricity, modify peak demand so that the need for generation and transmission infrastructure is minimized. And encourage clean generation close to load centers, which will reduce the losses of energy caused by long-distance transmission.

For in the end, the high-voltage transmission lines with towers that can exceed 180 feet in height and wide rights of way are part of the energy system with the largest footprint and often the most dramatic impacts on communities that lie along them. The transmission system has the potential for substantial land-use impacts, including impacts that directly conflict with Federal, State and local policies to protect and enhance important natural and cultural resources.

In the brief amount of time I have, I want to focus on a couple of issues that have not been raised yet. The first is the assertion that the only way to meet national and State goals to reduce greenhouse gas emissions and to increase the role of renewable sources of energy is to build a national transmission grid. One example of this grid is up here. This is the grid proposed AEP for the 765 KV system that would link resources.

It was originally overlaid over wind resources, but in fact, the correspondence with coal resources is actually higher when you actually go see where those lines are laid out. That is one of the causes of concern that in fact what you would be doing by doing a transmission-loaded set of incentives is in fact encouraging greater transmission of coal-fired generation than in fact of renewables.

The reason for that is that no where in the legislation do we recommend a change in the economic dispatch rules that govern which generation is brought on line first. All the renewable goals notwithstanding, we dispatch energy by price, and the auctions are by price. We have heard lots of calls for competitive pricing, but the potential that that will in fact increase the amount of transmission

that is carrying coal-fired emissions, and in fact from the dirtiest and oldest plants, is very real.

Unless this committee can also ensure that, before that transmission is made available, we are in fact putting in the carbon cuts through the carbon cap-and-trade and otherwise governing the emissions of grandfathered coal plants who have never reduced their emissions, there is a very real possibility in the Eastern Interconnect that the gains that have been made by RGGI, the 45 million tons or so of carbon emissions reductions, could be offset.

Second, an issue that has not been addressed so far is the issue of peak versus average demand. The transmission and generation system is being designed to meet peak loads, and the more we can do to reduce peak loading, the less we have to build across our landscape. And so it is very important that this committee address the fact that transmission planning that has been done to this point really hasn't addressed the full incorporation of some of the policies that are in the ACES legislation. They did not take into account the amount of demand-side management that is recommended and in fact assumed a level of per capita electricity used that steadily increases over time rather than is reduced.

The final thought is this, to the extent the transmission is necessary, and obviously connecting some renewables will require transmission, it is very important to respect the other public policy values that are out there, and particularly related to the lands that have to be crossed by transmission. We should be seeking to avoid wherever possible the natural resources, the historic resources, the cultural resources and, yes, even the landscapes that America values so much.

Current legislation draws a distinction between publicly-owned lands and privately-owned lands. And that is something that I think this committee needs to look at hard. East of the Mississippi, most natural resource lands, most historic lands are privately-owned but protected through public-private partnerships, whether it is the designation of historic districts or the donation of conservation and historic easements. Those easements are often approved by State government.

In the case of Massachusetts, hundreds of thousands of acres are actually individually approved each time by the attorney general. The same is true in the State of Virginia. And they are due all of the respect that a national park or national wildlife refuge or State park would. So as you think forward on those transmission lines that have to be built, make sure we are avoiding the resources, the private resources as well as the public resources. And make sure we mitigate and compensate for the impacts on those resources.

[The prepared statement of Mr. Miller follows:]



Testimony of

**CHRISTOPHER G. MILLER
PRESIDENT
THE PIEDMONT ENVIRONMENTAL COUNCIL**

before the

**SUBCOMMITTEE ON ENERGY AND THE ENVIRONMENT
COMMITTEE ON ENERGY AND COMMERCE
UNITED STATES HOUSE OF REPRESENTATIVES**

Hearing on

**THE FUTURE OF THE GRID: PROPOSALS FOR REFORMING NATIONAL
TRANSMISSION POLICY**

June 12, 2009

Thank you Mr. Chairman for this opportunity to testify today.

My name is Christopher G. Miller and I am President of the Piedmont Environmental Council (PEC), a non-profit organization working to safeguard the landscapes, communities and heritage of the Virginia Piedmont by involving citizens in public policy and land conservation. PEC has been an active participant in energy and transmission planning since our inception in 1972, most recently as a Respondent in a state proceeding considering the proposed Trans-Allegheny Interstate Line project, and in the Department of Energy's proceedings on implementation of §1221 of the Energy Policy Act of 2005.

On April 27, 2007, I testified before the House Committee on Government Oversight and Reform about the implementation of §1221 of the Energy Policy Act of

Testimony of Christopher G. Miller

2005. A section we still believe should be repealed. And in July of 2007, PEC joined with the utility commissions in a successful challenge¹ to Federal Energy Regulatory Commission's (FERC) interpretation of §1221.

Our participation in these proceedings has given us a very practical insight into electrical transmission and the strengths and weaknesses of current federal policies. And we appreciate the opportunity to provide this testimony as the Committee continues its consideration of the appropriate federal role in transmission policy.

As a land use and land conservation organization PEC deals with transmission not just as an energy issue, but also as a particularly intrusive land use. Current engineering of high voltage electric transmission has a substantial footprint, requiring rights of way that often exceed 200 feet in width and tower heights that can exceed 180 feet. In addition to the impact on the properties that these lines cross, the impact on cultural, historic and economic interests of the surrounding areas cannot be ignored. In some cases, land protections take the form of public ownership, such as Federal and state park lands. But in other cases, environment, historic or scenic values have been protected by tools such as conservation easements. We believe that the potential conflicts should be avoided whenever possible and adequately mitigated.

The Greenwashing of Transmission Lines

As important or more important than the potential impacts and conflicts with other public policies is that the current and proposed transmission policies may produce a transmission grid that is over-built, overly complex and subject to reliability problems, and encourages increased reliance on fossil-fuel generation rather than distributed renewable generation, energy efficiency, conservation, and load management. Expanded,

¹ United States Court of Appeals for the Fourth Circuit ruling in Case #07-1651

guaranteed, enhanced, virtually risk-free regulated returns on transmission investments and economic dispatch will increase use of coal based power plants and result in increased greenhouse gas emissions. Those emissions will not be subject to financial and regulatory controls for years, even under this Committee's proposed legislation.

Three years ago the utilities were claiming that they must 'build, build, build' for reliability reasons. That pressure has been removed by the drastic economic slowdown and the initial commitment to energy efficiency and energy conservation measure. Now, the claim is that additional transmission is necessary to encourage renewables. Any federal siting authority and financial incentives for transmission should require a FERC decision supported by findings and conclusions based upon a record that clearly shows that power needs cannot be met through conservation, efficiency, improvements to existing lines and distributed, clean generation.

As I will argue throughout my testimony, transmission is just one part of an energy equation that includes everything on the supply side and everything on the demand side. The location, amount and timing of generation and demand are crucial to making a decision on when and where to build transmission, and whether transmission is necessary at all. Before we set federal policy that permits a \$100-200 billion grid build out, we should make every effort to better utilize existing transmission infrastructure, reduce the need for new supply, and encourage clean distributed generation.

Let me begin by outlining two of our observations regarding transmission:

Transmission planning is overwhelming energy planning -- Federal policy and state utility commissions are increasingly deferential to the energy planning done by Regional Transmission Organizations (RTO) and Independent System Operators (ISO),

which are private entities run by member utilities and energy stakeholders, and are by design, predisposed toward transmission solutions. This “transmission first” planning, combined with the generous federal incentives that are being awarded by FERC, put non-transmission energy alternatives at a marked disadvantage, even when those alternatives have lower emission profiles, a smaller footprint, lower price tag, or would create more long-term jobs.

There is no transmission proposal shortfall -- State Utility Commissions are siting transmission lines across the nation, often in less than two years². There is no compelling reason to go to a federal siting process, thereby putting the people whose lands will be taken even farther away from the decision makers.

Transmission Myth vs. Reality

As we consider whether new federal transmission authority is warranted, a number of inconsistent justifications continue to emerge:

Myth 1: The current regulatory scheme discourages transmission from being built

Not true, interstate transmission line proposals are being pursued and approved throughout the country. Lines are rarely turned down by State Utility Commissions, and such denials are exceptions, not the norm. In many jurisdictions, new transmission lines are being approved with scant attention to alternatives such as improved efficiency and better generation alternatives.

The poster child for delayed state siting is AEP’s Wyoming to Jackson Ferry 765 kV line between West Virginia and Virginia. This line which was originally announced

² For example, the Trans-Allegheny Interstate Line through Pennsylvania, West Virginia and Virginia and CapX2020 through South Dakota and Minnesota. Many others are proceeding unimpeded through the state’s regulatory process.

in 1990 did not go into service until 2006. This single incident is frequently cited as a reason to remove siting authority from States. But an examination of the history of this line demonstrates that the reason for the delay had more to do with evolving electricity markets and a proposed crossing over National Forest property. Once legitimate state concerns were addressed and the federal land issue was resolved, the line was approved and built.

Myth 2: Future renewable generation will be located far from the load and require massive transmission investment.

According to a number of the bills pending before Congress, future generation sources, particularly renewable generation sources, will be located “distant from load centers”, in “rural areas,” or be “location-constrained.” This assumes a continued reliance on distant generation sources, and ignores the significant potential for off-shore wind, distributed solar, geothermal, natural gas peaking plants, and other forms of generation that could be more easily located near the load.

To the degree that future renewable generation is sited in the solar-rich Southwest or wind-rich Midwest, that generation can be used to serve urban centers closer to the source --Las Vegas, Los Angeles, Phoenix, Denver, Madison, Wichita, and Sioux Falls.

As for the East Coast, as PJM Interconnection pointed out in comments to FERC on March 6, 2009:

...off-shore wind from New Jersey and Canada, and greater strides in energy efficiency, may be deliverable to customers in New England, New York and New Jersey sooner and more cost-effectively than the Midwest wind resources.³

³ Motion to Intervene and Comments of PJM Interconnection, L.L.C in FERC Docket No. ER09-681-000

This point was reiterated in a May 4 letter from ten East Coast governors, in which the governors argued:

While we support the development of wind resources for the United States wherever they exist, this ratepayer-funded revenue guarantee for land-based wind and other generation resources in the Great Plains would have significant, negative consequences for our region: it would hinder our efforts to meet regional renewable energy goals with regional resources and would establish financial conditions in our electricity markets that would impede development of the vast wind resources onshore and just off our shores for decades to come.

Myth 3: Transmission can be easily targeted toward renewables

Operators cannot control which electrons flow along a given transmission line. That flow is determined by the laws of physics. Once a transmission line is built, it will fill with whatever electrons are produced by the available generators. In a December 2008 report⁴, the Union of Concerned Scientists warned:

Expanded capacity to transmit electricity would likely mean an even greater near-term flow of coal-fired electricity from western PJM to eastern PJM and other RGGI states. Lower congestion costs would make coal-fueled power plants in the west even more competitive, while power producers in eastern PJM states continued to face higher fuel costs because of their greater dependence on natural gas. This trend could spur even more proposals for new coal plants and new transmission capacity, as electricity production moved away from higher-priced states. The result would be greater amounts of heat trapping emissions.

And as Bill Raney, President of the West Virginia Coal Association, outlined in a recent statement in support of the proposed Potomac Appalachian Transmission Highline through West Virginia, Virginia and Maryland:

Enhanced transmission capacity helps increase the amount of low-cost, coal fired generation dispatched into the regional grid. This helps preserve the future of existing power plants already on line, justifies additional investment in these plants and increases the likelihood that new, clean-coal electric fired generation will be constructed in the state.⁵

⁴ http://www.ucsusa.org/assets/documents/clean_energy/importing-pollution_report.pdf

⁵ Letter filed under West Virginia Public Service Commission Case # 09-0770-ECN

As shown in the two attached maps the grid backbone concept put forward by American Electric Power and the American Wind Energy Association has the very real potential to enable access to large coal deposits rather than wind energy. For this reason, it is critical that no such grid expansion take place prior to enactment of strong and enforceable carbon regulations or a reform of the dispatch system to emphasize environmental priorities, as opposed to the current system prioritizing economic dispatch.

Myth 4: All proposals for new transmission have been fully vetted and alternatives have been examined

Operation of the electric transmission grid has been expressly delegated to the Independent System Operators and Regional Transmission Organizations. The continued availability of electricity on demand day after day is ample testimony to the skill of those operations. However in PEC's experience, the RTOs' single-minded focus on transmission does not translate well when it comes to planning.

PJM, the largest of the regional transmission organizations, has repeatedly stated that the only solution to electric reliability problems is to order the construction of new transmission lines. PJM is a limited liability corporation, authorized to do only what its members agree to. Its voting membership is composed of transmission companies, generators, utilities and industry insiders. When considering a new transmission project it does not consider whether alternatives would satisfy the identified problem nor does it consider the impact of the line on the environment, the cultural or historic properties that will be affected.

Myth 5: More transmission means better reliability and national security –

From a technical standpoint, building more transmission to allow for greater inter-regional power transfers will make the power system less reliable, not more reliable. As electrical engineer and member of the New York State Reliability Council George Loehr said in his testimony to the Senate Energy & Natural Resources Committee in July, 2008:

Reliability is a function of the standards used, not the amount of wire in the air... If more generation is built in remote areas, and less generation and other resources are built close to load centers, then the load centers will be increasingly dependent on distant generating capacity – located perhaps hundreds of miles away. It would be like running a long extension cord to a friend's house a block or two away to power your toaster, instead of plugging it into an electric outlet right in your own kitchen. The more major cities depend on long transmission lines, the more subject they will be to power outages and blackouts due to major contingencies on the transmission system.

