Slide 1—TITLE SLIDE__STATE OF THE GRID: 2016

Slide 2—About the ISO on Background Series

Good morning, everyone. My name is Ellen Foley and I am the Director of Corporate Communications at ISO New England. I'm joined today by Gordon van Welie, president and CEO of ISO New England. We'd like to welcome all of you to our eighth "ISO on Background" session.

We hold these informational briefings periodically to provide the media with an informal opportunity to get an in-depth look at the trends affecting New England's electricity industry. Although these sessions are called *ISO on Background,* the content is on the record, and may be quoted and attributed to the speaker.

I'll go over today's agenda and provide a quick overview of ISO New England, followed by Gordon van Welie, president and chief executive officer, who will describe the state of New England's power grid.

To be sure that we get through the material in the scheduled time, we'll hold questions until the Q&A session at the end.

The presentation and remarks will be posted on the ISO New England website, in the press release section, after the session concludes.

Slide 3—Agenda

The presentation will last about 45 minutes and we've set aside about a half-hour for questions from the media.

Slide 4—Overview of Presentation

Today we'll provide updated statistics regarding the power system in 2015 and outline the factors driving the transformation of New England's power system, which is on the way to becoming a hybrid grid.

Slide 5—TITLE SLIDE __ ABOUT ISO NEW ENGLAND

Slide 6 – Two Decades of Experience Overseeing the Region's Restructured Electric Power System

ISO New England, headquartered in western Massachusetts, is the independent, not-for-profit corporation established by the federal government in 1997 to handle three important tasks: operating the high-voltage power system in the six New England states, administering the wholesale electricity markets, and conducting power system planning.

A hallmark of the ISO's independence is the fact that employees, management, and the Board of Directors can't have any financial interest in any of the companies doing business in the markets.

The ISO operates the high-voltage, interstate transmission system and is regulated by the Federal Energy Regulatory Commission. Local utilities are under state jurisdiction, and operate the low-voltage distribution system of wires bringing electricity directly to homes and businesses.

It bears repeating that the ISO does not favor any fuel or technology and takes no position on any natural gas pipeline proposal or elective transmission proposal. The ISO doesn't own any transmission or distribution lines or power plants; doesn't buy or sell electricity and doesn't make money in the markets we administer. The ISO has no financial or other connection to the natural gas industry, other than to coordinate with the pipeline operators when needed to ensure reliability, and the ISO has no role in setting energy or environmental policy.

Slide 7—Snapshot of New England's Power System and Wholesale Electricity Markets

This slide provides a snapshot of the power system that we operate and a thumbnail description of the markets we administer.

Now I'll turn the briefing over to Gordon van Welie, president and CEO of ISO New England, to update you on the state of New England's power grid, the continuing transformation of its resource mix, and the advent of a hybrid grid.

SLIDE 8—TITLE SLIDE __ State of the Grid: Setting the Stage

Thank you, Ellen. I want to thank you all for dialing in to this year's State of the Grid media briefing. We appreciate your interest. This morning, we'll update key data points with 2015 facts and figures and describe the forces that continue to transform New England's power system.

For those of you who have covered energy issues in New England for any length of time, much of this year's status report will sound familiar. The fundamental challenges facing the New England power system remain the same, and the ISO's perspective has not changed. The New England power system continues to be in a precarious position during extended periods of extreme cold. The region will continue to be in this position until the New England's natural gas infrastructure is expanded to meet the demand for gas.

Briefly, the key points we'll highlight today are these:

First, New England's competitive wholesale electricity markets have been the foundation enabling the transformation of the region's resource mix. Competition has resulted in significant investment in resources that are cleaner and more efficient.

Second, New England's generation fleet is undergoing rapid change. The use of natural gas to generate electricity continues to grow, retirements of coal, oil and nuclear power plants are continuing, and levels of wind and solar resources and energy-efficiency measures are also growing. The transformation is bringing both benefits and challenges to reliable operation of the power system.

