Testimony Before the Senate Committee
on Environment and Public Works

On

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The Clean Energy Jobs and American Power Act

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Thank you for this opportunity to appear before you on the topic of climate change. Because this is the critically urgent issue that informs everything we do from national energy policy to national security, I think of climate change as the transcendent challenge of our generation of American leadership.

As a major power generation company with a large fleet of conventional fossil fuel plants across the country, NRG has long recognized the challenge that climate change legislation represents to our industry but rather than resist based on narrow and short-sighted self-interest, we chose four years ago to turn the challenge of climate change into opportunity. By embracing the emerging and, in the case of nuclear, the re-emerging low carbon technology innovations that have been developed by America's entrepreneurs and inventors over the past several years, we set a course to achieve a first mover low carbon advantage in our industry. Accordingly, we are now three years into our 10 year $15 billion *Repowering*NRG program, a program that will substantially reduce the carbon intensity of our fleet with advanced nuclear, wind, concentrated solar, solar PV, biomass and post-combustion carbon capture projects.

To date, our company has spent hundreds of millions of our shareholders' money on this development effort. As a merchant power company without regulated customer rates, we can only recover that money if we control costs and risks, and make the technology work in the competitive market. But of course neither the competitive market nor the fully regulated electricity market puts a price on carbon emissions. We are allowed to emit all we choose to into the atmosphere for free. This is why the Senate needs to pass legislation in order to make carbon emissions part of the economic equation for NRG and the rest of the industry.

The timing is particularly acute right now. For NRG, after 3 years of development, permitting, etc., many of our projects are ready or nearly ready to break ground. But for many of our projects to make that jump from millions of dollars spent on development to the billions invested in construction, the Senate first needs to pass a comprehensive climate bill. This is because due in part to the dramatic decline in fuel and wholesale electricity prices over the past year the economics of many of these projects depend partially or totally on their being a price imposed by the United States Government on emitting carbon into the atmosphere.

That, I would suggest respectfully, is how the EPW Committee and the Senate as a whole should think about the task at hand. I encourage you to view your work as a bipartisan mission to find a climate change framework that will unleash the power of American capitalism and the innovative genius of America's entrepreneurs. Certainly I can assure you that if you provide a sound framework, NRG will do everything we can within our capability to bring the promising low carbon energy technologies being developed and demonstrated around our country to full scale deployment, at a cost that allows the US not only to compete in the global economy, but to win.

As you address that task, and seek to improve on the effort begun in the House earlier this year, comprehensive federal climate change legislation designed to reduce our carbon

emissions by 80% by 2050 will, in fact, be our national energy policy for the next two generations. The House bill recognized this to a degree by including a Federal renewable energy standard in AR 2454.

But a national renewable policy, such as a federal RES, while it may be laudable, is not by itself an effectively comprehensive low carbon national energy policy. Renewable resources are a major part of our low carbon future, but their inherent issues of intermittency, limited scale, expense and geographic constraints are serious limitations. In fact, we need to build a zero carbon base load foundation under our wind farms and solar fields. That foundation is new advanced nuclear power.

Right now NRG's $10 billion, 2700 MW STP 3&4 project is one of the four projects under due diligence at the DOE for the all-critical federal loan guarantee, which was authorized by the Energy Policy Act of 2005 and has been administered in an admirably bipartisan way by the DOE through the transition from the Bush to the Obama Administration. We are highly confident that our project will proceed successfully through the DOE loan guarantee and NRC regulatory approval process, that it will be built on time and on budget and that it will be on line in the later part of the next decade, supplying inexpensive, reliable and safe base load power to 2 million Texan homes – and with zero carbon emissions or, for that matter, air emissions of any kind. We expect at least two of the other three projects currently before the DOE to begin operation in the same time frame.

*Three new nuclear power plants by 2020, while an important first step in the right direction, does not a nuclear renaissance make.* If you assume that all 104 nuclear reactors currently operating in the United States have been retired by 2050, that means we need approximately 75 new nuclear units over the next 41 years simply to keep nuclear power's share of electricity production near 20%. If we want to double the nuclear share of power production to 40% in order to accommodate demand growth and realize a greater carbon benefit, we are going to need to build about 150 new nuclear units.