Or as it was put in a 2003 article⁶ written by famed energy expert and Chief Scientist at the Rocky Mountain Institute, Amory Lovins:

...as one utility executive notes, the emerging policy consensus — that we need to build more and bigger power lines because usage has outpaced capacity — is as wrong as prescribing bloodletting for a patient with a high fever. It reflects a fundamental misunderstanding of what is amiss.

In fact, more wires may make cascading failures more likely and widespread. And they're almost always slower and costlier than three functionally equivalent alternatives: using electricity efficiently, letting customers choose to tailor their usage to price, and decentralized generation.

And as Dr. Vannevar Bush⁷, one of the 20th century's most brilliant electrical engineers predicted nearly forty years ago:

The more complex a society [or a system], the more chance there is that it will get fouled up Power systems have grown enormously and have become interconnected over vast regions. And we have had two severe blackouts and are undoubtedly headed for more.

⁶ http://www.rmi.org/images/PDFs/EnergySecurity/E03-06_TowerDsnFlaws.pdf

⁷ Head of the Office of Scientific Research and Development in World War II, he later served as Chairman of the MIT Corporation (Board of Regents)

Myth 6: Transmission needs additional incentives

In 2006 FERC adopted regulations that promote transmission investment through the allowance of generous financial incentives.⁸ The regulations allow transmission developers a higher return on equity (usually 50-200 basis points), recovery of construction work-in-progress, recovery of abandonment costs and include an advanced technology “adder”.

Since adopting these new regulations, FERC has approved twenty-seven of the thirty three transmission projects that have sought enhanced rates of return⁹. Those twenty seven projects are valued at \$27 billion dollars and if constructed, would cover 8,000 miles. Only three projects have been turned down for these enhanced returns.

Myth 7: Demand Growth dictates investment in new transmission

According to the Energy Information Administration, in 2008 electric demand actually fell by 1.6% and in 2009 it is expected to fall by another 1.8%¹⁰. Over the next two decades, EIA expects average residential demand growth per capita to slow further, with overall growth increasing at a rate of around 1% per year.

If the current economy is any indication, demand growth may not rebound to previous growth levels for quite some time. In the meantime, aggressive implementation of energy efficiency standards will further blunt demand growth. According to the American Council on an Energy Efficiency Economy (ACEEE):

In total, the energy efficiency provisions in H.R. 2454 could reduce U.S. energy use by 4.4 quadrillion Btu's, which accounts for about 4 percent of projected U.S. energy use in 2020.... By 2030, these energy efficiency savings grow to 11

⁸ July 2006, FERC Order No. 679 pursuant to the Energy Policy Act of 2005

⁹ <http://www.eia.doe.gov/conference/2009/session4/Agarwal.pdf>

¹⁰ EIA forecasts available at <http://www.eia.doe.gov/oiaf/forecasting.html>

quadrillion Btu's, accounting for about 10 percent of projected U.S. energy use that year.¹¹

ACEEE goes on to call for increasing the energy efficiency component of the Combined Efficiency and Renewable Energy Standard with H.R. 2454 to 10% savings by 2020 and devoting one-third of electric utility allowances to efficiency. They estimate that this strengthened energy efficiency component would increase these 2030 energy savings by about 25 percent. These investments in energy efficiency produce green jobs, save consumers money and are a better way to reduce carbon emissions than investment in expensive and intrusive investment in transmission.

Myth 8: FERC sites gas lines, transmission is a natural evolution

The comparison between gas transmission lines and electric transmission lines is inapposite. Transmission lines, which are strung on towers that range in height from 10-18 stories (compared to a 6 foot high or buried gas line) are visually intrusive, particularly in areas that aren't highly developed or industrialized. The 200 foot rights-of-way required by most transmission companies require regular maintenance and clearing, helicopter servicing for painting or visual inspection, and access roads. In addition, transmission conductors emit an electric field that crackle and pop during most months of the year.

From an engineering perspective, the comparison is even less appropriate. The flow of natural gas can be directed and controlled, the fuel can be stored, and the source and destination easily identified. Electric power, on the other hand, cannot be controlled or directed over one path rather than another. Further, it cannot be stored in bulk; it must be used instantaneously as it is created. But the most important difference between gas

¹¹ <http://aceee.org/energy/national/index.htm>

transmission and electric power transmission systems is that gas transmission is essentially point-to-point, whereas electric transmission is through a highly integrated, extremely complex grid. As an electric engineer told us recently:

There is a kind of grid in the gas production field itself, and certainly at the customer distribution end. But it moves long distances between the gas fields and local distribution systems through a series of point-to-point pipelines, with *no connections between them*. Electric power, on the other hand, moves over extensive grids composed of many thousands of individual transmission lines. The grids themselves have literally thousands of nodes or junctions, and uncounted parallel paths. The difference in complexity between gas and electric systems is comparable to the difference between a flashlight's electric circuit, and the guidance system of the space shuttle.

Myth 9: Environmentalists agree we need more transmission, fast

Not everyone thinks transmission is the answer – and to the extent that environmental groups do support new transmission policy, that support is limited to lines that would enable the rapid deployment of renewable energy generation. In a recent letter to Carol Browner and congressional leadership, environmental organizations warned:

Piecemeal energy policy –especially electric transmission policy reform—in advance of a comprehensive national climate regime can have the real but unintended effect of facilitating *more*, not less, greenhouse gas pollution.

For this reason, many environmental groups believe a federal transmission siting provision could do more harm than good unless it is part of a comprehensive climate strategy that puts strong and enforceable carbon regulations in place.

Conclusion

Instead of new FERC siting authority, what we really need is federal policy that directs Integrated Resource Planning approach to energy planning at a state, regional and

federal level. We should look at demand, supply and transmission in concert, without being limited to or predisposed toward investments in transmission.

If Congress does choose a federal approach to transmission siting, it should require:

1) **An Integrated Resource Planning approach** --Energy solutions, be they new generation, transmission or demand side options should be reviewed together. The solution that best solves an identified problem, with the lowest environmental and economic impact, taking into account all costs, should be chosen.

2) **An open and inclusive process** – A federal process should include a thorough review of alternatives, and not be RTO-driven. Stakeholders should also include state utility commissions, environmental organizations and interested localities. And participants should have access to data resources to fully participate.

3) **Limited federal siting authority that targets transmission projects that directly enhance access to renewable generation** –If the problem is getting renewables on to the grid, then having strong carbon controls in place and requiring a greenhouse gas interconnection standard prior to implementation of federal transmission authority is critical.

4) **Genuine land and environmental protections** - Damages to private and public values from development of existing and new rights of way should be minimized and appropriately mitigated.

A number of transmission titles have been introduced to date, some try to target renewables while others provide for grid expansion regardless of the generators that would benefit. Congressman Inslee's title does include a greenhouse gas interconnection

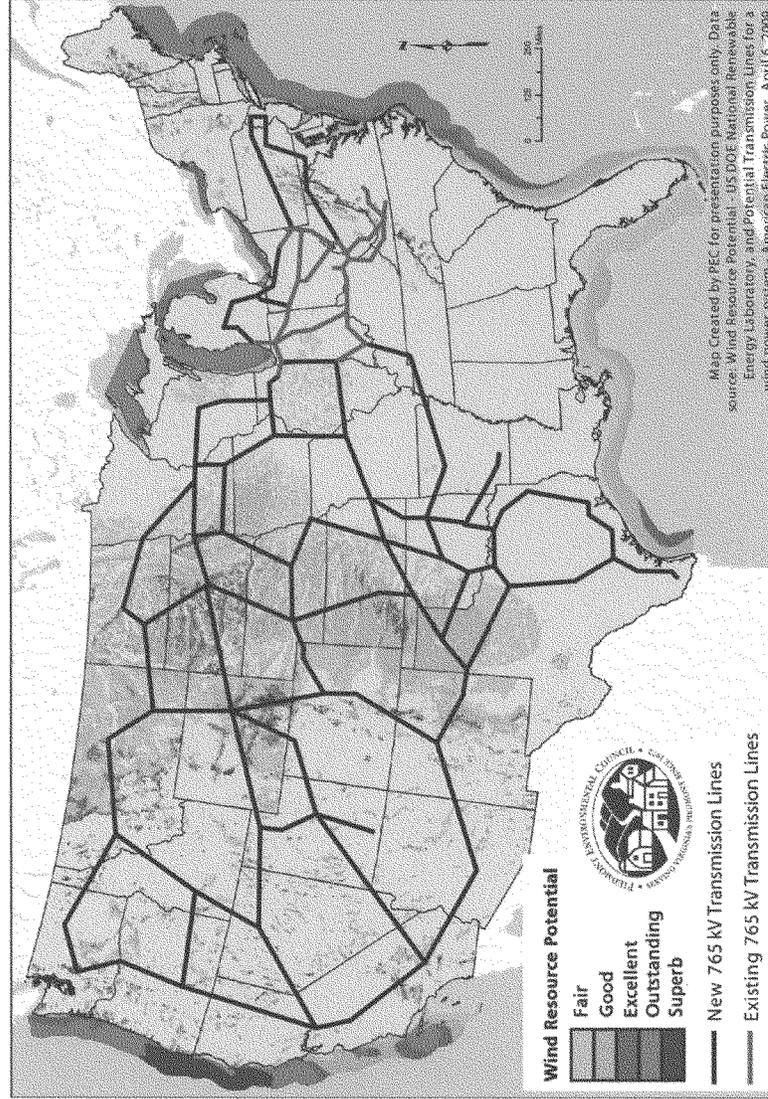
standard, and we have spoken with his office about the need to include provisions for avoidance of transmission siting on lands conserved through a conservation easement. Subcommittee Chairman Markey and Committee Chairman Waxman have focused their transmission title on planning and setting national objectives on the deployment of renewable and other zero-carbon sources. In the Senate, the titles appear more transmission-first oriented. On the positive side, Senator Reid's title includes a 75% renewable reserve and Senator Cantwell has authored language that would impose an alternatives analysis at an early stage of the planning process and a greenhouse gas interconnection standard into Senator Bingaman's title. We are grateful for those efforts and hope to continue to work with Senators and Members to achieve a balanced energy program.

However, if we fail to change the policies and we continue on this rate payer financed experiment in massive grid expansion, we run the very real risk of building a gold-plated, highly intrusive system that benefits old ways and methods, while deterring new investment in energy efficiency and renewable energy going forward. What is worse, in some cases we are planning these lines in non-inclusive manner that ignores adverse impacts and produces results that are unnecessary and unfair. If we just plan for transmission, transmission will be all that we build. And in the end many of your constituents will be left living beneath an aluminum sky.

Thank you again for this opportunity to testify. I would be happy to answer any questions you may have.

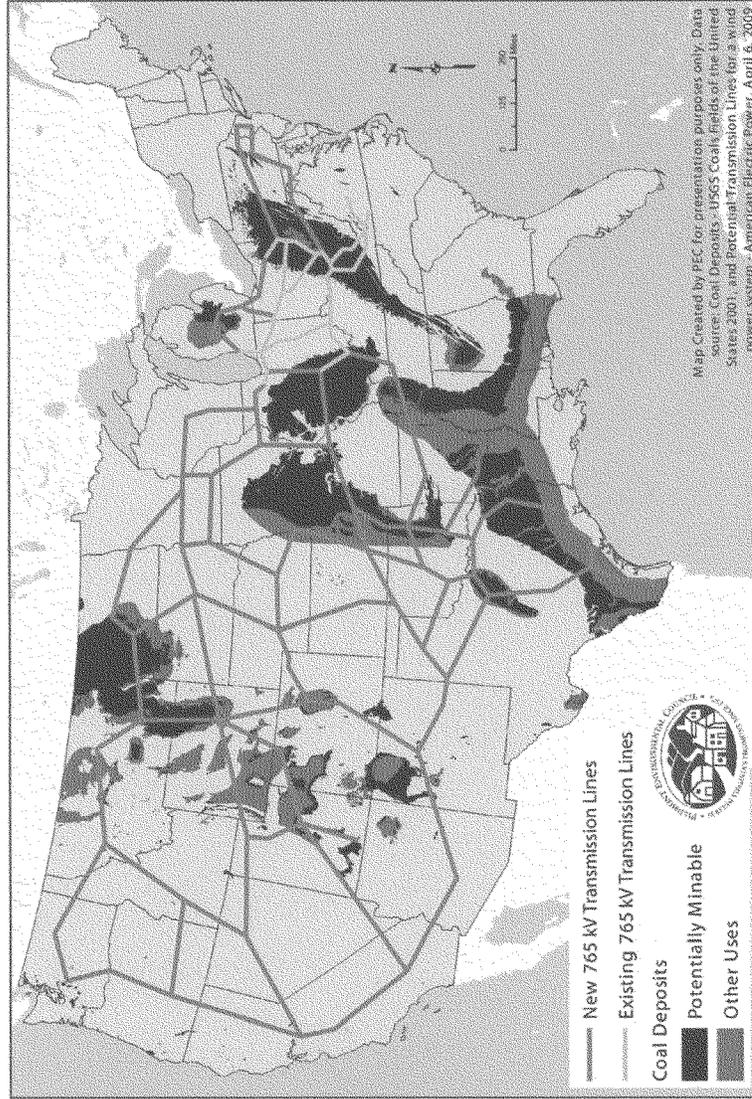
Map 1

AEP Conceptual Transmission Plan for Wind Energy



Map 2

...or is it for Coal?



Mr. MARKEY. Thank you, Mr. Miller, very much.