Third, New England needs additional energy infrastructure. That includes natural gas infrastructure to meet growing demand for natural gas for both heating and power generation. New transmission infrastructure will also be needed to fully realize the New England states' clean energy goals to bring wind from northern New England or Canadian hydro down to the population centers in southern New England.

Fourth, the price of wholesale power in New England is directly correlated to the price of natural gas. When generators can't get natural gas, prices spike. But for most of 2015, pipelines were able to deliver plenty of low-priced natural gas to New England generators, and our wholesale power prices dropped to levels that were competitive with other regions of the country.

Finally, ISO New England and our stakeholders have worked together to address the challenges of this transformation. We've made major changes to both operations and markets to address the challenges to power system reliability. We'll continue to work with market participants, policy makers and other regional stakeholders to maintain a reliable power system and competitive wholesale markets as the transformation continues.

Slide 9—Transformation of Region's Resource Mix Continues

The transformation of New England's generation fleet is continuing unabated. You will see this when we present the numbers of proposed natural gas generators and wind farms, combined with the growing number of retiring baseload resources that DON'T use natural gas, such as coal, oil and nuclear power plants. The transformation is also evident in the growth of energy-efficiency measures, and demand-response and solar resources.

The shift to natural-gas-fired generation has been underway for the last two decades. New England's competitive wholesale electricity markets have attracted significant investment in new power plants. Most of this new investment has been in highly efficient, natural-gas-fired plants that are relatively easy to site and less expensive to build and run than other types of power plants.

Booming production of natural gas from the Marcellus Shale, on New England's doorstep, has made low-priced natural gas available to the region, most of the time. When there's enough pipeline capacity to serve the region's power generators, New England's wholesale electricity prices can compete with the prices in regions where electricity is typically less costly. In winter, though, the pipelines serving New England are operating at full capacity just to meet heating demand. When that happens, we've experienced challenges to power system reliability as well as extreme price spikes.

During most of the year, the low price of natural gas is setting the wholesale price of electric energy, so power plants using more expensive fuels are getting squeezed financially. As a result, more and more non-natural-gas-fired generators are retiring.

Slide 10—Shift to Cleaner Energy Sources Continues

The transformation of our resource mix is fueled by economic realities, such as the low price of natural gas produced in nearby states, as well as public policy decisions establishing environmental requirements and encouraging development of cleaner energy resources.

The New England states are leading the nation in development of energy-efficiency measures and support of clean energy resources. Primarily, these have been large-scale wind in remote areas of the region, and also behind-the-meter solar. Some state clean-energy goals also seek more large-scale hydro from Canada. Whether it's wind in northern New England or hydro from Canada, more high-voltage transmission lines will be needed to bring that energy down to New England's population centers.

The transition to greater levels of renewables will require fast and flexible resources that can ramp their output up and down on command to balance the variable output of these weather-dependent resources. Paradoxically, the current technology that can do this best is in natural-gas generators. New England has conventional grid-scale energy storage in the form of two large pumped hydro storage facilities, and the states are launching initiatives in support of emerging storage technologies. The newer storage resources are just beginning to explore how they can participate in the wholesale markets.

Distributed generation located at consumers' sites, such as solar panels, is growing rapidly in New England. This is especially true in states like Massachusetts that have policies encouraging the development of solar. Distributed generation is on the distribution system operated by the utilities, and not on the high-voltage system operated by the ISO. While the ISO can't "see" these resources or control their output, they are already having an impact on consumer demand, and we are working to accurately project the effect they will have, hour by hour, and also 10 years ahead.

Slide 11—Electric Grid Will Look Very Different in the Near Future

The generation fleet is shifting to a hybrid fleet from a system based almost entirely on large-scale oil, coal, and nuclear generators located near large population centers. This hybrid grid will continue to include large generators, but they will be mostly natural gas power plants located near large population centers and wind facilities in remote locations. Increasingly, our resource mix will include distributed generation, such as solar panels located at customers' sites, and resources that reduce demand, such as energy efficiency measures and companies that can lower their power usage when needed.

