

Prepared Statement for Tom King

**US Department of Energy – Quadrennial Energy Review Meeting**

**April 21, 2014**

Thank you for the opportunity to participate in the Quadrennial Energy Review.

Thank you to President Obama and Secretary Moniz for their leadership in convening this task force. It is crucial that public-private partnerships help establish a roadmap to addressing our energy needs and environmental challenges.

National Grid is one of the largest investor-owned utilities in the world. National Grid owns and operates the United Kingdom's national electric and gas infrastructure, and is investing over 30 billion dollars to enhance capacity and modernize those networks, under well structured regulatory compacts.

Here in the US, National Grid owns natural gas and electric transmission networks across New England and New York, and distributes electricity and natural gas to more than 7 million customer accounts.

This equates to connecting 15-16 million people every day with our energy networks, which allows us to understand the importance of regional coordination.

America's natural gas and electricity networks are extraordinary feats of engineering. These systems have mostly served us well over the last half-century and have done what they were originally intended to do.

Now, in 2014, our collective challenge is that current energy networks can't support 21<sup>st</sup> century demands and innovations. We need to expand the capacity and the capabilities of both our natural gas and electric energy networks.

In the Northeast, we have an extraordinary opportunity to optimize our energy networks. By making smart investments in our infrastructure, supported by innovative regulatory frameworks, regional policies, and technology, we can advance economic and environmental health.

But without forward-planning regulatory innovation, a real change to the regulatory paradigm, these necessary infrastructure investments to our networks won't happen.

Driven in large part by evolving consumer behaviors and the realities of climate change, our customers and communities are focused, rightfully, on economic and

environmental progress. We see real opportunities to create economic development, investments, job creation, resulting in a more resilient energy system to meet customer demands of today, and tomorrow.

A more resilient energy backbone is one that responds effectively to the increasing diversity of energy demands; and one that can withstand the increased frequency and ferocity of extreme weather.

By investing in resiliency, we're investing in the future, and either we pay for it now or pay that much more for it later.

My comments will focus on 3 important areas:

1. Gas and electric interdependency and the need to build infrastructure.
2. Gas distribution pipeline infrastructure and methane emission reductions.
3. Utility of the future: Connect21

### ***Gas and electric interdependency and the need to build infrastructure***

According to FEMA, every dollar spent on resiliency and preparedness equals four dollars we'd have to spend on response.

This region has experienced extreme winters and summers, and now with more frequency.

So we must strengthen resiliency in New England while optimizing the interdependency of electric and natural gas.

Over half of the electricity generation in New England now comes from natural gas.<sup>1</sup>

About half of the homes in Massachusetts are heated by natural gas and that number is on the rise.

From 2008-2012, we converted and connected 46,400 customers to natural gas in the Commonwealth.

Recently, 19,700 new gas accounts were built and connected.

Compound that trend with additional natural gas generation, the already significant constraints in the region have been exacerbated.

We saw firsthand this winter how limited pipeline capacity, complicated by a polar vortex, caused spikes in wholesale natural gas prices.

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<sup>1</sup> ISO-New England, 2012 Annual Markets Report

Energy market costs were \$5.05 billion during this past winter, compared to \$5.2 billion for *all* of 2012.<sup>2</sup>

This has direct consequences for our customers.

The commodity portion of our Massachusetts retail electric customers' bills was up by 35 percent compared to the year before. And we anticipate 40 percent over that for next winter.

The natural gas we purchase for our customers is up 30 percent compared to last year.

Electric transmission constraints will cost customers in the Boston area more than 250 million dollars in just one year.

Solving for this interdependency will require long-term investments in our existing bulk power network AND in new natural gas pipeline infrastructure.

Investments like the NEEWs transmission projects that National Grid and Northeast Utilities have been working on is the perfect example.

The New England East-West Solution ("NEEWS") is a collection of electric transmission projects to improve the reliability and performance of the bulk power network in southern New England.