And other final witness is David Joos. He is the president and chief executive officer of CMS Energy, and chief executive officer of its principal subsidiary, Consumers Energy.

We welcome you, sir.

STATEMENT OF DAVID JOOS

Mr. JOOS. Thank you, Mr. Chairman.

And thank you also for pronouncing my name properly. I appreciate that.

I appreciate the opportunity to address the subcommittee this afternoon. Consumers Energy, our principal subsidiary, serves 1.8 million electric customer; 1.7 natural gas customers in lower peninsula of Michigan.

I would suggest that we have a bit of a unique opportunity. Having developed, owned, and operated transmission assets along with distribution and generation assets for a century, Consumers Energy now no longer owns transmission assets. We sold our transmission system in 2002, and it is now independently operated.

We therefore appreciate the difficulty in siting new transmission and support Federal backstop authority for new interstate lines as a last resort. We also see a need for new transmission in Michigan to interconnect new wind resources that are being developed in the Thumb in particular and along the Lake Michigan shoreline as part of the renewable portfolio standard compliance effort in the State of Michigan.

We believe new transmission development should meet three key commonsense principles. Number one, benefits of proposed projects should exceed the cost by a reasonable margin. Number two, proposed projects should be similar or should be superior to other alternatives, which would include other transmission solutions, distribution solutions, perhaps lower-voltage transmission solutions and generation solutions. And finally, costs ought to be fairly allocated to the beneficiaries of the project as determined through the planning process.

I would concede that these principals are complex to apply and therefore need an independent planning authority of some sort to apply them, a regional transmission organization or a group of RTOs, for example, to conduct the evaluation.

They cannot be objectively performed by market participants, including independent transmission owners that have a vested interest in new transmission. In our view, overly generous FERC incentive policies have created a rush to invest in transmission, often not justified on a cost-benefit basis. I provide some specific Michigan examples within my written testimony and won't go over those now.

Fortunately for new intrastate projects in Michigan, we have a certificate-of-need process that fully vets these projects before allowing condemnation. I suggest that might be a model that is appropriate at the Federal level as a Federal backstop.

Now there are proposals to build massive new high-voltage infrastructure over the entire Eastern Interconnect, the so-called overlays. Part of that, a \$3.2 billion 765 KV project largely in Michigan has already been evaluated by the Midwest Independent System

Operator and determined not to meet a cost-benefit test for the State of Michigan.

A number of independent system operators and planning authorities in the Eastern Interconnect recently studied a joint coordinated system plan that was referred to earlier involving \$56 billion high voltage overlay. Some have referred to it as the equivalent of constructing an interstate highway system. That study concluded that Michigan would receive virtually no benefit at fairly large cost. Looking just at consumers customers, if cost were spread a "postage stamp basis" to all our customers, we would pay about \$159 million a year of increased cost for roughly a \$2 million annual benefit. I would submit that Michigan simply can't afford that.

Another \$10 billion to \$12 billion project that has been proposed to bring wind power from the Dakotas to as far east as Chicago, of course, does not reach Michigan, but further, when the cost of that transmission is included in the equation, Michigan-based generation is less expensive to develop. On that score, we agree with the 10 Northeast and Mid-Atlantic Governors with regard to the potential implications on developing renewable resources locally.

Let me be clear, we don't object to such projects if the benefits exceed the cost by a reasonable margin; reasonable alternatives have been considered; and the costs are spread appropriately to the beneficiaries. That might be, for example, Dakota wind developers or purchasers of that power who need it meet their own standards.

Finally, Michigan transmission rates today are four times what they were in 2002 when we sold the system. Even without these overlay projects, we are forecasting they will increase by another 50 percent from today's rates over the next 6 years. Transmission investment is occurring in the State of Michigan.

We don't feel that FERC rate making oversight currently is sufficient in States where transmission is independently owned and therefore not subject to State regulatory oversight. That situation, along with overly rich incentives, are causing in our view transmission development that is sometimes not in the best interest of our customers.

In summary, we think targeted transmission investment is needed both in Michigan and nationally. We believe that planning and evaluation by our RTOs or groups of RTOs that are independent from market participants is an appropriate way to pursue that. And we think three key principals need to be followed: One, benefits exceed cost by reasonable margin; two, reasonable alternatives have been considered; and three, the costs are appropriately allocated to the beneficiaries.

Thank you again.

[The prepared statement of Mr. Joos follows:]

Testimony by David W. Joos
to the U.S. House Energy and Commerce Committee,
Subcommittee on Energy and the Environment
June 12, 2009

Good morning. My name is David Joos, president and chief executive officer of CMS Energy Corporation, headquartered in Jackson, Michigan. Our principal subsidiary, Consumers Energy, provides service to 1.8 million electric customers and 1.7 million gas customers in Michigan's Lower Peninsula.

Thank you for this opportunity to testify on The Future of the Grid: Proposals for Reforming National Transmission Policy. This hearing is timely. The electric industry in the United States is on the verge of major transformation. Like all change, this represents a mix of potential benefits and significant risks.

Background

Consumers Energy offers a unique perspective on the issue this subcommittee is examining. We are one of the few electric utilities who developed, owned, and operated electric transmission facilities for a century, but are no longer transmission owners. In 2002, in response to prompting by the FERC through Order 2000 and new state energy policy, we sold our transmission system to an independent entity: TransElect, LLC. That system is now owned by ITC Holdings Corporation. Once we sold our system, our perspective shifted from a transmission-owning utility company to a transmission-dependent one. So you could say we see the issues from both sides of the street.

Our long experience gives us an appreciation of the importance of a robust transmission system. Further, we are keenly aware of the difficulties in building or expanding a transmission system. Our last attempt at developing a major interstate line was in the early 1990s when we proposed building a new transmission line from southwest Michigan to northern Indiana, connecting Consumers Energy's transmission system with Public Service Indiana's system. This proposed new line offered a new route for bringing electric power in and out of Michigan. However, local "not in my backyard" opposition delayed and ultimately led to the cancellation of the project despite anticipated benefits to the state as a whole.

An upside from this experience was the subsequent passage of siting legislation by the Michigan Legislature to address just such a situation. This legislation put in place a stringent needs analysis at the state regulatory level for proposals designed to protect and enhance essential infrastructure. That process continues to function well today.

To be clear, Consumers Energy is supportive of the development of new transmission infrastructure if:

1. The benefits exceed the costs by a reasonable margin.
2. The proposed project is superior to reasonable alternatives.
3. The costs are fairly allocated to the recipients of the benefits.

Allow me to expand upon these principles in the context of the planning, cost allocation, and siting of new transmission projects, as well as protecting customers from unjustified costs.

Planning

With regard to planning, a thoughtful, objective process must be utilized. This needs to demonstrate not only that the margin by which benefits exceed costs is reasonable, but also that other viable alternatives have been fully considered before a project moves forward. These alternatives could include local generation, distribution and alternative transmission projects.

We believe this planning should be conducted by an independent planning authority such as a Regional Transmission Organization, or a group of RTOs across a larger geographical area, rather than left to an individual transmission owner or a single state. The logic of this approach should be readily apparent. An RTO is charged to be independent and not have a vested interest in the outcome.

Transmission owners, even “independent” companies who do not also own generation or distribution assets, are clearly not objective parties to the process. In fact, independent transmission companies have a vested interest in transmission solutions in lieu of other alternatives. Capital investment in transmission is their growth vehicle. Further, overly generous FERC policies designed to incent investment in new transmission have created

a rush to develop projects for investment opportunity even when they don't represent optimum or even cost-effective solutions for customers.

We had a recent example of this in Michigan, with the proposed AEP-ITC Great Lakes 765 kV loop. This 700-mile, \$3.2 billion project would have added an additional \$640 million in annual transmission costs. The Midwest ISO's analysis concluded that Michigan customers stood to benefit by \$5 million a year in reduced generation costs. However, this \$5 million is before considering Michigan's share of the \$640 million of annual transmission cost, which resulted in this project failing to meet the Midwest ISO benefit/cost test. Further, the MISO identified that most of the benefits of the proposed Great Lakes 765 kV loop could be realized for a small fraction of the cost through a few 345 kV upgrades. Nevertheless, the proposed 765 kV loop continues to be included in massive high voltage infrastructure proposals by transmission developers.

Another example of the perverse incentive to build regardless of the benefit can be illustrated by an ITC transmission proposal to construct an underground 14-mile line at a cost of \$150 million in southeastern Michigan to resolve an alleged reliability problem. Consumers Energy and Detroit Edison challenged the prudence of ITC's solution. Detroit Edison proposed two solutions that would resolve ITC's alleged problem at a fraction of the cost: \$2.5 to \$5 million. Consumers Energy argued that reasonable and less expensive alternative overhead routes had not been considered in the development of ITC's proposal. The Michigan Public Service Commission ruled that ITC had not provided sufficient evidence that the quantifiable and non-quantifiable benefits of the line

would justify its construction. The moral of the tale is that the Certificate of Need process in Michigan works. In this case, it protected the customer from \$30 million in unjustified annual costs. This stringent review process needs to be replicated at the Federal Energy Regulatory Commission level.

Cost allocations

The RTO planning process needs to ensure that costs are not only prudent but are allocated fairly among the beneficiaries, whether that's the generator or the ultimate customer. Cost allocation should be a result of the planning process. Once a decision is made to go forward with a project, it should be determined through the planning process who benefits and, therefore, who pays. Bottom line, customers should not pay for something that does not benefit them. Customers in states like Michigan that are developing generation and transmission to serve the needs of the state should not be charged additional costs for transmission that is remote and does not provide demonstrable benefits to the customers.

For example, utilities and independent developers are planning significant new investment in renewable generation in the state, principally wind generation. There is viable wind in Michigan's "Thumb" as well as in several areas along the Lake Michigan shoreline. We will need new transmission infrastructure to interconnect this power to the existing grid, and welcome proposals to develop it. Michigan customers will benefit from these projects, which are needed to comply with new state renewable portfolio requirements, and Michigan customers should bear the costs associated with the optimum

solution to this need.

At the same time, transmission developers have proposed massive high voltage projects such as the “Green Power Express” to bring wind energy from the Dakotas to as far east as Chicago. It and projects like it have been likened in scale to the interstate highway system developed in the 1950s. The estimated cost of the “Green Power Express” is \$10 billion to \$12 billion.

The notion of harnessing vast quantities of wind energy on the Great Plains and transporting it over 3,000 miles of transmission lines to population centers in the Midwest and East is, without economic analysis, exciting and appealing on many levels. Perhaps it makes economic sense for customers in some of those locations. However, the Brattle Group study that has been used to tout the benefits of power from the wind-rich Dakotas makes it clear that the cost of the massive transmission investment is not included in its analysis, nor is the cost of the combustion-turbine back-up power needed for an intermittent energy source such as wind power. Including these necessary costs about doubles the cost of power on a delivered basis.

Similar to the conclusion of ten Governors of Northeast and Mid-Atlantic states, in Michigan we have analyzed that our wind resources can be developed at a lower cost to customers than the cost of wind power imported from the Dakotas once the cost of transmission is included. In addition to the cost savings, Michigan will benefit from the jobs and tax base associated with in-state wind development.

Siting

Siting, as discussed above, is potentially the most contentious issue and requires maximum transparency in the process. Any federal backstop provision must be judiciously applied, allowing for adequate local input and ensuring that reasonable alternatives are evaluated. Michigan's law offers a good model for consideration.

Protect Customers

Since Consumers Energy sold its transmission system, our customers' transmission costs have escalated significantly without demonstrable benefit. Transmission reliability in Michigan is excellent today, but it is not much different than it was a decade ago. Nor does Michigan suffer from significant transmission congestion issues.

Transmission rates in our service territory are today about four times what they were in 2001. The Administrative and General costs included in our rates have increased by a startling 461% just since 2003. Current proposals to further upgrade and expand the system would double rates again over the next decade, and this does not include the costs of interstate projects that some would have allocated to customers across the Eastern U.S.

There is no doubt that some additional investment in the Michigan transmission system has been needed, as well as additional attention to the operation and maintenance of the system. However, the increase in transmission cost to Michigan customers is not

justified, and portends to continue to increase dramatically if strong oversight is not in place. We don't believe that FERC's ratemaking process, for example, provides for sufficient prudency review of transmission rates in states where independent ownership limits the ratemaking review of state regulators.

In summary, while we are supportive of legislation to facilitate the siting of needed new transmission, we believe strongly that an objective, thoughtful process is needed to assure that the new investment is justified. Planning should be independent, benefits of projects must exceed costs and be superior to reasonable alternatives, and costs should be allocated to the benefit recipients. Further, state regulatory oversight of proposed intrastate projects should be preserved.

Thank you for your attention.

Mr. MARKEY. Thank you, and we thank our entire panel.

I turn and recognize the gentleman from Washington State, Mr. Inslee.

Mr. INSLEE. Thank you.

First, I would like to put on the record a white paper which is quite instructive. It is entitled "Green Power Super Highways," provided by the American Wind Energy Association and the Solar Energy Industries Association.

Mr. Chair, if I may.

Mr. MARKEY. Without objection.

[The information was unavailable at the time of printing.]

Mr. INSLEE. I appreciate that, Mr. Chair.

This does confirm what the witnesses talked about, which is that we have got 300,000 megawatts of wind projects waiting in line essentially to connect to the grid. And they point out that the lack of transmission capacity is also hindering States' ability to meet multiple renewable energy goals, and it just confirms what several the witnesses have testified today.