The larger generators will keep electricity flowing on the regional power system while the smaller, distributed resources will help reduce the amount of energy that needs to be produced. It wouldn't be surprising if, within the next 10 or 15 years, as much as a fifth of New England's resource mix consists of distributed resources. This "hybrid" blend of resources will change how we operate the power grid, and will require significant investment in energy infrastructure to support it.

SLIDE 12—TITLE SLIDE__2015 Highlights

Now we'll update some of the facts and figures we provide every year.

Slide 13—Natural Gas Used Most Often to Generate Region's Power

With declining natural gas prices, the use of natural gas to generate electricity has increased dramatically. Last year, natural-gas-fired power plants produced just under half, or 49%, of the electricity generated in New England. That's up from 15% in 2000, and is more than any other fuel source in the region. Meanwhile, the combined use of coal and oil has fallen dramatically over the same period, from 40% to 6%. Coal- and oil-fired resources rarely operate any more. They're typically called on to run only during the summer when electricity demand is highest, and in the winter when natural gas pipelines are constrained or spiking natural gas prices make them more economical. Because they rarely run, they rarely get paid in the energy market, and that's a major driver of generator retirements in New England.

The retirement of Vermont Yankee nuclear station at the end of 2014 also had an impact on the generation mix. Nuclear power's share of total generation dropped from 34% in 2014 to 30% last year.

Because natural gas power plants make up 44% of the region's fleet, the availability of natural gas for power generation has a profound impact on both grid reliability and power prices.

Slide 14—Natural Gas and Wholesale Electricity Prices Are Linked

This graphic shows average monthly prices since the current markets were launched in March 2003. The price of wholesale electricity is primarily driven by the cost of fuel used to produce it. As you can see, natural gas and wholesale power prices are closely linked in New England. That's because the largest share of electricity produced in our six states comes from generators that use natural gas. These monthly averages also illustrate the seasonal price volatility for both natural gas and wholesale electricity. This is a direct result of the availability of pipeline capacity.

Slide 15—Winter vs. Summer Prices: With Pipeline Constraints, the Price Spread is Growing

In winter, when demand for gas is high and natural gas pipelines are constrained, wholesale prices can increase dramatically. In summer, when the demand for natural gas is low and the pipelines are not constrained, the fuel's price drops and wholesale electricity prices drop, too. In fact, in 2015 we saw the lowest summer prices in New England in the last 12 years.

This slide compares average prices for the three months of winter against the three months of summer in New England. When domestic natural gas production started to take off in 2009, summer prices started to trend lower than winter prices. In the last three years, starting in the winter of 2012/2013, pipeline capacity has become an even bigger factor and has really expanded the spread between winter and summer prices.

Consumers won't see high or low wholesale electricity prices reflected in their retail bills right away. While wholesale electricity prices change every five minutes, retail rates in customers' bills usually change every six months or a year. Utilities and competitive retail suppliers establish longer-term contracts to even out the volatility in real-time wholesale power prices.

Slides 16 & 17—When Pipelines are Unconstrained: New England's Wholesale Power Prices are Competitive with Other Regions

On the next two slides, slides 16 and 17, you'll see that when low-priced fuel is available without constraint to the region's power generators in summer, New England's wholesale prices are nationally competitive.

The booming production of domestic shale gas has dropped the price of natural gas to historic lows across the country. In summer, when natural gas demand is low, there's plenty of room in the natural gas pipelines to carry this low-priced natural gas to New England generators.

Last summer's prices were the lowest in 12 years and as a result, New England prices were competitive with the prices in other wholesale markets. The first slide shows that last summer, New England's average price of wholesale power was even lower than the price in the Midcontinent ISO, which serves the Midwest. The Midwest typically has used cheaper, indigenous fuels such as coal and, therefore, typically has had lower prices than New England. However, in winter, the Midwest does not have the natural gas pipeline constraints that we experience here and their winter prices were almost $50 a megawatt-hour lower than ours. Because of pipeline constraints, New England consumers cannot reap the year-round benefit of low-cost natural gas.

