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Remarks to the Economic Studies Working Group
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Before we get going this morning, I want to take this opportunity to express my sincere gratitude to Bob, Joe and Chairman Reishus, and to all of you for providing this opportunity for me, other states, and stakeholders to take a breather, and consider a bit more carefully the path we may be heading down with our various interpretations of what is and what is not in the Tariff Attachments N and K, and with the review of projects submitted under these attachments.

I appreciate this because after just a couple of these ESWG meetings I found my head spinning, and simply did not feel like I was even close to understanding what was going on, what the likely outcomes of these processes were, and how they might impact ratepayers. And I admit that I may not be capable of understanding the nuances of the regional tariff, and definitely can not claim that I am a member of that select priesthood – headed up by ISO’s own Wayne Costa – that actually understands what goes on in the belly of production cost models. But what was clear is that we were talking about potentially huge infrastructure investments, and consequently potentially significant consumer rate impacts. The letter I drafted was in effect a plea to be more deliberate in our review of these issues, given the magnitude of potential costs.

At the outset, I have to admit that I would be shocked if ten or fifteen years from now we point to this and say that this was the only, or even the most difficult, episode in our efforts to manage power systems in a way that efficiently and effectively meets the climate challenge before us. And I believe that that is really what we are faced with here – some of the first really difficult decisions we will need to make to address carbon issues. We don’t need to argue about whether we need to consider and pursue all potential solutions to reducing the net carbon impact of the bulk power system – we do. We don’t need to argue about whether we need to dramatically change the efficiency of the generation, delivery, and end use of electricity – we do. We don’t need to argue about whether wind and hydro resources are a key component of this evolution – they are. And we don’t need to argue about the need for and value of constructive and truly positive cooperation among the New England states on this issue – it is critically important.

But the difficulty is not in recognizing that we need to find *a path* forward that reflects these fundamental principles, it is in finding *the right path*. And in that deliberation, the devil is truly in the details. The price tag for the Maine Power Connection (and associated increases in North-South transfer capability), and all other generation interconnection projects under consideration by this working group, is extraordinary – in the billions. So it simply won’t be enough to just assert or model that a project or plan provides carbon benefits – they will have to be certain and demonstrated to be incremental to what would otherwise happen. And it won’t be enough to assert or model

that there will be economic benefits – they will have to be structured, contracted for, and guaranteed.

So what I would like to do today is to work from the bottom up, starting with the climate rationale for working towards solutions and a quick summary of how we in Massachusetts are responding to the challenge. And I suppose when I can avoid it no longer, I'll wade into the tricky issues surrounding Attachments K and N, and the baggage they drag along related to whether and how to depart from core principles governing operation of competitive wholesale markets, and the sharing of transmission costs for reliability projects.

In all of this, I believe one thing is clear, and bears little need of repeating. The challenge of climate change – particularly in a period of rapidly escalating energy costs and diminishing prosperity – is no run-of-the-mill public policy challenge. It is not one that can be solved by focusing on one economic sector, one market product, one state or region, or even one country. And the inexorable links between climate change, fossil-fuel consumption, and economic growth and prosperity mean that it is a challenge whose solution will affect everyone for a very long time.

But the science is clear and unequivocal: immediate and sustained reductions in the growth of greenhouse gases are absolutely needed to avoid substantial and increasing risks to human populations, societies, and environmental quality. In this context, it is not surprising that policy makers are seeking long-term solutions that may be perceived as deviating from strict competitive market principles. Or at least, by investigating potential promising solutions, are hedging their bets.

From the standpoint of system planning, I believe it is appropriate to assume that we will have an all-sector national cap on carbon within the planning horizon, creating the conditions to let technology and market forces produce the lowest-cost solution under the cap. But in the meantime, given the magnitude of the risks that climate change represents, we can leave no stone unturned. While fundamentally we will continue to operate and plan within an evolving wholesale market structure that primarily leaves resource development decisions to competitive market participants, the complexity and magnitude of climate risks suggest that we need to explore and, if appropriate, act through legislation and policy, wherever there are barriers to real and meaningful contributions to addressing the climate challenge.

That said, we are also intensely aware of how genuine public policy concerns can be manipulated to accomplish the strategic or financial objectives of private interests, and so as a region we need to carefully and deliberately separate *claims* of project benefits from projects that mean real, lasting, and guaranteed benefits to our states.