There is a big gap between the three to four new plants currently working their way through the system to construction now and 150. In my view, we have no hope of getting anywhere near 150 new units over the next 41 years unless we have an effective nuclear title as part of comprehensive climate change legislation in 2009. That title must embrace new nuclear as a fundamental building block of our 21st century national energy policy, and provide the pragmatic, essential policy tools that are needed to realize the laudable intentions laid out for new nuclear power in the Kerry- Boxer bill -- tools that are needed in addition to a price on carbon for nuclear to succeed. Those tools must address the key commercial constraints to a nuclear renaissance, and include worker training, expanded domestic manufacturing capability, transitional loan guarantees for project financing for a second wave of new plants, and efficient and safe regulatory approval processes capable of handling a much larger volume of projects.

Nuclear, renewables and, let us not forget, carbon capture and sequestration, can transform NRG's fleet and the US power sector from high carbon to low carbon in the next 30 years. That will address the 40% of US carbon emissions that come from the power sector. But another third comes from the transportation sector, and more than half of that comes from light cars and trucks and simple math tells me that, if the goal is 80% carbon reduction by 2050, that means we need to aim for near total decarbonization of both the electric and transportation sector.

The Boxer-Kerry bill recognizes the importance of decarbonization of the transport sector through electrification but is too cautious in what it proposes. Planning and grants are well and good, but what we need to do is start building an electric vehicle ecosystem in several major cities and city clusters across the country right now. In other words, we need to focus on a commercial foothold strategy that will quickly capture a significant market share for electric vehicles in key American cities that themselves take steps to develop a coherent electric car urban ecosystem. This needs to be combined with provisions that foster entrepreneurial, campaign-based, commercial efforts to drive rapid adoption of electric vehicles by actual American customers.

Electrification of our transport sector is, of course, not just a major step forward in our effort to decarbonize American society, it means much more in terms of the enhancement of national security and the preservation of national wealth. The electrification of our transportation sector will provide the cure to our national addiction to foreign oil and will keep at home in the United States a substantial portion of the $400 billion of wealth transfer that currently takes place every year from the United States to the oil producing nations.

Let me turn from what should be added to the bill to commenting on what is already in the Boxer-Kerry bill. First, we want to salute you, Chairman Boxer, along with Senator Kerry, the members of this Committee and your staffs for starting this important work in the Senate.

Let me make it clear that we support the general framework of this bill. By that, I mean a declining cap on carbon emissions, a market-based flexible compliance system, and a combination of free allocations and auctioning of allowances. Auction revenues and some of the free allowances are used to help buy down the initial cost and risk of low and no-carbon technologies. Additional allowances and revenues are used to buffer the impacts of compliance costs on end use consumers. And a large number of offsets and other measures are intended to ensure that those costs do not become excessive. This bill has all of those features. However, in my view, the current draft would be more effective with modifications to several of those key provisions:

First, the bill appropriately recognizes that the most important source of investment in clean technologies is the private sector, and in the power sector that means power companies themselves. The transitional allocation of carbon allowances to the power sector is incredibly important in enabling US electric companies actually to invest in the scale deployment of clean technologies. As a merchant generation company, NRG would

face a stark choice under climate legislation without enough transitional allocations for merchant coal companies. Earnings that we are spending today on aggressively decarbonizing our fleet would instead be spent buying more allowances in the EPA auction, leaving us unable to deploy at scale the low carbon technologies needed to meet the legislation's aggressive emission reduction goals. An adequate supply of transitional allocations to merchant coal companies will allow us to invest our way to a low carbon future; while helping ensure against carbon "windfalls" from merchant coal receiving excessive transitional allocations. Similarly, rate-regulated utilities need the bill's LDC allowances so that they, too, can invest in costly new technology without creating the rate shock that would harm customers and lead state utility commissioners to slow down their spending on new technology.