Slide 17 compares New England prices to those in nearby regions in New York state and in PJM, the ISO New England counterpart in the Mid-Atlantic States. This past February, when New England's natural gas pipelines were constrained during extreme cold, the wholesale price of power here was the highest of the three; in June, when there was plenty of pipeline capacity to serve power generators, our region's price was the lowest.

Slide 18—Wholesale Electricity Costs Reflect Market Conditions

The total value of the New England energy market, in blue, was $5.9 billion in 2015, one of the lowest totals we have seen since 2008. There were two main drivers for the low energy market value in 2015. Very mild weather most of the year lowered consumer demand for both natural gas and electricity, and extremely low natural gas prices during most of the year translated into very low power prices. In fact, the lowest monthly power price since 2003 occurred in June. And last month was the mildest December since 1960, and recorded the second-lowest wholesale power price since 2003. Those low prices contrast with last February, which was the coldest February since 1960. Natural gas prices spiked to near record highs, and power prices followed suit.

Including the capacity and ancillary services markets, the total value of New England's wholesale electricity markets was $7.2 billion in 2015. These are preliminary numbers until the markets are settled.

Slide 19—Putting Competitive Wholesale Markets to Work for New England

All these facts and figures illustrate something that may not be readily apparent. When wholesale markets are competitive, as they are in New England, resources must compete by offering their electricity at prices that reflect their true operating costs. Fuel is the primary operating cost for most resources. Lower-cost resources are dispatched first to meet consumer demand. Resources using higher-priced fuels are dispatched less often. The lower-cost, efficient resources are usually the newer and cleaner resources. The competitive markets have enabled the addition of new, efficient, natural-gas-fired generators, and these generators are displacing older power plants that use more costly fuels – mostly coal and oil. And renewable resources, which have no fuel costs, will displace natural-gas generators.

Slide 20—Power Plant Emissions Have Declined with Changes in the Fuel Mix

New England's power plant emissions have dropped significantly over the past 13 years. The reason is twofold. The increase in cleaner-burning natural-gas generation, coupled with declining use of coal and oil plants, has brought significant improvements to the region's air quality. As you can see, the total emissions, and the average emissions rates, of nitrogen oxide, sulfur dioxide, and carbon dioxide have all declined significantly.

The New England states' public policies also play an important role in emissions reductions in the region. Those policies include funding for widespread energy-efficiency measures, putting a price on carbon through participation in the Regional Greenhouse Gas Initiative, and environmental regulations that have resulted in one of the cleanest fleets of power plants in the country.

Slide 21—New England Shifts to Coal and Oil in the Winter

When natural gas delivery to natural gas generators is limited by pipeline capacity constraints, the ISO must dispatch other generating resources to maintain grid reliability. These resources are often coal- and oil-fired power plants with access to fuel stored on-site. As you can see, coal, in green, and oil, in red, made vital contributions to the fuel mix during high natural gas demand days last winter, particularly during last February's extended cold. The contributions of natural gas and liquefied natural gas are in blue.

As you might expect, emissions go up in winter when the ISO must use more oil and coal plants to maintain reliability. Coal and oil power plants are obviously still important to keeping the lights on, but many are retiring and more are at risk of retirement.

Slide 22—Winter Operations Highlight Natural Gas Pipeline Constraints as a Continuing Reliability Challenge

Let's focus for a moment on the current winter and briefly go over the Winter Reliability Program that has helped the ISO keep the lights on through these past few challenging winters.

As I mentioned, almost half of the region's fleet of power plants uses natural gas as its primary fuel. Our load forecasters have become experts in the operations of the natural gas industry because of our experiences of the past several winters, and they have identified up to 4,200 megawatts of natural-gas generation that could be at risk of not being able to get fuel during the winter period.

To ensure that there's enough fuel to keep the lights on, the ISO initiated its first Winter Reliability Program two winters ago, for 2013/2014. We ran another one last winter, and the third program is underway now.