Over the past year and a half, we have seen significant legislative and policy developments that prove Massachusetts' aggressive commitment to addressing customers' electricity costs and power system carbon emissions. We have fully

reengaged in RGGI, and are pouring state resources into making sure it succeeds and that it provides a solid example and impetus for federal legislation. My agency recently approved 10-year contracts for the purchase of energy, capacity, and renewable energy credits from out-of-state wind projects. And on July 2nd, Governor Patrick signed into law a comprehensive energy bill that addresses RGGI, building efficiency, and the transportation sector, as well as game-changing provisions related to the electric sector. For example, the Act:

- Sets the stage for utility future procurement of renewable power via long-term contracts;
- Requires the installation by gas and electric utilities of all energy efficiency that is cost-effective, compared to what customers would otherwise pay for electricity or natural gas delivered to their homes or businesses;
- Provides for the potential installation in Massachusetts of up to 50 MW per utility of solar photovoltaic capacity over the next several years;
- Vastly expands the applicability of net metering – to neighborhoods, businesses, and municipalities – for installation of on-site renewable capacity up to a size of 2 Megawatts;
- Doubles the annual increase in the state’s renewable portfolio standard minimum percentage, beginning in 2010;
- Facilitates the offering of green power programs by competitive suppliers; and
- Establishes a number of technology innovation seeding programs, in particular related to residential customer installation of renewable energy technologies, and the advancement of smart grid technology installation.

And, given the expanded role of our gas and electric distribution utilities under the Act, on this Wednesday DPU issued an Order commencing the decoupling of electricity and natural gas rates from sales for all utilities in Massachusetts; our expectation is that this will eliminate key financial barriers to expanded energy efficiency and local renewable development in our state.

So, rest assured, our Governor, legislature, and state energy agencies are already charting a path for the energy future of our state and our region – one that is more stable, more efficient, lower cost, and that has a lower carbon impact.

I mention all this because some have been so bold as to paint our position on this transmission cost allocation issue as impeding solutions to the carbon dilemma; and I want to be clear that nothing could be so disingenuous, and so far from the truth. The Commonwealth of Massachusetts is doing everything it can to facilitate the expansion of energy efficiency and the development of renewable resources large and small, and otherwise to comprehensively address the dual challenges of energy costs and climate change.

Moreover, this includes remaining completely open to consider – with certain very limited but important exceptions – any and all options for facilitating the development of renewable resources within Massachusetts, within the New England power system, and

beyond the borders of our power region, whether in Maine Public Service's service territory, New Brunswick, Quebec, or New York.

And this may just reflect recent developments in my state, but I am optimistic; I believe we have reason to be. Energy efficiency remains a huge, untapped energy resource. Escalating energy costs and increasing manufacturing efficiencies are leading to improved cost effectiveness of many renewable technologies. And while there are siting challenges in all states, we are seeing a proliferation of wind turbines across our region, and across the country. We are seeing the successful integration of these generators in most RTO regions, at the same time that we are learning the challenges of balancing and managing such resources; these are lessons that we will surely benefit from here in New England.

And the industry is no longer one that needs to be pampered – wind resource development is now being driven not by local interests or wind wildcatters, but by institutions with extremely deep pockets and sophisticated development strategies – including, for example, FPL which is active in many states, T Boone Pickens in Texas, as well as developers here in northern New England: wind development in NH is backed by Iberdrola, a company that has a market capitalization of more than \$60 billion, and that has expressed interest throughout our region. And wind resource developments in Aroostook County, Maine are backed by Energias de Portugal (EDP) – a international company with a market capitalization of more than \$20 billion.

In Massachusetts, we believe we must tap into the efficiency and local renewable opportunities contained in our recent law given the sobering fact that the only way to truly manage delivered electricity prices is by reducing demand. In our state, costs associated with distribution of electricity by our jurisdictional companies represent only about a quarter of the cost of delivered electricity, and have remained relatively stable. The rest? It's wholesale commodity and FERC-jurisdictional transmission costs.