I want to ask Mr. Detchon about the greenhouse gas interconnection standard that your proposal has incorporated that basically would essentially allow Federal backstop authority. It would encourage it in relationship to those sources that are low and zero greenhouse-gas-emitting generators. Can you tell us how you envision that working?

And by the way, would it help in at least some sense some of the concern of the Northeast States who don't want to see their off-shore wind projects intruded upon by, say, if we can call it dirty sources from far away intruding on their corridor.

Mr. DETCHON. Thank you for the question.

I think there is confusion how a greenhouse gas interconnection standard would work. In the first place, it is an interconnection standard. It doesn't govern what electrons are on the line because, as everybody has pointed out, you can't distinguish between green and brown electrons.

But if we are going to provide some additional authority to site and pay for special new transmission lines to benefit renewable energy, let's make sure that the generation that is hooked up to it is not conventional coal. And so what we have suggested is that, since you are going to need probably gas to balance renewable energy on these lines, that up to a single-cycle gas turbine, emission level would be acceptable to connect to these lines, but above that would not. And that seems like a fairly straightforward way to approach that.

With regard to the question of competition with local resources, I think what should be important and I think inevitably would happened if the States are driving this planning process even on an interconnection-wide basis is that they take into consideration State policies considering local resources and use delivered prices, as was mentioned in the last panel, as the basis for comparing different resources. I think that is a very straightforward way to make sure that the competition is fair.

Mr. INSLEE. I will ask you what I hope is a rhetorical question, but in the bill that I have introduced, we have tried to preserve the bottom-up planning, so that the States and regions really do the

planning rather than a cramdown from the Federal Government. Do you think that is a fair characterization of the proposals that we have made?

Mr. DETCHON. No, absolutely. And I think that there has been a lot of talk about top-down or Federal intervention here, but I think the legislation that you have proposed, Congressman, establishes mechanisms for States to work collaboratively addressing these regional issues. And those decisions will be executed with the assistance of FERC, but FERC would only be able to step in if the States are unable to reach a plan.

Mr. INSLEE. And could you suggest any other solutions to the concern that the gentleman from Massachusetts expressed about this offshore wind being crowded out, if you will? I perceive that greenhouse gas interconnection standard would help solve that problem, because it would essentially allow the use of the Federal backstop authority for clean source, green sources of energy. I think that would help solve that problem. Do you agree with that, and is there anything else you could suggest that would help solve that concern?

Mr. DETCHON. Well, I think a stronger step which Mr. Miller suggested, which would be to have Federal intervention on the loading orders for the use of different kinds of resources, I doubt that that would be politically saleable right now. So I think, within the context of what is doable, I think the approach you outlined is about as strong as it could be.

I might add the greenhouse gas standard to a certain extent over time gets overtaken by the requirements of the cap-and-trade legislation, assuming that that is enacted, but I think your legislation reflects that as well as.

Mr. INSLEE. Thank you.

Thank you, Mr. Chair, for your cooperation.

Mr. MARKEY. The gentleman's time has expired.

The Chair will recognize himself for a round of questions.

Let's go down the line and each of you could answer yes or no. Do you support giving FERC the authority to modify any transmission plans that are established through bottom-up regional planning processes?

Mr. Izzo.

Mr. IZZO. I would not.

Mr. MARKEY. Mr. Joos.

Mr. JOOS. Nor would I.

Mr. MARKEY. Mr. Nipper.

Mr. NIPPER. No.

Mr. ENGLISH. No.

Mr. DETCHON. I think that if the plans are developed by a broad array of States in the way we are describing, I would agree no.

Mr. MARKEY. No.

Mr. Welch.

Mr. WELCH. Bottoms-up is each State brings it up, or how do you envision that?

Mr. MARKEY. Regional planning that is agreed to by the State. Should the FERC be able to modify a regionally agreed-upon plan?

Mr. WELCH. If the planning process is independent, no. If the planning process is not independent, yes.

Mr. MARKEY. "Not independent" meaning?

Mr. WELCH. That it is influenced by market participants and other political entities. The planning process to me—

Mr. MARKEY. Even if the State governments agree to it?

Mr. WELCH. I believe that all the transmission within the State that is not regional in nature should—the State should have as much authority over it as they want when we develop regional transmission, which is for the good of the region or the good of the country.

Mr. MARKEY. Should the FERC be able to override that original plan agreed-upon by those States?

Mr. WELCH. I stand by what I said. If it is done by an independent planning authority, yes. I am saying no. And if it is not, yes.

Mr. MARKEY. Mr. Miller.

Mr. MILLER. I think one of the concerns we would have if FERC were involved, that the right of appeal ought to be not only limited to the transmission proposers but also those with other perspectives. Right now—

Mr. MARKEY. Under those circumstances, you would give FERC the authority to modify a transmission plan?

Mr. MILLER. Well, there are legitimate Federal issues with anything involving interstate transmissions, but if you are going to create that, it ought to be equally available to both the proponents and those that have concerns.

Mr. MARKEY. OK. Let me go down the line again, how many of you would support a greenhouse gas interconnection standard of the type proposed by Mr. Inslee?

Can we go down and ask how many of you would support that?

Mr. IZZO. I would not for the simple reason that a greenhouse gas interconnection standard does not speak to existing carbon-intensive generation being able to piggyback.

Mr. MARKEY. Thank you.

Mr. Joos.

Mr. JOOS. I will have to qualify my answer, I am not 100 percent sure the specifics of the standard. I haven't read them.

I would say we have, of course, standards for interconnecting all kinds of renewable capacity already. I would not be supportive of something that limited the use of the transmission line to certain types of technology simply because I agree with what has been said earlier, that you can't label the electrons.

Mr. MARKEY. Thank you.

Mr. Nipper.

Mr. NIPPER. No, sir, we would not.

Mr. MARKEY. You would not.

Mr. English.

Mr. ENGLISH. I believe that the bill in itself, since this is going to be part of the legislation, the bill in itself takes care of that issue, so no.

Mr. MARKEY. No.

Mr. Welch, I know you do support it. Mr. Welch.

Mr. WELCH. With my company, we are an independent transmission company. You make the policy, we are going to support the policy.

Mr. MARKEY. Mr. Miller.

Mr. MILLER. I think it is an interesting concept would apply to lines that feed into the grid, but unfortunately, the authorities that are being discussed would apply to transmission that is not simply for bringing new generation on to the grid but for expansion of the grid as a whole. So I would have to say no.

Mr. MARKEY. And I will let you answer for the record, Mr. Detchon.

Mr. DETCHON. Just to touch on these two points, we are talking about specially authorized renewable energy transmission lines that would be feeding into the larger grid, not to the larger grid. And I agree with Glenn that if this is attached to H.R. 2454 and enacted, then some of the reason for it goes away. But there is always the possible that this will become disconnected from that bill, and as a free-standing measure on transmission, we think that a greenhouse gas standard would be important.

Mr. MARKEY. How many of you would limit Federal authority to only lines that affect renewable electricity that is generated? How many would limit Federal authority just to that?

Mr. IZZO. I would do quite the opposite, Mr. Chairman. I would limit Federal siting authority to lines that affect reliability.

Mr. MARKEY. Reliability, ok, thank you.

Mr. Joos?

Mr. JOOS. I would limit Federal authority as only a backstop provision and rely on local and regional planning as the primary mechanism.

Mr. MARKEY. Mr. Nipper.

Mr. NIPPER. Assuming the backstop authority, no, we wouldn't limit that.

Mr. MARKEY. You would not limit.

Mr. English, would you limit?

Mr. ENGLISH. And again, backstop.

Mr. MARKEY. MR. DETCHON, WOULD YOU LIMIT IT JUST TO RENEWABLES?

Mr. DETCHON. What I would say is that, if we are going to create special new authorities, they ought to be targeted at the problem, which is renewables.

Mr. MARKEY. Mr. Welch.

Mr. WELCH. I would not limit the Federal backstop siting authority.

Mr. MARKEY. Mr. Miller.

Mr. MILLER. I think we would support limiting it and also respecting the Fourth Circuit opinion that we were involved in.

Mr. MARKEY. Mr. Izzo, do you support Federal back-up siting authority for lines for any reason other than reliability?

Mr. IZZO. No, I would not.

Could you talk a little bit about that first map which Mr. Miller put up that showed very rich wind resources along the East Coast of the United States. With the exception of some portions of the Great Lakes and out on the West Coast, it looks like it has the greatest potential for renewable electricity generation in our country.

Mr. IZZO. You are absolutely right, Mr. Chairman.

And as I may have mentioned, we pursuing 150 megawatt wind farm. And as you mentioned, we can do that 20 miles out and still be within 140 feet of water. That is not to underestimate the challenges of construction and operations and maintenance cost. We expect to fully bear the cost of the short-haul transmission and would be opposed to having a nationwide support for a long-haul transmission and be unfairly disadvantaged.

Mr. MARKEY. Well, what could happen if we take Mr. Miller's charts—I guess they are not Mr. Miller's charts. They are AEP's maps that have been put together. Is that right, Mr. Miller?

Mr. MILLER. The transmission map is AEP's. We overlaid it on wind and then the coal resource maps.

Mr. MARKEY. If that transmission plan was implemented, it would bring a transmission line in from the Midwest very close to the East Coast. What impact might that have on your planning for renewable electricity off of the coastline or other parts of New Jersey?

Mr. IZZO. We would stop planning for that.

Mr. MARKEY. Why would you stop?

Mr. IZZO. Well, because we would not be able to be competitive with the cost of the wind if it is not burdened by the cost of transmission. So the wind from the Midwest if it does not face the transmission charge would be cheaper in that case.

Mr. MARKEY. Now you are up in the Great Lakes, Mr. Joos.

Could you talk about that as well in terms of the potential renewables coming in off the Great Lakes and what impact that could have for Michigan and what could happen if, instead, power is wheeled in from other parts the country through Federal preemption and Federal eminent domain takings?

Mr. JOOS. It is a bit similar but maybe two aspects to what Mr. Izzo said.

First of all, it is clearly windier in the Dakotas for example that it is Michigan. Michigan has wind resource even on land, but it is not as windy in the Dakotas. So instead of 42 percent roughly capacity factors, you might see in the range of 30 percent capacity factor.

However, once the cost of transmission to get the power from the Dakotas to Michigan is taken into account, it is cheaper to develop it in Michigan.

Now you mentioned offshore, Michigan does have a very strong offshore wind resource. Unfortunately, offshore is still about twice as expensive to develop than onshore resources. So when that calculus is taken into account, we think it makes more senses to develop the onshore resources in Michigan first.

Mr. MARKEY. Now you heard the earlier testimony about the problem getting renewable energy resources from Dakotas over to Minnesota and the blame being laid at the feet of the Federal Government. In that region, do you believe that is one of the main problems that otherwise the regions have been able to harmonize their electricity transmission policies in a way that is viewed as fair to all States?

Mr. JOOS. I am not familiar with specific Federal Government problems that may have come up in Minnesota. My observation is

that the regional planning process has been effective and is a good solution to the problem.

I think as many of us are pointing out, you warp the economics when you start putting effectively free transmission or postage-stamp transmission across broad regions, and then you change the economics dramatically rather than having them compete on a stand-alone basis.

Mr. MARKEY. Now for our audience, when we say "postage stamp," what are you referring to? Why is the phrase "postage stamp" used?

Mr. JOOS. Effectively what a postage-stamp rate is, and it is used an analogy to the Federal postal system, where you put a stamp on a letter, and you can send it anywhere for the same price.

Mr. MARKEY. You could send it from the Dakotas to New Jersey for the same price.

Mr. JOOS. The reality, of course, is the costs are not the same. And when we look at the cost of transmission to move power from West to East, there is a significant cost involved. However, if that cost is ignored and everybody pays the same price regardless of how far it moves, it changes the economics, and yes, Dakota wind would then be more economic on that basis, once the cost of transmission is ignored, than Michigan or the East Coast. We don't think that is the right way to look at it.

Mr. MARKEY. And one of the things that we are really trying to accomplish obviously in the Waxman-Markey bill is to generate renewable electricity and renewable energy jobs generally in all 50 States.

So Mr. Izzo here has a plan to, along with many other people in New Jersey, to generate new renewable energy jobs that help with the employment in his company, but in the State of New Jersey as well. And we don't want to invoke the law of unintended consequences here and have a great revolution, have a standard imposed upon New Jersey and not have the jobs created in New Jersey, especially if they have the richest renewable energy resource right off their shore.

Mr. English.

Mr. ENGLISH. Mr. Chairman, I think you make a good point, but I also suggest one other thing, that it might make more sense, in light of the objective of the legislation and in light of the fact that we are entering into a little different world than we have in the past, that really what we are trying to do here is maximize the amount of renewable energy that we get produced all over this country.

Now the fact of whether it is produced in one State versus another State, as long as it is the most cost-effective way in which we produce it and we can in fact make use of it all across this Nation, I would think would be the ultimate objective.

Now I can understand why some folks may want to look at this very localized, and it may be a very parochial thing, but this is a national piece of legislation. And we are trying to achieve a national objective, and the thing that is limiting us to being efficient is this transmission system.

Mr. MARKEY. Absolutely, and by the way, we couldn't agree more on this.

Mr. ENGLISH. So if you are looking at this map and the fact that we are talking about along the coast, and they may have more wind there, then obviously we ought to be looking, that is where we ought to produce it, and we should use that most cost-effectively. And that should be the driver in where we go. If we can't do that and have to do it out in the Dakotas, then fine, do it in the Dakotas.