By strengthening the network in New England, NEEWs will improve operational flexibility, reduce congestion, alleviate customer costs, and integrate cleaner generation resources.

To meet clean energy goals, however, we will also need additional electric transmission investments like the New England Governors have identified in their regional coordination efforts.

National Grid has experience in connecting up renewables, most recently with our agreement to construct the undersea cable to interconnect with Deepwater Wind – the offshore wind farm off the coast of Rhode Island.

And we will be looking at additional opportunities to invest in New England transmission infrastructure to help meet the region's clean energy needs.

This same type of regional coordination is also needed for long-term gas pipeline capacity.

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<sup>2</sup> ISO-New England, Cold Weather Operations, April 2014

The region and ISO-New England must work expeditiously to put in place effective market structures that will result in generators incented to perform when called upon, and the establishment of firmer fuel arrangements, and which value regional fuel diversity.

National Grid would support the procurement of long-term gas pipeline capacity provided appropriate legislative and regulatory mechanisms are in place and ensure that customers are protected.

With these structures in place, resiliency will be stronger, constraints alleviated, and price volatilities mitigated. Both gas and electric prices should show marked improvements for customers.

Now investing in new capacity and the network is one-half the equation.

Downstream solutions are the other half.

### ***Gas distribution pipeline infrastructure and methane emission reductions***

Natural gas pipeline replacement and reducing methane emissions – address public safety, economic and environmental goals.

The need to advance leak detection technology, accelerate replacement, and drive regulatory innovation to ensure investment recovery is critical.

To offer an example, I'd highlight our efforts in Rhode Island.

We have 3,200 miles of natural gas main in the Ocean State, providing gas service to 257,000 customers. With the support of the Rhode Island Public Utilities Commission, we've undertaken an accelerated pipeline replacement program.

Our "Distribution Integrity Management Plan," a federally-mandated program to which every natural gas company must subscribe, boasts an ambitious strategy to replace 1400 miles of natural gas mains over 19 years.

And by prioritizing the leak prone areas of pipe, we've replaced it with more efficient plastic mains and services. Leak repairs per mile have dropped more than 40 percent.

Our Rhode Island customers expect a safer, cleaner, more efficient system and we're delivering on it.

In the same light on a larger scale, I'm also proud that National Grid is a founding member of the Natural Gas Downstream Initiative; partnering with other leading natural gas LDCs to manage and reduce methane emissions from infrastructure and operations.

The Downstream Initiative seeks to identify and encourage programs that

Accelerate investments to modernize infrastructure,

Promote operational excellence, and

Utilize advanced technologies.

I am encouraged by the early enthusiasm of this Initiative and look forward to advancing this effort with DOE, EPA, the NGO community, and my industry colleagues.

### ***Utility of the future. Connect21***

Connect21 is National Grid's plan to design, build, and operate an energy infrastructure that is responsive to 21<sup>st</sup> century needs.

At the heart of it, the Connect21 framework links customer needs and policy goals with technology and market solutions; all geared toward optimizing our energy networks.

It starts with putting customers in charge.

By equipping them with the best information, customers can make energy efficient choices

By providing options about sources of electricity, for solar, for wind, a stronger market for renewable energy will be built.

And to enable this data and energy management, we must enhance the network with technology and innovation.

By opening up our natural gas and electricity grids as innovation playgrounds, our high tech partners can propel market-based advancements; real game changers for economic and environmental progress.

But Connect21 will only work if the regulatory paradigm is changed.

It only works through regulatory innovation that supports long-term infrastructure investments, and rewards policy goals such as resiliency, efficiency, and technology advancement.

As the Quadrennial Energy Review Task Force continues its regional hearings across the country and develops an integrated review, thank you for your consideration of National Grid's perspective.

We look forward to helping address the energy challenges and opportunities facing New England, the Northeast, and the nation.

Thanks again.