Prepared Statement for Camilo Serna
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Good afternoon and welcome Secretary Moniz and the entire Quadrennial Energy Review Task Force. My name is Camilo Serna, and I am the Vice President Strategic Planning and Policy of Eversource Energy.

Eversource Energy is the largest energy provider in New England, with 3.6 million electric and gas customers in Connecticut, Massachusetts and New Hampshire. Through our six operating companies, Eversource operates over 4,300 miles of transmission lines, 72,000 miles of distribution lines, and 6,500 miles of natural gas pipelines. Eversource also runs the region's largest energy efficiency programs which have been ranked the best in the nation and is the largest integrator of renewable energy in New England. Our 8,000 plus employees are committed to our mission to deliver reliable energy and superior customer service, 24 hours a day, 365 days a year.

I want to thank you for having me on this panel to discuss some the energy challenges and opportunities we face in New England.

Eversource Energy takes its role as a leader in the industry very seriously, and I look forward to sharing our views on these important topics.

Transmission Success Story

Before we talk about our region's wholesale generation and transmission challenges, I think it is important to take a step back and look at the last 10 years to understand where we are coming from as a region.

Over the past 10 years, New England transmission owners, including Eversource, have invested billions of dollars constructing the needed transmission upgrades that have eliminated many existing and emerging reliability needs on a timely basis. As a result of these projects, New England has a much more robust and flexible transmission system, with an increased level of reliability.

These projects have also had the additional benefit of reducing hundreds of millions of dollars of congestion payments on the New England transmission system. They have also eliminated the need for ISO-NE to make daily out-of-merit dispatch payments thus contributing to reduced payments for reliability must run generation.

In addition, the flexibility provided from these transmission investments has allowed for the economic dispatch of generators with fewer emissions, resulting in substantial reductions in emissions level.

Most importantly, New England customers are much better off as a result of the substantial transmission upgrades that the New England transmission owners have built. Congestion charges, daily reliability payments, and payments associated with reliability must run agreements fell from almost $800 million in 2005 to less than $100 million in 2015, an almost 90 percent.

Eversource has been the largest player in the construction of those upgrades, and its transmission improvements have produced major regional reliability benefits and large savings for our consumers. Since 2001, Eversource has focused on the planning and construction of multi-year, billion-plus dollar investments in transmission assets. At Eversource, we are proud of what we have accomplished and plan to continue to identify needed reliability based investments into the future.

Regional Challenges Moving Forward

As a result of the significant transmission investments, New England is different from the rest of the country to the extent that the region has already completed a substantial build-out and upgrading of its transmission system in the last decade. Moving forward, we see that the region will need to address four different but interconnected challenges.

First in New England we have undergone a major transition, as traditional fossil fuels, such as coal and oil, have made way for natural gas. In 2000, natural gas comprised 15 percent of the region's generation output. In 2015, that output has risen to 49 percent.

This shift to natural gas has provided for important positive impacts to the region, such a significant contribution to carbon emission reductions. Power plant carbon emissions have been reduced by approximately 25 percent both on total and on an average emission rate over the last 15 years.

However, and this is our second challenge, New England has a constrained gas pipeline system which has led to incredible market volatility. When our pipeline system is unconstrained, New England's wholesale energy prices are competitive with the rest of the nation. However when there are constraints our customers pay much more. For example, the energy market value for the winter of 2013-2014 was over $6.8 billion, which was up from an average of $2.8 billion in the prior three winters. We believe that $3 billion of this increase can be directly attributed to pipeline constraints. This occurred when 8,000 to 10,000 megawatts of our most efficient power plants sat idle without gas supply. This uncertainty in the market caused retail electric prices to increase a staggering 40-60% in the winter of 2015. We can't really have a system where we are hoping for mild winters.

Third, the region has seen and is expected to continue to face an increase in the retirement of generation capacity. Over the past 3 years, a total of almost 2,000 megawatts of generation capacity has retired. Most importantly the region expects to lose another 3,000 megawatts of retirements in the next 4 years and has the potential to lose an additional 6,000 megawatts by 2025. This would represent approximately 30 percent of existing capacity resources.

Fourth, we have as a region some of the most aggressive carbon emission reduction goals in the nation. Both Connecticut and Massachusetts have signed into law Global Warming Solution acts that call for an 80% reduction in carbon emissions by 2050. This commitment to carbon emission reductions is coupled with aggressive renewable portfolio standards and a strong commitment to maintain and grow investments in energy efficiency. New England has significant renewable energy potential, but it is mostly located remote from load in the form of hydro and wind to the north and off shore wind to the east. Tapping these resources will require additional investments in transmission. Since these do not readily fall into the Regional Network Service on reliability, we will need to find new ways to finance these investments. The Clean Energy RFP that MA, CT and RI are pursuing may be such a vehicle.

These challenges are very real and very imminent. We are facing potentially lasting impacts on our residential and business customers, as well as the regional economy. We need a call to action, with balanced and comprehensive solutions that are able to address these challenges both in the short- and long-term.

Balanced and Comprehensive Solutions are needed

Moving forward, it is important to note, that at Eversource we have already begun work to meet these challenges head on to ensure a bright energy future for New England.

As power plants retire and production shifts, Eversource will continually propose projects that reinforce our transmission grid to eliminate bottlenecks and price congestion. One of the success stories in New England has been the ability of the region to plan, finance and build electric transmission through the Regional Network Service Transmission Tariff. As I said, new transmission will be needed to continue to "de-bottleneck" our system. Eversource Energy is confident that we can meet that challenge under the current RNS structure as long as the appropriate incentives to make these investments remain in place.

To address the pipeline constraint challenges, we need to expand the region's natural gas capacity. Although it is our fuel of choice for the region, we have not seen capacity for generation added in over 20 years in New England. We need to address this structural defect as it keeps up to 8 gigawatts of our most efficient capacity off line in the winter and adds potentially $3 billion in inefficient costs to our customers' bills—not to mention the environmental impacts. Multiple attempts to address this issue through market pricing designs failed, so it is the time for a different approach. Eversource has entered into contracts for gas transportation capacity with interstate pipelines. In order to get these contracts approved collaboration with our policymakers will be crucial for pipeline expansion in New England.

Finally in order to meet the aggressive carbon emission goals that the region has, at Eversource we believe we need a cost-effective portfolio approach that focuses on resource diversity. We hope ongoing procurements of clean energy by the key New England States will help advance the region in meeting these goals by leveraging a diverse set of clean energy resources.

Looking out into the future, we also see the need to focus on solutions that provide renewable energy that is close to electric load centers, with lower intermittency and higher capacity factors than traditional renewable solutions and where major transmission upgrades are not needed. To that end, we believe that offshore wind holds great promise for New England and could be a key element to address the carbon emission goals and the impeding generation retirements. We are heartened by the important experience gains the technology improvements over the past five years in Europe and the expected cost improvements that offshore wind companies have indicated over the past months.

In Closing

Yes we have challenges, but we have opportunities. I look forward to discussing the future of energy in New England further with my fellow panelists today, and I again want to thank Secretary Moniz and the Department of Energy for welcoming me here to share our perspective.