But it shouldn't matter whether it is off the coast of Massachusetts or in the Dakotas, as long as we are meeting the Nation's needs, and we are going to have a huge amount of power that is going to be necessary to come from renewable energy if we are going to meet the objectives as outlined in the legislation.

One quick point, I know, I have a home down in South Carolina. It is up on a mountain top. We have a huge amount of wind up there, but I can assure you, if you try to build a wind generator on that mountain, you are going to have a lot of people that are going to be objecting to it, unlike what you will find in the Dakotas.

Mr. MARKEY. Absolutely.

I think the point that Mr. Izzo is making and Mr. Joos as well is that, using this postage stamp analogy, it doesn't cost \$0.47 to really move a letter from New Jersey to New York City. It probably costs less, but the average is \$0.47, so that someone from South Dakota can mail a letter to New York City, and we have communications across the country. That is great, and we accept that. It is the way it should be.

But what Mr. Izzo is saying is that if you do the same thing for electricity and you make it the same price to transmit electricity in from the middle of America to New Jersey as it would be to bring it in off the coastline of New Jersey, then that is going to undermine the economics of all the projects along the East Coast because it hasn't factored in how much it costs to transmit that electricity 1,500 miles all the way into the East Coast market. And so the question then becomes, how many new jobs will be created along the East Coast of the United States if there is no incentive any longer for Mr. Izzo because he is almost bound by his obligation to his shareholders to take all of this very inexpensive but subsidized electricity coming in from the Midwest?

So how do we square this circle, Glenn, so that Mr. Izzo and Mr. Joos and others are not disincentivized to produce renewable electricity within their own service area?

Mr. ENGLISH. Broadbased fair rates, that is basically what you are talking about. The people that are receiving the power, that are using the power, are paying the cost. That is what it really comes down to. If you are not talking about mailing that letter from the Dakotas to some other region of the country, and you are talking about, instead, what it costs to actually mail that letter to that location, that is the real issue that you are coming down to.

Mr. MARKEY. Mr. Izzo, what would you respond to that?

Mr. IZZO. So I would say that, if I looked at just this last year alone, the price difference associated with transmitting power from the plains States to New Jersey, depending upon how busy the transmission lines were, range from \$20 to \$80 a kilowatt hour. Typically, it was \$30 to \$40 a kilowatt hour. That means it would be cheaper for a customer in New Jersey to use a wind farm oper-

ating 25 percent of the time than to use a wind farm operating in the plains 40 percent of the time, because it is the total cost that matters.

If you eliminate transmission, then suddenly the 40 percent time of the Dakota farm looks cheaper, but you have put a burden on the American taxpayer, and you have ended our economic development in that region.

Mr. MARKEY. Well, we want to be fair here, though, right? I mean, that is our goal of the bill. We want to incentivize renewable—this green energy revolution should be everywhere, not just in certain parts of the country. So we need to find a way then to make sure that we don't invoke this kind of consequence that undermines economic development in States that have incredible resources indigenous to them, and that is a real difficult problem here and something we that we have to work through.

I apologize to everyone. I really could spend a whole afternoon with you, and next week I might spend an afternoon with each one of you in working out this issue, because we have to be fair. We have to be fair. We have a big vision, but everyone, every State can actually play a role here. There is actually a role for everyone, and we have to make sure that we render to the East Coast the things that are theirs; the things to the South that are theirs; and the Midwest that are theirs; and the West that is theirs. The prairie, the desert.

And, Glenn, even as you were saying you represent 75 percent of the land mass of the United States, there is an ocean mass, too, that is also out there. And we have to—

Mr. ENGLISH. We do have coastal co-ops, Mr. Chairman.

Mr. MARKEY. That is what I am saying to you, and so I want to make sure those coastal co-ops are able to go out into the ocean and have the incentive—

Mr. ENGLISH. I am with you.

Mr. MARKEY. So we have to work out a fair formula.

So I thank each of you. And we are going to have to stick close together over the next couple of weeks so we can have this conversation and reflect what our national goals are, but with each State, each region, and the history of each State and region; States that are not even States, commonwealths, whether it be Virginia or Massachusetts, have their own traditions in terms of what lands are sacred that might not follow the traditional Federal Lands Act but have just the same impact in terms of the relationship with the history our States.

So I thank each of you, and I am going to turn over the remainder of the hearing to Congresswoman Baldwin who will bring it to a conclusion. Thank you so much.

Ms. BALDWIN [presiding]. I don't get to sit in this chair very often, but I won't make you stay long just because I am enjoying it.

First, a quick comment, and I am construing or interpreting from some of Mr. Welch's testimony that there is a frustration with some of the planning that is occurring at the State-level process. And one of the things that I would just point out, and certainly we have heard some testimony in the first panel about very successful State-level planning, but if you look at Order 890 and this process,

it is really relatively new and I think I would argue hasn't yet been given the chance to play out.

If you look at the area that I am most familiar with, the first time MISO Order 890 planning processes were approved by FERC and then subject to additional compliance requirements was on May 15th, 2008. And thereafter, they had to do a filing in August of 2008, where it was just approved on May 20th, 2009. So you could make an argument that really just 3 weeks ago this is getting underway, and it is a process to be given 12 to 24 months to occur.

So it certainly concerns me to have a characterization of this State and regional planning processes as not being—as being broken or not working when really much of the new focus that is subject to Order 890 is just underway.

I have one question for the panel with regard to, it goes without saying that construction of a transmission super highway will be a money maker for certain parties involved, and we heard the chairman of FERC testify about the economics of transmission siting, and construction as well as the guaranteed rate of return.

And so I guess I would like to ask you all what role, if any, should these entities with profit interest play in the transmission siting and decision-making process? How should we appropriately limit or not the role that they play?

And why don't we go from left to right this time and start with Mr. Miller.

Mr. MILLER. I appreciate that question, that has been one of the most troubling aspects of the planning process in the PJM region. The PJM is essentially, from our perspective, a trade association of utilities who are proposing projects and then ratifying the proposal amongst themselves. They do not, until very recently, have a process that complies with the FERC Order 890. They were looking only at transmission solutions and not at alternatives. And they do not do the kind of balancing of impacts, you know, other issues of the public interest that State utility commissions more clearly have authority to do.

So the current way we do regional transmission planning is very disturbing. The owners of the transmission lines propose projects. There is a reactive approval process, and there is no balancing of other considerations, even within the alternative energy solutions like energy efficiency DSM. They are starting to incorporate those things, but the process is very conservative and very oriented towards producing transmission solutions.

Ms. BALDWIN. Mr. Welch.

Mr. WELCH. Well, to go to your question, first, the frustration that I feel with the planning process is that I would agree with you that Order 890 went a long way, but the one thing that we don't have in MISO or any of the other RTOs, we don't have full participation from all of the affected people. As a result of that, when you are trying to do regional planning, you are not going to get to the solution set that you need, number one.

Number two, like when we had problems in 2003 with the largest blackout that affected this country, we finally came to the conclusion that NERC was funded improperly and wasn't independent in their decision-making for setting reliability standards. As a re-

sult of that, we changed the way NERC was funded. It reports to FERC. It is funded through an assessment through all the utilities, and that assessment is paid to FERC, who then pays NERC, and we have taken the financial incentives of the market participants out of the RTO or, in this case, the reliability council.

So when we talk about independent planning, it is not about some kind of closed-door deal here. It is about getting the financial impacts off the back of the RTO so that they can do the job that they are supposed to do.

Then when we get to that point, you have the question that says, who should participate and which of the rates of return that these companies should earn? I think that the fair thing to say, when you start to build regional projects, that everyone is affected by it; they should be all participating in as financial investors. This shouldn't be just a one-stop, one-person place, but those people should be part of that investment proposition because they are all there to make the grid work and work in a concert way.

When you build a regional grid, you have to have yourself in a position where you can also maintain it. No one company could ever go across thousands of miles, have linemen and line crews, warehouse facilities and everything that we need. So it is going to take the participation of all of those people on the route, but without everyone being there at the table, this gets tough to do. So when you get to that point, whatever the FERC says is just and reasonable; that is what it will be. Ms. BALDWIN. Mr. Detchon?

Mr. DETCHON. I thank you for the question, let me suggest a way to think about cost allocation and rate of return together. Under the current system, private companies enter into agreements to provide transmission, and they go out, and they raise the capital on the markets to do that. So as our regulators consider that, they have to provide the cost of that at the high cost of raising that capital and then a rate of return on top of that.

If the costs are more broadly shared, first of all, you have a guaranteed revenue flow which will reduce the cost of capital to raise the money in the first place. And in the second, and therefore a reduced rate of return to the companies would be justified. So there would be two ways by sharing the cost that you would reduce the cost of building out this transmission, sharing it across a broader range of customers.

Ms. BALDWIN. Mr. English.

Mr. ENGLISH. We have had many complaints about the fact that it is difficult for electric cooperatives to participate in this process both because of the size and the complexity and the type of expertise that is required to participate independently, but also I think a lot of it does come down to the situation that the big entities of the region, quite frankly, are the ones that seem to have the control and the influence or at least feel that they should.

And many of those—so that basically does not have an all-inclusive broad participation locally in designing many of the systems that come forward.

Mr. ENGLISH. So, I think there is much work that needs to be done in the improvements in that, and hopefully we are going to see that in the future, but we need a broad-based planning system in place.

Ms. BALDWIN. Mr. Nipper.

Mr. NIPPER. Yes, ma'am. We would agree with the comments that have been made that it really requires a participation by everyone involved, all the stakeholders, it is varied in our members' views among regions, some a bit better than others, but it really is necessary that everyone be at the table and be participating and their input be counted.

I will say that, following up the comment on the RTO and ISO regions—and they vary a bit, as well, among them; but the opportunities to participate, equally participate in the stakeholder process with some of the other stakeholders, for our members leaves a lot to be desired. I will say that.

And then I will lastly mention the benefits that I mentioned in my testimony about joint ownership, and if there are opportunities, equal opportunities for folks, and yet American transmission company is a good example of this, where an opportunity for broad and joint ownership by multiple entities provides planning and other benefits as well.

Ms. BALDWIN. Mr. Joos.

Mr. JOOS. Well, I might just pick up on something Mr. Miller said.

I think that FERC's incentive policies have created a situation where not only independent transmission companies but integrated utilities that hold distribution, transmission and generation favor investment and transmission for solutions to the problems, even if they are not the most optimum solution. Because frankly the rates of return are higher and the levels of risk are significantly lower than other kinds of investments that might be under State regulatory policy vis-a-vis, for example, what the FERC has put in place. So our concern is you see a rush to invest in transmission.

Now, I want to clarify again there are transmission projects that make sense, and if they make good economic sense, they ought to be supported. I think we have to be careful not to incent investment because of the low-risk, high-return environment vis-a-vis public interest; and therefore, I do think broad public planning of some nature is necessary with broad participation.

Ms. BALDWIN. And Mr. Izzo.

Mr. IZZO. We operate both a regulated transmission and distribution business and an unregulated generation business. And the regulated transmission business provides reliability 99.99 percent of the times through a regional planning process. It works and it works well. And that is regulated and rates are based upon our cost of service.

Our unregulated generation business always has to consider the cost of connecting to the grid as part of its investment strategy and fully bears that cost.

We need to dispel the notion that renewables are not being built because of the transmission system. Renewables are not being built because we are not sending clear price signals. This committee deserves congratulations on doing that through cap-and-trade and through setting an RES.

And now, at the risk of being a little slip, the next thing I expect to hear from people is that if only we had refrigerated freight trains running free of charge from the North Pole, our local super-

market would get its ice cubes through there. It just doesn't make sense to ignore the transportation charges.

Ms. BALDWIN. I want to thank all of you gentlemen again for your time and expertise and your patience.

Before I adjourn, I need to ask unanimous consent that two letters from FERC to Chairman Markey are put in the record. Without objection so ordered.

[The information appears at the conclusion of the hearing.]

Ms. BALDWIN. And with that, our hearing is adjourned.

[Whereupon, at 2:40 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC 20426

OFFICE OF THE CHAIRMAN

June 11, 2009

The Honorable Edward J. Markey
Chair, Subcommittee on Energy and Environment
U.S. House of Representatives
Washington, D.C. 20515

Dear Chair Markey:

I am writing in response to your June 3, 2009 letter seeking information regarding the Federal Energy Regulatory Commission's (Commission) implementation of section 1241 of the Energy Policy Act of 2005 (EPAAct 2005).

Incentive-based ratemaking is an important tool for the Commission to use in appropriate circumstances to spur construction of needed transmission facilities. For example, the directive of Congress in section 1241 that the Commission develop incentive-based rate treatments has been implemented to provide incentives for new transmission facilities designed to connect location-constrained renewable energy resources to load centers. Renewable energy resources such as wind, solar, and geothermal are usually found in economically developable quantities at dispersed locations remote from load centers. For this reason, there are often high costs associated with developing transmission facilities needed to deliver power from such resources. Incentive-based rates are one way the Commission can support the development of these facilities. While section 1241 has been effective in encouraging developers to come forward with these projects, I have previously testified before Congress that I believe additional authority is needed to ensure that these facilities can be sited and their costs can be fairly allocated. Incentive-based rates also facilitate the Commission's compliance with section 1223 of EPAAct 2005, as the Commission has used this authority to incentivize advanced transmission technologies to increase efficiency, enhance grid operations, and allow greater grid flexibility.¹

Incentive-based ratemaking encompasses many techniques, including cost recovery associated with construction work in progress (CWIP), recovery of costs

¹ See, e.g., *New York Regional Interconnect, Inc.*, 124 FERC ¶ 61,259 (2008); *Northeast Utils. Serv. Co.*, 124 FERC ¶ 61,044 (2008); *Pepco Holdings, Inc.*, 125 FERC ¶ 61,130 (2008); and *PacifiCorp*, 125 FERC ¶ 61,076 (2008).

associated with projects that are abandoned for reasons beyond the developer's control, and incentive return on equity (ROE) adders. Different incentive techniques, or combinations thereof, are appropriate in different circumstances. In evaluating requests for an incentive ROE adder, I believe that it is particularly important to focus on investments beyond those projects that are required to meet the minimum standard for good utility practice. In my view, incentive ROE adders should be targeted to non-routine investments that provide incremental benefits such as those associated with the types of projects described above.