Given the importance of this issue, the House bill's overall level of power sector allocations were at a bare minimum for us. We certainly appreciate the maintenance of the basic power sector framework in the Kerry-Boxer bill. However, the set aside of some 10% of all allowances in the Senate bill for deficit reduction, while done more or less fairly or "across the board", does create a real problem for companies like ours that are attempting to invest tens of billions of dollars in new, clean power plants in the upcoming decade. We think the most promising solution to this problem is to carefully improve the bill's features for avoiding both under-allocation and over-allocation in and across sectors, and we look forward to working with members of this and other committees in exploring such improvements in efficiency and fairness, while maintaining the basic allocation approach.

Second, we are concerned with the very real risks to our economy and, we believe in the longer run, the climate that will result from EPA regulating greenhouse gases under the current Clean Air Act - as it is poised to do as early as next Spring if you do not act first. There are two basic problems with using the Clean Air Act's provisions for greenhouse gases– first, it can only mandate the use of technologies to reduce emissions, but cannot provide the positive incentives for rapid development and deployment of those technologies that would be provided by comprehensive climate legislation. Second, the solutions it can mandate for greenhouse gases are likely to both be highly expensive and environmentally relatively ineffective. To prevent both of these problems, the Senate must not only pass comprehensive climate legislation before next Spring, it must also affirmatively prevent the EPA from regulating GHGs under the Clean Air Act in ways that will do more harm than good in the power sector. The House bill does this. The Senate bill should, too. We believe there are a variety of approaches to fix this problem in an environmentally responsible way, and look forward to working with members on developing a Senate solution.

Third, the bill increases support for the broad early deployment of carbon capture and sequestration, which we believe is crucial for global success in reducing carbon emissions to acceptable levels. We appreciate the significant effort and innovation in this area your bill has made, and as we work through the significant details of your new provisions, we will commit to help with further improvements based on our own ongoing efforts and experience with post combustion carbon capture technologies.

Fourth, we believe that the cost containment provisions of the bill can and should be improved, in three key ways:

- Along with other members of USCAP, we support the ability of covered entities to use at least 2 billion tons of offsets, made up of no more than 1.5 billion tons of either international or domestic offsets. The bill's limitation on domestic offsets international offsets is too narrow, and we believe will increase the risk of allowance prices being unacceptably high.

- We also believe it is critically important to take steps that will increase the supply of such offsets that are in the development pipeline well before the carbon caps go into effect. In our view, the best way to do that is for the bill to encourage EPA to act now, even before enactment, to establish criteria for early offsets to qualify for compliance use in the program after the bill is enacted. To achieve this, the bill should clearly provide that any early offsets that meet such EPA criteria will indeed be valid for compliance. This will allow offset developers and offset buyers to have a high level of certainty regarding what offsets will qualify for compliance, and allow the early pipeline of offsets to begin to fill up almost immediately. This should significantly moderate costs in the early years of the program.

- Similarly, we would like to see improvements in the market stability reserve program. Most important is for the bill to contain clearer means to ensure that a very large number of avoided deforestation credits from national programs will be procured by the US Government and used to fill and refill the reserve. This will allow it to be large enough to provide a truly firm cap on allowance prices. We are concerned that not enough attention has yet been given to ensuring that the reserve will be large enough to effectively prevent excessively high prices, and we look forward to working with you and others to ensure that it does.

For such a complex topic as climate change, and an 820 page bill, this is a pretty short list. While there are many parts of the bill that do not affect us, and which we do not have an opinion on, I think the basic message here is that you are making a good start. While much additional work is needed, I believe most of it is focused in a relatively few areas of the bill, and that the best way to achieve success is by moving the bill forward through the Senate process. Some of the work can best be done in this committee; I'm sure much important work in addressing various regional and state-specific concerns will be done in other committees; and much will no doubt be achieved on the floor of the Senate as well. Let me assure you that, as you work to improve this landfall first draft throughout the entire Senate process, and work above all to secure the all-important 60 votes on the Senate floor, we will be pleased to act as a resource to this Committee and to each of you in this historic and critically important task.