Before implementing the winter programs, we discovered that most oil-fired generators were not filling their tanks because the cost of oil was high at the time and they were rarely called on to run. But as you've seen, when natural gas power plants can't get fuel, we need to turn to other types of power plants. But if those generators run out of fuel, they cannot help. By providing financial incentives to participating power plants to stock up on fuel before winter begins, the Winter Reliability Program ensures that generators have the fuel they need to run during those extended cold periods when natural gas pipelines are constrained.

We've had robust participation in each of the Winter Reliability Programs, and they have been crucial to maintaining reliability through recent winters.

The current Winter Reliability Program will run through this winter and the next two winters. Then, in June 2018, new performance incentives in the Forward Capacity Market will go into effect. With the new rules, resource owners are expected to make investments that will ensure their resources will perform as expected during times of system stress. For many of these owners, the most cost-effective investment is to convert to dual-fuel capability. With dual-fuel capability, they can switch to burning oil stored on site when they can't get natural gas or the price is too high. However, that will result in higher emissions, which runs counter to the states' environmental objectives.

Slide 23—Winter 2015 / 2016 So Far

Up until this past week, there hadn't been much winter to speak of, and that's reflected in the high temperatures and incredibly low electricity usage and prices through January 18. This past December was the mildest since at least 1960. It was so unseasonably warm that both natural gas prices and wholesale electricity prices were unusually low. December's wholesale power price was the second-lowest average monthly price we've seen since 2003; the lowest was just six months earlier, in June 2015.

Slide 24—More Than 4,200 MWs of Generation Have Retired or Will Retire in Less Than Five Years

As we have seen, oil and coal power plants have been important contributors to maintaining reliability, particularly in winter. But they are starting to retire in large numbers. By 2019, the region will have lost more than 10% of its current capacity with the retirement of 4,200 megawatts of power plants that don't use natural gas. That includes two baseload nuclear stations, Vermont Yankee and Pilgrim in Massachusetts. Beyond the 4,200 MW of known retirements, as much as 6,000 MW of aging coal- and oil-fired power plants are at risk of retirement. That's primarily due to financial pressure because for most of the year, they don't run. When they don't run, they don't earn money in the energy market.

The retiring coal, oil, and nuclear units are going to be replaced by more natural gas and wind. To effectively use these resources, constraints on the natural gas supply into New England must be addressed and transmission lines must be built to bring the wind energy down to population centers in southern New England.

The retirement of power plants that don't use natural gas also raises the question of how the ISO will operate the grid reliably when natural-gas power plants can't get fuel.

Slide 25—Generator Retirements and Higher Capacity Prices Signal the Need for New Supply Resources

The recent and impending retirements have had an effect on prices in the Forward Capacity Market, which is separate from the daily energy markets. We hold a Forward Capacity Market auction every year to make sure there will be enough power generation and demand-reducing resources three years out to maintain system reliability.

When the region had a surplus of capacity, capacity prices were low. When almost 10% of the region's capacity announced plans to retire, capacity prices went up. As a result, the number of new power plant proposals has more than doubled, from about 5,000 megawatts just before the capacity auction in 2014, to about 13,000 megawatts today. It's worth noting that two-thirds of the proposed new power plants would use natural gas, while most of the rest would be wind facilities. Also, not all projects proposed in the interconnection queue will be built. Historically, there's an attrition rate of about 70% of the megawatts proposed.

Slide 26—The Forward Capacity Market Is Attracting Efficient and Fast-Starting Resources

The higher prices coming out of recent auctions have focused attention on the workings of the capacity market. But one significant development has been obscured: higher price signals have worked to bring new resources into the capacity market. Prices rose in the capacity auction in 2014 because more resources were needed. And by the next auction, in 2015, more than 1,000 megawatts of new power plants came forward and cleared in the market. When these new plants come online in two or three years, they will start to address the future capacity shortfalls we were expecting in some areas of the region.

In addition to the high level of new generation, last year's capacity auction demonstrated robust price competition. In that auction, developers of proposed new power plants accepted a capacity clearing price that was lower than the estimated cost to build a new power plant.

Further, for the next capacity auction, in February, 147 new resources totaling 6,700 megawatts of new generation, demand-response and energy-efficiency capacity have qualified to compete to supply capacity three years from now.