Consistent with the directive of Congress, the Commission issued a rule (Order No. 679²) to implement section 1241 of EPAct 2005. Under the approach codified by Order No. 679, the Commission has granted incentive-based rate treatment in a number of cases,³ and has denied requests for incentives in others.⁴

The responses to your specific questions, which are set forth below, provide further detail regarding the Commission's implementation of section 1241.

1. For how many transmission projects, and for how many total miles of transmission lines, has FERC approved incentive rates? What is the financial value of the incentive rates that each utility has received for these projects?

FERC has approved incentives under Order No. 679 for a total of 58 transmission projects, totaling approximately 10,700 miles of transmission lines with estimated costs of \$40.7 billion. Within that set, 50 projects received some form of ROE incentive, often together with other incentives.⁵ The weighted average ROE adder for the projects granted incentives was 130 basis points (or

² *Promoting Transmission Investment through Pricing Reform*, Order No. 679, FERC Stats. & Regs. ¶ 31,222, *order on reh'g*, Order No. 679-A, FERC Stats. Regs. ¶ 31,236 (2006), *order on reh'g*, 119 FERC ¶ 61,062 (2007).

³ *See, e.g., Green Power Express LP*, 127 FERC ¶ 61,031 (2009); *Pioneer Transmission, LLC*, 126 FERC 61,281 (2009); *Tallgrass Transmission LLC and Prairie Wind Transmission, LLC*, 125 FERC ¶ 61,248 (2008); and *Potomac-Appalachian Transmission Highline, L.L.C.*, 122 FERC ¶ 61,188 (2008).

⁴ *See, e.g., Commonwealth Edison Co.*, 125 FERC ¶ 61,250 (2008); *NSTAR Elec. Co.*, 125 FERC ¶ 61,313 (2008); *Trans-Allegheny Interstate Line Co.*, 126 FERC ¶ 61,286 (2009).

⁵ The other eight projects received cost recovery associated with CWIP and/or project abandonment costs.

1.30 percent). If all of the projects are completed as planned at their projected costs, the financial value of these ROE adders to the utilities would be approximately \$264 million, after tax,⁶ assuming that every project had a capital structure consisting of 50 percent debt and 50 percent equity. Please see Attachment A for a list of all of the projects and approved incentive rates.

2. Which projects with approved incentive rates currently are being developed and are these projects on schedule?

All projects are currently on schedule except for the Arizona portion of Southern California Edison Company's Devers to Palo Verde line (121 FERC ¶ 61,168), New York Regional Interconnect, Inc.'s project (124 FERC ¶ 61,259), and Central Maine Power Company's and Maine Public Service Company's joint Maine Power Connection project (125 FERC ¶ 61,182). There are also several projects where a construction timeline has not yet been fully developed under the regional transmission planning process, including American Electric Power Company's and Duke Energy Company's joint Pioneer project (126 FERC ¶ 61,281), ITC Great Plains LLC's KETA project and Kansas V Plan project (126 FERC ¶ 61,223), and ITC Holdings Corporation's Green Power Express project (127 FERC ¶ 61,031). Please see Attachment B for a list of all of the approved projects and their construction status.

3. What are the net benefits of the transmission projects that have been approved for incentive rates? What metrics has FERC developed to measure the effectiveness of its incentive rate policy to ensure that reliable and economically efficient transmission is being built?

There are multiple net benefits of the transmission projects that have been approved for incentive rates. If constructed as proposed, these projects will permit the interconnection of many thousands of megawatts of additional generation capacity. This will provide reliability benefits and reduce the cost of delivered power by reducing congestion costs. The applications have included major "backbone" projects widely recognized as providing significant environmental benefits as well. For example, one case involved Southern California Edison Company's Tehachapi project, to provide transmission for up to 4,500 megawatts of primarily wind generation into the Los Angeles area. Another case involved the Green Power Express project, to provide transmission for up to 12,000 MW of renewable energy from Minnesota, Iowa, and the Dakotas to major load centers in

⁶ The ROE adders include any incentive granted specifically for the use of advanced technologies, if applicable, and represent the first 12-month period for each project.

the Midwest. For all transmission incentives granted, the Commission has imposed an annual reporting requirement, FERC Form No. 730, which collects the capital spending targets and construction status for each approved project. This information will help regulators and consumers monitor the actual and projected capital spending targets for each project, as well as the construction schedule, to ensure that the projects are completed in a reasonable timeframe and at reasonable cost.

4. Has FERC approved incentive rates for transmission technologies that increase the capacity and efficiency of existing transmission facilities and improve the operation of the facilities?

In Order No. 679, the Commission required applicants for transmission incentives to provide a technology statement detailing their consideration and planned use of technologies that increase the capacity and efficiency of the proposed transmission projects. The Commission has approved a stand-alone incentive ROE adder for the use of advanced transmission technologies for the Middletown to Norwalk project in Connecticut, jointly developed by the United Illuminating Company and the Northeast Utilities Service Company.

In addition, while not the sole basis for granting the incentive, the Commission has approved incentive ROE adders for many projects, in part, because of their use of advanced technologies. For example, the Commission approved an incentive ROE adder for the Mid-Atlantic Power Pathway (MAPP) project. In addition to providing a major new transmission backbone to reinforce the eastern transmission grid, the MAPP project, as described by Pepco Holdings, Inc. (125 FERC ¶ 61,130), will broadly deploy phasor measurement units and other advanced sensors, microprocessor-based relays and other advanced controls, substation wide-area-networks with integrated substation automation and equipment and line monitoring, and dedicated fiber-optic communications links to tie it all together. With this advanced equipment in place, Pepco Holdings expects the MAPP project to: (1) optimize assets and operate efficiently; (2) minimize sags, spikes, and other disturbances; (3) correct any problems quickly and with a minimum of intervention by the grid operator; and (4) monitor, self-analyze and diagnose the health and condition of equipment, and predict the malfunction or failure of a device before the event occurs in order to take action to prevent the malfunction or failure from occurring.

The MAPP project and the above-noted Green Power Express project could be considered to include many of the transmission-level features of a “Smart Grid,” as envisioned by the Title XIII of the Energy Independence and Security Act of 2007. One of the main benefits of a smart grid at the transmission level would be that it will provide much better information about actual system conditions than has historically been available to system operators. With better information, operators should be able to operate the system using less conservative assumptions without compromising reliability. In other words, better data should generally translate into increased useable capacity from the same transmission lines, as the need to hold large amounts of capacity in reserve to address unknown system conditions should be reduced. For these and other reasons, smart grid technologies hold great promise for improving the operation and increasing the capacity and efficiency of existing transmission facilities.

5. What are the risks or considerations that merit an incentive-based return on equity? What analysis has FERC undertaken regarding the level of risk that merit incentive rates and the higher rate of return required to incent investment? For example, what percentage of the projects that meet the criteria for receiving incentives have historically been unable to recover their costs?

Order No. 679 describes the various risks and considerations that the Commission takes into account when determining whether projects merit some form of ROE incentive. Primarily, the Commission considers whether the project ensures reliability or reduces congestion, consistent with section 1241 of EPAct 2005. The Commission also considers whether there are risks and challenges unique to each project, such as whether there are financial or regulatory risks that inhibit investment. For example, without an ROE incentive, some applicants could suffer a credit ratings downgrade to junk bond status as a direct result of undertaking the transmission project, and thus need the incentive in order to attract investors to fund the project.

ROE incentives are intended primarily to address financial risks. Because transmission projects require significant outlays of cash, an ROE incentive should improve cash flow, coverage ratios, and other financial metrics that help preserve credit quality. Also, an ROE incentive should help encourage investment in projects by offering investors a return commensurate with siting, construction, regulatory, and other risks and challenges of the project. Project siting risks, for example, often arise when dealing with multiple states and local municipalities that may have different rules, agendas, and priorities. Construction risks often occur because projects have expedited construction schedules that require pre-ordering and payment of expensive materials before receiving all of the needed construction and/or regulatory approvals.

At least as important, the Commission ensures that the rates resulting from an ROE incentive are just and reasonable pursuant to section 205 of the Federal Power Act (FPA) and the directive of Congress in section 1241 of EPCA 2005. The Commission takes seriously its responsibility to balance consumer and investor interests and protect consumers from excessive rates.

6. What percentage of the projects approved for incentive rates are a part of an independent planning process? Which planning processes, if any, have considered alternative technologies in identifying needed transmission upgrades?

All of the projects approved for incentives rates are or will be part of an open and transparent planning process, whether the projects are located inside or outside the footprint of a regional transmission organization or an independent system operator. The majority of the approved projects have already gone through such an open and transparent planning process, while other projects have had approval of incentives conditioned upon the completion of such a planning process.

These open and transparent planning processes are set up to allow projects to be proposed utilizing advanced transmission technologies, as well as alternatives other than transmission projects, for solving reliability violations and reducing the cost of delivered power by reducing congestion costs.

7. Have any of the incentives, such as cost recovery associated with construction work in progress or abandoned transmission projects, resulted in customers paying for the costs of transmission that will not be placed in service?

No. While the Commission has approved cost recovery associated with CWIP, as well as incentives that would allow a developer to seek cost recovery in the event a project is abandoned for reasons beyond the developer's control, none of these incentives has resulted in consumers paying for transmission projects that will not be placed into service. Moreover, it is important to note that, even if a project is abandoned in the future, the latter incentive alone does not guarantee cost recovery. The Commission has ensured that consumers will be protected by requiring a project developer to demonstrate in a Commission proceeding that the costs it proposes to recover were prudently incurred and that the project was abandoned for reasons beyond the developer's control. In addition, a project developer that wants to recover costs associated with a project that was abandoned for reasons beyond the developer's control must demonstrate in a

Commission proceeding that the rate and cost allocation methodology it proposes for recovery of those costs is just and reasonable.

There currently is a pending filing before the Commission by the Southern California Edison Company to recover costs associated with the cancelled Devers-Palo Verde line. For the other two projects that received incentive rates and have since been cancelled, the New York Regional Interconnect project and the Maine Power Connection project, the developers have made no filings before the Commission to recover costs.

8. Does FERC have a process in place for reviewing the current incentive rate policy to ensure that the program is cost beneficial to those paying higher rates or taking on additional risk?

The Commission has multiple processes in place for ensuring consumer benefits associated with transmission projects that receive incentive-based rates. We review each project under section 205 of the FPA to ensure that the rates charged to consumers are just and reasonable and that costs are prudently incurred. As part of these proceedings, the Commission reviews individual metrics for projects to ensure that the project benefits are justified on an ongoing basis. For example, in cases where companies propose to recover transmission incentives in formula rates, we require companies to file an annual report as part of their formula rates, detailing project costs and true-ups of those costs, thereby providing regulators and consumers with a forum to review the prudence of those costs. As noted above, for all transmission incentives granted, the Commission requires the annual submission of FERC Form No. 730, allowing staff and the public to monitor actual and projected capital spending targets and construction status to ensure progress towards the project's goals.

In addition, the Commission regularly examines its rules and policies to ensure that they are achieving the desired goals. Because the incentive policy established under Order No. 679 is relatively new, it has not yet undergone significant revisions.

9. Does the Commission have a process to determine whether the various incentives available continue to be necessary to encourage new investments?

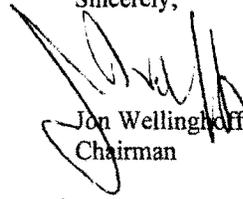
The Commission continues to evaluate, on a project by project basis, whether incentives are necessary to encourage new transmission investment.

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I hope this information adequately addresses your questions. If I can be of any further assistance with this or any other Commission matter, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Wellinghoff", is written over the typed name and title.