What this means, in effect, is that markets are setting a competitive price. They are working to attract new investment that is needed to maintain a power system that can meet future demand. Investors are committing to develop new resources, in the right locations, to fill the reliability gaps as older, less competitive resources retire.

Slide 27—TITLE SLIDE __Preparing for the Hybrid grid

Slide 28—Market Enhancements Are Providing Benefits

New England's competitive markets have been a key driver of the shift to a cleaner, more efficient power system. The most efficient, cost-effective generators are dispatched most frequently and earn the most revenue, supporting the transformation of the power system to a less-costly fleet that emits less.

Market-based mechanisms like the Regional Greenhouse Gas Initiative, or RGGI, support the transition because the price of carbon is embedded in the price offers of higher-emitting plants. The price of carbon raises their costs and increases the competitive advantage of lower-emitting resources.

The ISO and stakeholders have worked hard to refine the design of the capacity market to improve incentives to perform, improve price formation, and improve the likelihood that new generators will be able to get the financing they need in order to get built. The most significant change, which I mentioned earlier, is called Pay for Performance, which goes into effect in 2018. Pay for Performance will provide strong incentives for resources to invest in operational improvements and secure fuel arrangements. This will go a long way towards mitigating the reliability risks facing the region.

Slide 29—Market Changes Allow Variable Resources to More Effectively Participate in the Wholesale Markets

We've also made significant market rule changes to enhance the ability of resources such as wind and solar to participate in the wholesale markets more effectively. Negative offer prices and new dispatch rules will help incorporate wind resources into reliable operations and wholesale market competition. The improved process for evaluating Elective Transmission Upgrades will facilitate the development of these projects that are proposed by private investors.

Slide 30—State Policy Requirements Drive Proposals for Renewable Energy

Each of the New England states has adopted renewable portfolio standards that require retail electricity suppliers to buy higher amounts of renewable energy every year. This year, Vermont joined the rest of New England with legislation to create a renewable portfolio standard, but Vermont is unique among the New England states because it counts large-scale hydropower as a renewable resource. Some of the states also have clean energy or global warming requirements beyond the renewable portfolio standards.

Slide 31—Renewable and EE Resources Are Trending Up

Accounting for the New England states' clean energy laws and policies, the ISO's projections show significant increases in wind and solar resources, as well as energy-efficiency measures over the next decade. These are nameplate capacity figures. Nameplate accounts for a resource's total possible output when it's operating at 100% of its rated capability.

Wind and solar operate at lower capacity levels due to the variable nature of the wind and sun. Even so, these are significant nameplate quantities that, if realized, would represent a third of current capacity.

Slide 32—Energy Efficiency Is Slowing Peak Demand Growth and Flattening Energy Use

The New England states have made energy efficiency a priority and their results are leading the nation. To account for the effects of these ratepayer-funded programs on consumer demand, the ISO developed the first multi-state energy-efficiency forecast in the nation.

This forecast projects that the states' collective investment of nearly $1 billion a year will flatten out annual energy usage over the next 10 years, lower winter peak demand slightly, and slow down the growth in summer peak demand, which is the highest amount of power used in a year.

Slide 33—The ISO is Leading Efforts to Account for Solar Resources Connected to the Distribution System

State policies have had a significant impact on the development of solar resources, which have been coming online rapidly in recent years. We expect the current level of nameplate capacity of 1,200 MW to double by 2024, to more than 2,400 MW.

Like the energy-efficiency forecast, ISO New England also developed the first multi-state forecast of the growth of solar resources. This forecast accounts for distributed solar located at customer sites on the distribution system, and not just the larger facilities connected to the high-voltage power grid operated by the ISO.

We have worked hard to develop a solar forecast we can rely on and, for the first time, we have reduced the installed capacity requirement by including distributed solar generation. This requirement represents the amount of capacity we need to buy in the next capacity auction.

We are now able to forecast with confidence that the solar facilities that will be installed on the distribution system three years from now will be able to provide up to 390 MW of load reduction. In fact, the inclusion of the solar forecast may mitigate some of the expected shortfalls coming out of previous auctions, in some areas of the power system.

Slide 34—Solar Power's Effect on Hourly Electricity Demand

Most of the solar being added in New England is at customer sites, on the distribution system. The ISO is not connected to these resources and can't "see" or control their output, so improving daily operational forecasts to understand when they will be producing energy, or not, is crucial to reliable power grid operations.

While nearly all of the solar energy in New England comes from very small facilities, the aggregate effect of these installations is becoming observable in our control room on clear, sunny days. When they're operating full strength, they are actually *reducing* demand on the high-voltage power system that the ISO operates.

As these behind-the-meter installations grow in number, they can have a significant effect on afternoon consumer demand. Solar tends to shift peak demand to later in the day. This example from last May shows the reduction in demand during a sunny afternoon, and then the steeper evening ramp-up in demand as solar output falls with the setting sun.

Adding more wind- and solar-powered resources in New England will increase the region's need for fast-response, flexible resources. Winter peak demand occurs after the sun goes down, so less daylight and snow cover can dampen the output of solar resources, while ice and extreme cold can hamper the operation of wind turbines.

Until emerging energy storage technologies become more widespread at a grid scale, the region will depend largely on its two pumped storage plants and natural-gas power plants to counter renewable resources' weather-dependent fluctuations. This is because they can raise and lower their output quickly. Ensuring natural gas fuel availability becomes even more important as the region strives to reach a clean-energy future.

Slide 35—Transmission Developers Are Proposing to Move Renewable Energy to New England Load Centers

There are currently multiple proposals to build large, privately-owned transmission lines to bring additional hydro and wind power from Canada and northern New England to the region's population centers. These are elective projects proposed by private developers, not reliability projects needed to address weaknesses on the existing power system. However, they could help facilitate the integration of renewable resources by improving portions of the grid.

Slide 36—Infrastructure Will Be Needed to Deliver Energy from Proposed Resources

Incorporating new natural gas plants and large wind farms will require more infrastructure. Expanded natural gas infrastructure will be needed to provide fuel to the growing fleet of natural gas plants, and new high-voltage transmission lines will be needed to move wind energy from remote mountainous areas in the north to markets in the south.

Slide 37—TITLE SLIDE__CONCLUSIONS

Slide 38—Conclusions

In their first 20 years, the competitive wholesale markets have attracted billions of dollars of investment in more efficient, cleaner-burning natural gas-fired generation, while investment in transmission upgrades for reliability has enabled the addition of more generation with less congestion.

Lower-priced natural gas generators are displacing older coal, oil, and nuclear units, and the fleet of natural gas generators is only going to increase. This will mean lower wholesale electricity prices for most of the year. In 2015, those low prices were competitive with other regions of the country. But when the pipelines are constrained, reliability is threatened and prices for both natural gas and power spike. Additional natural gas infrastructure is needed to meet the demand for natural gas in New England.

The current constraints on natural gas pipelines make it more difficult for generators to get low-priced natural gas during extended cold periods in the winter.

The New England states' policies are likely to increase the region's portfolio of renewable resources significantly, but to fully integrate wind, more transmission will be needed. Further, to incorporate variable resources such as wind and solar, fast and flexible resources such as natural gas generators will be needed to back them up.

The ISO has been working for nearly two decades with policymakers and market participants to ensure the region has efficient, competitive wholesale markets to ensure reliability.

The power industry is undergoing major change. This is a transition that is well underway in New England. We have worked hard with our stakeholders to make extensive changes in markets and in operations to address the immediate challenges I've outlined today. These changes include measures to improve the financial incentives for resources to perform when needed. However, additional energy infrastructure will be needed to support the region's new resource mix, and ISO New England will continue working with our regional stakeholders to address these challenges.

Thank you for your interest and the time you've spent with us today. Now I'll be happy to take some questions from the reporters on the call. Ellen will explain how you can submit your questions.

Slide 39—QUESTIONS

Slide 40 – FOR MORE INFORMATION