Jon Wellinghoff
Chairman

cc: The Honorable Fred Upton, Ranking Member

ATTACHMENT A: RESPONSE TO QUESTION 1 ON PROJECT MILES, COSTS, AND INCENTIVE RATES

Lead Docket Number	Applicant(s) Name	Project Name(s)	Proj- acts	Project Cost (millions)	Miles	ROE Adder(s)	Incentive Cost (millions/yr)
ER06-1549-000	Duquesne Light Co.	OTEP	1	\$184	18	1.00%	\$0.92
ER07-653-000	United Illuminating Co.	Middletown to Norwalk	1	\$260	24	0.50%	\$0.65
ER09-966-000	Northeast Utilities Service Co.	Middletown to Norwalk	1	\$1,050	69	0.50%	\$2.63
ER07-562-000	Trans-Allegheny Interstate Line Co.	TRAIL SVC	1	\$50	N/A	1.00%	\$0.25
ER07-576-000	Baltimore Gas & Electric	4 projects	4	\$99	3	1.00%	\$0.50
EL07-62-000	Southern California Edison	3 projects	3	\$2,460	500	1.21%	\$14.87
ER07-1415-000	Xcel Energy Services Inc.	NSP Expansion (6 projects)	6	\$1,000	800	0.00%	\$0.00
EL07-41-001	Commonwealth Edison	West Loop II	1	\$345	20	1.50%	\$2.59
ER08-386-000	Potomac/Appalachian Trans. Highline	PATH	1	\$1,800	290	2.60%	\$23.40
ER08-396-000	Westar Energy, Inc.	Wichita to Reno	1	\$225	97	1.00%	\$1.13
ER06-278-000	Nevada Hydro Co.	TE VS Interconnect	1	\$350	30	1.50%	\$2.63
EL08-24-000	Pacific Gas & Electric Co.	British Columbia to No. California	1	\$3,200	1,000	0.00%	\$0.00
EL08-23-000	PPL/PSEG	Susquehanna Line	1	\$950	130	1.25%	\$5.94
ER08-686-000	Peppo Holdings, Inc.	8 projects	8	\$290	N/A	1.50%	\$2.18
ER08-1207-000	Virginia Electric & Power Co.	11 projects	11	\$878	164	1.34%	\$5.88
EL08-39-000	New York Regional Interconnect, Inc.	NYRI	1	\$1,950	190	2.25%	\$21.94
ER08-1402-000	Duquesne Light Co.	BRADY Project	1	\$291	N/A	1.50%	\$2.18
EL08-74-000	Central Maine Power Co.	MPRP Project	1	\$1,400	485	1.25%	\$8.75
EL08-75-000	PacificCorp	Energy Gateway Project	1	\$6,000	2,000	2.00%	\$60.00
EL08-82-000	Veestren South (So. Indiana G&E)	Gibson-Brown-Reid Project	1	\$84	70	0.00%	\$0.00
ER08-1423-000	Peppo Holdings, Inc.	MAPP Project	1	\$1,050	230	1.50%	\$7.88
EL08-77-000	Central Maine Power/Maine Pub. Svc.	Maine Power Connection Project	1	\$625	200	1.50%	\$4.69
ER09-75-000	Pioneer Transmission (AEP/Duke)	Pioneer Project	1	\$1,000	240	1.50%	\$7.50
ER08-1548-000	Northeast Utilities/National Grid	NEEWS Project	1	\$2,100	318	1.25%	\$13.13
ER09-36-000	Prairie Wind Transmission	Prairie Wind Project	1	\$600	230	1.50%	\$4.50
ER09-35-000	Tallgrass Transmission	Tallgrass Project	1	\$500	170	1.50%	\$3.75
ER09-249-000	Public Service Electric & Gas	MAPP Project	1	\$150	10	1.50%	\$1.13
ER09-548-000	ITC Great Plains	KETA Project, Kansas V Plan (2)	2	\$787	390	1.00%	\$3.94
ER09-681-000	Green Power Express	Green Power Express Project	1	\$1,000	3,000	1.10%	\$60.50
ER09-745-000	Baltimore Gas & Electric Co.	MAPP Project	1	\$65	10	1.50%	\$0.49
TOTALS			58	\$40,743	10,688	1.30%	\$263.89

Note: The annual Incentive Cost assumes that all projects have a capital structure of 50% debt and 50% equity.

- (1) Includes an Advanced Technology adder of 50 basis points (b.p.) or 0.50%.
- (2) Weighted average ROE. The DPV2 & T1 technologies projects were granted 125 b.p. and the Rancho Vista project was granted 75 b.p.
- (3) 260 b.p. of the 14.3% total ROE is assumed to represent the ROE adder.
- (4) 150 b.p. of the 13.5% total ROE is assumed to represent the ROE adder.
- (5) Consideration of the requested 150 b.p. adder was deferred until after the project's planning process meets Order No. 679 requirements.
- (6) Weighted average ROE. Four projects (including TRAIL & MAPP) were granted 150 b.p. while seven projects were granted 125 b.p.

ATTACHMENT B: RESPONSE TO QUESTION 2 ON PROJECT DEVELOPMENT SCHEDULES

Lead Docket Number	Applicant(s) Name	Project Name	CONSTRUCTION STATUS		
			Year Began	Completed?	On Schedule?
ER05-1549-000	Duquesne Light Co.	DTEP	2005	No	Yes
ER07-653-000	United Illuminating Co.	Middletown to Norwalk	2006	No	Yes
ER08-966-000	Northeast Utilities Service Co.	Middletown to Norwalk	2006	No	Yes
ER07-562-000	Trans-Allegheny Interstate Line Co.	TRAIL SVC	2008**	No	Yes
ER07-576-000	Baltimore Gas & Electric	4 projects	2007-2008	2008-2009	Yes
EL07-62-000	Southern California Edison	3 projects	2006-2008	No	No
ER07-1415-000	Xcel Energy Services Inc.	NSP Expansion (6 projects)	2008	No	Yes
EL07-41-001	Commonwealth Edison	West Loop II	2005	Yes	In-Service
ER08-386-000	Potomac-Appalachian Trans. Highline	PATH	2010	No	Yes
ER08-396-000	Westar Energy, Inc.	Wichita to Reno	n/a*	No	Yes
ER06-278-000	Nevada Hydro Co.	TE VS Interconnect	n/a*	No	n/a
EL08-24-000	Pacific Gas & Electric Co.	British Columbia to No. California	n/a*	No	Yes
EL08-23-000	PPL/PSEG	Susquehanna Line	2009	No	Yes
ER08-686-000	Pepco Holdings, Inc.	8 projects	2008-2009	No	Yes
ER08-1207-000	Virginia Electric & Power Co.	11 projects	2008-2012	No	Yes
EL08-39-000	New York Regional Interconnect, Inc.	NYRI	suspended	No	No
ER08-1402-000	Duquesne Light Co.	BRADY Project	2008	No	Yes
EL08-74-000	Central Maine Power Co.	MPRP Project	2009	No	Yes
EL08-75-000	PacificCorp	Energy Gateway Project	n/a*	No	Yes
EL08-82-000	Vectren South (So. Indiana G&E)	Gibson-Brown-Reid Project	2008	No	Yes
ER08-1423-000	Pepco Holdings, Inc.	MAPP Project	2009	No	Yes
EL08-77-000	Central Maine Power/Maine Pub. Svc.	Maine Power Connection Project	2009	No	No
ER09-75-000	Pioneer Transmission (AEP/Duke)	Pioneer Project	n/a*	No	n/a*
ER08-1548-000	Northeast Utilities/National Grid	NEEWS Project	2008	No	Yes
ER09-36-000	Prairie Wind Transmission	Prairie Wind Project	n/a*	No	Yes
ER09-35-000	Tallgrass Transmission	Tallgrass Project	n/a*	No	Yes
ER09-249-000	Public Service Electric & Gas	MAPP Project	2009	No	No
ER09-548-000	ITC Great Plains	KETA Project, Kansas V Plan (2)	n/a*	No	Yes
ER09-681-000	Green Power Express	Green Power Express Project	n/a*	No	n/a*
ER09-745-000	Baltimore Gas & Electric Co.	MAPP Project	2009	No	Yes

Note: Construction Status information per each utility's FERC-730 Report or the respective transmission planning process.
 * Dates are unknown because the project has not yet completed the regional planning and/or the state siting processes.

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC 20426

OFFICE OF THE CHAIRMAN

June 11, 2009

The Honorable Edward J. Markey
Chair
Energy and Environment Subcommittee
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

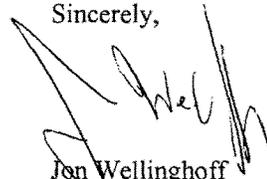
Dear Chair Markey:

I am writing in response to your June 9, 2009 letter seeking information from the Federal Energy Regulatory Commission (Commission) regarding the effects of the Energy Policy Act of 2005 repeal of the Public Utility Holding Company Act of 1935 (PUHCA) on investment in wholesale transmission.

Enclosed are my responses to your questions one through six. With respect to your June 10 clarification letter emailed today, I do need to determine how long it will take to provide the analysis, particularly for question seven.

I hope the enclosed information adequately addresses your first six questions. If I can be of further assistance with this or any other Commission matter, please do not hesitate to contact me.

Sincerely,



Jon Wellinghoff
Chairman

cc: The Honorable Fred Upton, Ranking Member

Questions for Chairman Wellinghoff
FERC
Subcommittee on Energy and Environment

Questions from Chair Edward J. Markey:

- 1. How many merchant transmission projects, encompassing how many total miles of transmission lines, has FERC approved since PUHCA's repeal in 2005? What is the percentage of total transmission investment resulting from these merchant lines?**

Answer: Since the repeal of PUHCA, the Commission has approved pricing for three merchant transmission projects, encompassing 2,100 miles of transmission.¹ The total projected investment associated with these projects is approximately \$6.01 billion. According to data provided in annual reports by public utilities to the Commission, total transmission investment for new lines and transmission upgrades completed during the years 2006, 2007, and 2008 combined was \$6.09 billion. It should be noted, however, that these figures are not readily comparable, in that the total projected investment associated with merchant transmission projects will be incurred over numerous years as construction progresses, while the total transmission investment during the years 2006 through 2008 represents actual costs of transmission additions completed in those years.

- 2. Could these transmission lines have been built even without PUHCA's repeal? Are there other quantifiable benefits in terms of increased transmission investments that have been demonstrated from the restrictions on the PUHCA 1935 being eliminated?**

Answer: Prior to the repeal of PUHCA, certain merchant transmission line projects were proposed or developed.² Additional merchant transmission lines have been proposed or developed since the repeal of PUHCA. I do not know and have no basis on which to provide an opinion as to whether the post-PUHCA projects could have been, or would have been, developed without PUHCA's

¹ See *Chinook Power Transmission, LLC and Zephyr Power Transmission, LLC*, 126 FERC ¶ 61,134 (2009); *Linden VFT, LLC*, 119 FERC ¶ 61,066, order on clarification, 120 FERC ¶ 61,242 (2007).

² See, e.g., *Neptune Regional Transmission System, LLC*, 96 FERC ¶ 61,147 (2001).

repeal. I do not have information regarding other quantifiable benefits in terms of increased transmission investments that have resulted from PUHCA repeal.

3. How many utility mergers have taken place as a result of PUHCA's repeal that would not have been permissible had PUHCA remained in place?

Answer: Since the repeal of PUHCA, the Commission has approved several large mergers (as noted in the Answer to Question No. 4 below). I cannot state with certainty whether these transactions would or would not have been permissible under the relevant standards of PUHCA. To secure the approval of the Securities and Exchange Commission (SEC), proponents of mergers involving non-contiguous utilities (that is, utilities that are not directly interconnected and with non-adjointing service territories) needed to satisfy PUHCA's "integration" standard. I do not know whether the SEC would have found that the MidAmerican/PacifiCorp merger or the acquisition by Macquarie (which already owned a Pennsylvania utility) of Puget Energy (in the State of Washington), for example, would have satisfied the "integration" standard under PUHCA. In that regard, however, the SEC did approve certain mergers of non-contiguous utilities prior to PUHCA repeal (e.g., Exelon/PECO, American Electric Power/Central and South West, Carolina Power & Light/Florida Progress).

4. What changes in utility market share has resulted from these approved mergers?

Answer: Among the more significant mergers the Commission has approved since the enactment of PUHCA 2005, please note the following: In the KeySpan/National Grid merger, the market share increased from 16 to 17 percent in the New York City zone of the New York Independent System Operator (New York ISO); from 71 to 72 percent in the Long Island zone; and from 16 percent to 20 percent in the New York ISO as a whole. The markets operated by the New York ISO are subject to Commission-approved market monitoring and market power mitigation. In addition, as a condition of the merger authorization, KeySpan and National Grid must seek prior Commission authorization for sales from upstate New York generating resources into the New York City or Long Island zones.

In the other two of the three largest mergers authorized by the Commission since the repeal of PUHCA, there was little or no geographic overlap between the merging companies, so the market shares were not affected. In the Duke/Cinergy merger, Duke's market share in its home balancing authority area remained at approximately 75 percent. Duke is not authorized to make market-based rate sales in its balancing authority area because of its dominant position in the area and

therefore can only make wholesale sales pursuant to a cost-based tariff approved by the Commission. Cinergy's market share remained at approximately nine percent in the market operated by the Midwest Independent System Operator. In the MidAmerican/PacifiCorp merger, MidAmerican's market share in its home balancing authority area remained at 56 percent. PacifiCorp's market share remained at 56 percent in the PacifiCorp-East area (covering parts of Idaho, Wyoming and Utah) and 58 percent in the PacifiCorp-West area (covering parts of Montana, Oregon and northern California). Like Duke, MidAmerican does not have market-based rate authority in its home area. PacifiCorp, by virtue of its significant retail native load obligation, has a much lower number of megawatts available to compete in the wholesale market (less than 20 percent in almost all season/load conditions), and thus was able to retain its market-based rate authorization in its home balancing authority areas.

5. Please respond to the following questions regarding the concerns raised by the GAO report cited above:

a.) Why has the FERC failed to beef up its oversight of utility mergers and acquisitions following PUHCA's repeal?

Answer: As you know, in conjunction with the repeal of PUHCA, FPA section 203 was amended to give the Commission significant new authority to review certain holding company mergers, acquisitions of utility and holding company securities, and certain transfers of generating facilities. Amended FPA section 203 sets forth specific standards that must be met before any proposed transaction can be approved. As described more fully in the response to Question No. 6, below, beginning in December 2005, the Commission revised its regulations specifically to address possible cross-subsidization or encumbrance of assets resulting from a merger or other FPA section 203 transaction. Subsequently, the Commission also issued a policy statement to provide guidance on the types of section 203 transactions that do not raise cross-subsidy concerns and guidance on the types of commitments applicants could make and the ring-fencing measures applicants could offer to address potential cross-subsidy concerns. See FPA Section 203 Supplemental Policy Statement, FERC Stats. & Regs. ¶ 31,253 (2007) (Supplemental Policy Statement), order on clarification and reconsideration, 122 FERC ¶ 61,157 (2008). The Supplemental Policy Statement also supplemented the Commission's 1996 Merger Policy Statement, the analytical framework for the Commission's analysis of the impact of a merger on competition.

In addition to these measures, the Commission announced in one of the first mergers following the effective date of the new section 203

provisions, National Grid plc, 117 FERC ¶ 61,080 (2006), that it would impose on all section 203 transactions involving a holding company a condition that members of the holding company adhere to specific pricing restrictions on non-power goods and services transactions between “unregulated” companies and their public utility affiliates with captive customers. Further, the Commission in February 2008 also adopted in its regulations non-power goods and services pricing restrictions on all transactions between unregulated companies and their public utility affiliates with captive customers. The Commission also adopted recordkeeping and reporting requirements for utility holding companies and their service companies, and detailed accounting requirements for centralized service companies. These requirements will enhance the ability of the Commission and the public to monitor for cross-subsidization.

The Commission has taken appropriate actions to ensure careful review and diligent monitoring of mergers and acquisitions. The Commission understands the importance of scrutinizing merger applications and imposing any conditions needed to prevent harm to consumers. Our orders in merger cases demonstrate our vigorous implementation of this approach. For example, as noted above in the response to Question No. 4, in order to protect consumers from merger related harm to competition, as a condition of the KeySpan/National Grid merger authorization, KeySpan and National Grid must seek prior Commission authorization for sales from upstate New York generating resources into the New York City or Long Island zones. The Commission also recognizes the need to monitor post-merger compliance with Commission conditions, and has bolstered its efforts in this regard.

For example, we have performed an audit involving merger conditions in NSTAR (Docket No. FA07-1) and are in the process of conducting audits involving merger conditions, holding company and service company books and records, and market-based rate authority in American Electric Power, Inc. (FA09-7-000), Duke Energy Corp., (FA09-8-000), Entergy Services, Inc. (FA09-9-000), and National Grid, USA, (FA09-10-000). Also, as part of our annual audit planning cycle, the Commission will take additional merger-related audits into consideration with our other priorities and the number of available resources.

b.) Why has FERC chosen to rely largely on utility self-reporting of post-merger cross-subsidization rather than step up its oversight or auditing activities to ensure that such cross-subsidization does not occur?

Answer: As previously stated in its response to the draft GAO report, the Commission has never relied on self-reporting as its primary enforcement mechanism to prevent inappropriate cross-subsidization or assure compliance with other regulatory requirements. Cross-subsidization, by its very nature, does not lend itself to being self-reported.

The Commission relies on other tools to police cross-subsidization. The Commission has in place affiliate pricing restrictions - which are not limited to public utilities involved in mergers - addressing both power and non-power sales between affiliates and recently completed a rulemaking on this subject. See Cross-Subsidization Restrictions on Affiliate Transactions, Order No. 707, FERC Stats. & Regs. ¶ 31,264, order on rehearing, Order No. 707-A, 73 Fed. Reg. 43,072 (July 24, 2008), FERC Stats. & Regs. ¶ 31,272 (2008). The Commission also has specific and detailed record retention rules for holding companies and their affiliates, as well as a new standardized Uniform System of Accounts (adopted in October 2006) that must be followed by all centralized service companies, thus providing greater transparency to protect ratepayers from paying improper service company costs. Centralized service companies must also file an annual report (Form No. 60) containing financial information and information related to non-power goods and services provided to affiliates. Information collected in this form, which is available electronically to market participants and the public, can be used in detecting potential cross-subsidization. Other types of service companies (e.g., a special purpose service company) also have an annual reporting requirement containing a narrative description of the service company's functions during the prior calendar year. These measures, coupled with our ratemaking authority, compliance measures, auditing, and the penalty authority under the Federal Power Act provide adequate customer protection and policing over a regulated entity's transactions with its affiliates.

Moreover, it is important to note that the Commission commenced and subsequently completed the audits of Exelon Corporation (FA08-4-000), Allegheny Energy, Inc. (FA08-3-000) and The Southern Company (PA08-6-000) shortly after the effective date of PUHCA repeal in February 2006. The Commission is currently conducting the audits of American Electric Power, Inc. (FA09-7-000), Duke Energy Corp., (FA09-8-000), Entergy Services, Inc. (FA09-9-000), and National Grid, USA (FA09-10-000). The audits involve an examination of merger conditions, holding and service companies' books and records, and market-based rate authority. These companies are some of the largest utility holding companies in the nation.

c.) Why has FERC chosen not to undertake a risk assessment for companies it regulates in order to better focus its audit and oversight activities on those companies whose consumers might be most at risk of being harmed as a result of cross-subsidies or other anti-competitive actions by the utility?

Answer: The Commission uses a risk-based approach in selecting merger and PUHCA audit candidates. Our risk-based approach entails a comprehensive review of all section 203 merger orders, audit materials obtained from the SEC; examination of financial information contained in FERC Form No. 60 (service company report), FERC Form No.1 (annual report of public utilities), and SEC filings; rate information gathered from Commission filings; and discussions with the Commission's legal and technical experts. The risk-based approach described above results in a preliminary risk assessment that takes into account, for example, the amount and type of costs reported in the FERC Form No. 60 and FERC Form No. 1; compliance problems gleaned from the non-public audit reports previously issued by the SEC; information on affiliate transactions included in SEC filings as well as other pertinent financial information affecting stock and bond prices; a review of Federal and state commission actions regarding affiliate transactions; and discussions with Commission legal and technical experts. Finally, shortly after the audit commences, the Commission audit staff discusses the audit scope, objectives and any other matters with state commission officials.

d.) In the absence of strong protections against cross-subsidization, how can the Subcommittee be assured that the higher "incentive" rates the Commission has been approving for utility investments in transmission actually go for that purpose, rather than subsidizing other utility expenses or even being diverted to non-utility affiliates of a utility holding company?

Answer: As noted above, the Commission has taken several significant steps to ensure strong oversight and protection against improper cross-subsidization. It also must be emphasized that Congress, in directing the Commission to adopt incentive-based transmission rates for jurisdictional utilities, did not change the "just and reasonable" ratemaking standard under FPA section 205. Thus, the Commission reviews incentive rate proposals under the standards of section 205. Utilities must also follow the accounting rules established by the Commission which provide the Commission a basis for determining what costs are being incurred. Also, as

part of our annual audit planning cycle, the Commission will take audits of utility investments in transmission into consideration with our other priorities and the number of available resources.

In addition, the Commission monitors any transfer of assets and dividends between regulated utilities and their parent companies or affiliates via the FERC Form 1, filed on an annual basis, and the FERC Form 3-Q, filed on a quarterly basis.

6. On the day that the Energy Policy Act of 2005 was signed into law, Representative Dingell and I wrote to then-Chairman Kelliher and other federal agencies regarding needed compensatory measures to be undertaken following PUHCA's repeal in order to spare utility consumers and investors from a repetition of the types of abuses that led to PUHCA's enactment in the first place. In that letter, we requested, among other things, that "FERC use its existing legal authority under the Federal Power Act, which section 1267(a) of EPACT expressly preserves, to adopt such general rules" as the Commission determines necessary to protect against mergers that result in cross-subsidization of a non-utility associate company or the pledge or encumbrance of utility assets for the benefit of an associate company." [footnote omitted] To my knowledge, the Commission never did so. Would the Commission now be willing to consider taking such action? If not, how can the Subcommittee be assured that utility consumers are not having their rates raised to pay for transmission assets that are not being used for their designated purpose, but are instead being used to cross-subsidize some other activity or are being used to overpay a non-utility affiliate for products or services relating to such transmission construction?

Answer: As noted, in December 2005, the Commission exercised its legal authority under the Federal Power Act to revise its regulations specifically to address possible cross-subsidization or encumbrance of assets resulting from a merger or other FPA section 203 transaction. Merger applicants must now make what is called an "Exhibit M" filing, which is a detailed showing (based on facts and circumstances known or reasonably foreseeable) that the merger will not result (at the time of the transaction or in the future) in the following activities by a traditional public utility that has captive customers or that operates Commission-jurisdictional transmission facilities, in each case for the benefit of an associate company: (a) the transfer of facilities, (b) the issuance of securities, (c) the pledge or encumbrance of assets, and (d) the execution of contracts other than approved contracts for non-power goods and services. Also, the applicants must disclose any pledges or encumbrances of utility assets existing at the time of the

application. If the applicants cannot provide adequate assurances against such activities, they must demonstrate that the activities are consistent with the public interest.

Following two technical conferences, in which the Commission sought input from state commissioners and others on what additional measures (including ring-fencing) the Commission should take to protect customers against inappropriate cross-subsidization, in July 2007 the Commission also issued the Supplemental Policy Statement. The Supplemental Policy Statement provided clarification and guidance on the types of section 203 transactions that do not raise cross-subsidy concerns and guidance on the types of commitments applicants could make and the ring-fencing measures applicants could offer to address potential cross-subsidy concerns. First, the Commission adopted a policy to defer to state commissions where the state adopts or has in place ring-fencing measures to protect customers unless those measures are inadequate to protect wholesale customers. If, based on the record of the transaction before the Commission, however, the state measures are inadequate to protect customers in a given case, the Commission will adopt supplemental measures as appropriate. If the state does not have authority to act on a section 203 transaction, the Commission will fill any regulatory gap by imposing ring fencing protections where appropriate. It is important to note that, where the Commission does defer to ring-fencing protections adopted by a state, the Commission's approval of the proposed section 203 transaction is premised on compliance with those ring-fencing protections and the Commission may audit and enforce compliance with those protections just as it enforces any additional protections it may accept or impose for a particular transaction; failure to abide by the restrictions constitutes a violation of the Commission's order approving the transaction. In addition, the Commission made clear in the Supplemental Policy Statement that, if it approves a transaction under section 203 (with or without ring-fencing measures), the Commission retains authority under FPA section 203(b) to later impose additional cross-subsidy protections or modify any previously-approved measures.

Second, the Supplemental Policy Statement also provided specific guidance on the types of protections companies might adopt to make the demonstration required by Exhibit M, referred to above, where a state has not required or does not have authority to require ring-fencing provisions. For example, the Commission stated that a ring-fencing structure related to internal corporate financings, *i.e.*, money pool or cash management transactions, could include some or all of the following elements, depending on the circumstances of the proposed transaction:

- (1) the holding company participates in the money pool as a lender only and it does not borrow from the subsidiaries with captive customers;

- (2) where the holding company system includes more than one public utility, the money pool for subsidiaries with captive customers is separate from the money pool for all other subsidiaries;
- (3) all money pool transactions are short-term (one year or less), and payable on demand to the public utility;
- (4) the interest rate formula is set according to a known index and recognizes that internal and external funds may be loaned into the money pool;
- (5) loan transactions are made pro rata from those offering funds on the date of the transactions;
- (6) the formula for distributing interest income realized from the money pool to money pool members is publicly disclosed; and,
- (7) the money pool administrator is required to maintain records of daily money pool transactions for examination by the Commission by transaction date, lender, borrower, amount and interest rate(s).

Thus, while not adopting a set of mandatory one-size-fits-all federal ring-fencing protections in the Supplemental Policy Statement, the Commission gave detailed guidance regarding the types of restrictions that, from the federal viewpoint, might be appropriate depending upon the particular facts presented. It made clear that the forms of ring-fencing protections listed were examples of protections the Commission would consider in evaluating proposed ring-fencing measures and stated that appropriate ring-fencing measures would depend on the facts presented and the specifics of an applicant's corporate structure, to be evaluated on a case-by-case basis. It also noted that the listed measures were among those typically approved by the SEC under PUHCA and/or adopted by state commissions.

In addition to the adoption of the new FPA section 203 requirement for an Exhibit M filing and the policies and guidance set forth in the Supplemental Policy Statement, the Commission announced in one of the first merger cases following the effective date of the new section 203 provisions, National Grid plc, 117 FERC ¶ 61,080 (2006), that it would impose on all section 203 transactions involving a holding company a condition that members of the holding company adhere to specific pricing restrictions on non-power goods and services transactions between "unregulated" companies and their public utility affiliates with captive customers. Further, because cross-subsidy concerns regarding both power and non-power

goods and services transactions can arise not only at the time of a proposed merger, but rather on an ongoing basis, the Commission in July 2007 also adopted in its regulations non-power goods and services pricing restrictions on all transactions between unregulated companies and their public utility affiliates with captive customers. The Commission also adopted recordkeeping and reporting requirements for utility holding companies and their service companies, and detailed accounting requirements for centralized service companies. These requirements will enhance the ability of the Commission and the public to monitor for cross-subsidization.

Also, as noted above, in response to PUHCA 2005, the Commission's Office of Enforcement is auditing affiliated transactions to detect and deter cross-subsidization. These audits include some of the largest utility holding companies. If information gained from these audits or elsewhere indicates a need for increased auditing, the Commission will either shift resources to such audits or, if necessary, seek additional resources from the Congress.

Importantly, all of these new requirements are in addition to the Commission's traditional and broad ratemaking authority to disallow rate recovery of costs found unjust and unreasonable as improper cross-subsidies. This authority applies to all utilities, whether or not they engage in cross-subsidies resulting from a merger.