Now, on the wholesale commodity side, we know how prices will be determined over the next couple decades, at least. Prices will be determined by the marginal price of natural gas-fired generation, with a little bit of marginal oil generation mixed in. We can not change this. We can not change it by building different types of generation. We can not change it by building transmission to remote generation. And we can not change it by selecting the types of wholesale generation resources added to our region – whether fossil, nuclear, or renewable. This is important for the current discussion: separately funding transmission from new generation resources – whether in southern New England, offshore, or to bring power in from New York, northern New England or Canada – can not materially impact the wholesale cost of power in the region. On the other hand, it *would* affect the price of delivered power at the *retail* level, but only by increasing it by the cost of transmission that otherwise would remain the responsibility of the generation developer.

On the transmission side, the cost picture is also pretty bleak. ISO projects a fairly dramatic increase in the costs of transmission over the next few years for the reliability projects in construction or planning. If I remember correctly, it's on the order of a five-fold increase. And that is not even beginning to talk about the generation interconnection projects that some would like to see regionalized – such as the Maine Power Connection (and associated increases in North-South transfer capability in Maine), or any of the proposals filed under Attachment K.

As I think you all know, this is a pretty tricky issue. Transmission cost allocation is by definition an explicit, political division of cost responsibility, but one that needs to make sense on some level of equity and fairness, and one that must be consistent with the economic framework for competitive markets. I recognize that we operate as a tightly integrated bulk power system, one where the reliability in one corner of the grid affects reliability in the opposite corner. And so I understand and accept the rationale for regional cost sharing of the prudent and useful costs of reliability-based transmission projects.

As you all know, Massachusetts picks up about half of the tab for transmission in our region. This means that, as a result of reliability-based projects coming on line in the past few years, and over the next several years in northern New England, the businesses and residential customers in my state will have to pony up potentially well over a billion dollars. This includes, from Massachusetts ratepayers:

- About \$200 million for reliability projects in Vermont, with Vermont contributing about \$16 million;
- About \$100 million for reliability projects in New Hampshire, with New Hampshire chipping in about \$16 million; and
- About \$800 million for reliability projects in Maine, with Maine pitching in about a seventh of that, just over a hundred million.

Now, I could sit here and open up some old wounds, and complain about how I remain unconvinced that these projects really affect reliability in Massachusetts, or that I don't think we should be paying over a billion for projects located in states that contribute only a small fraction of what Massachusetts ratepayers will pay. I could gear up for contesting every penny of every one of those projects in regional committees and at FERC. But in my view that is not an appropriate approach to the principle of jointly ensuring the reliability of a fully-integrated regional electric grid. And of course it simply would not be fair, because all states have paid and do pay their portion of reliability-based transmission investment in Massachusetts.

I get that. But here is the issue squarely before us now, given some interpretations of the tariff attachments, and given the intense focus on transmission to the North in ISO's strategic plan: *The line must be drawn at generation interconnection, or anything that smells of generation interconnection.*

And I don't mean only interconnection of gas fired power plants, or only generation projects close to load, or only generation projects in Southern New England, or only single generation projects within a contiguous property line, or under the control of a single owner. I mean all generation projects, including generation interconnections that are wrapped in green ribbons, or that are nominally configured with some load. With the opportunity to profit in a competitive wholesale market structure comes the responsibility for internalizing, and collecting through market prices, all development risks and costs. Most importantly, such costs include the costs to interconnect the facility or facilities, as well as the costs of all system upgrades needed to eliminate any impacts on system reliability resulting from the interconnection. This is the foundation of the deregulation bargain, and this responsibility is unambiguous in the tariff. Generators can not be allowed to profit from decreasing the reliability of the transmission grid, or from foisting development costs on captive transmission customers or ratepayers. To allow this would be to violate the competitive market formula, and would inevitably lead to a decrease in the economic efficiency of regional electricity market operations.

In short, if including all interconnection and system upgrade costs a project is not profitable in our region, it means by definition that another project is lower cost, and market efficiency dictates that *that* is the project that must go forward.

I know that some of you will say that renewable projects can not survive under current market prices. And I do not want to address today the greenwashing that has accompanied many proposals over the past year or two – if folks want to, we can talk about it during the discussion period. But let it suffice to say that this smells a bit of a wolf dressed in sheep's clothing. We don't choose resources, or require command and control emission reduction technologies or strategies anymore. We set caps and floors, and let markets – energy markets, renewable energy credit markets, and emission markets – determine the most efficient outcomes. If renewable energy floors or emission caps are deemed to be inadequate to achieve energy or environmental policy outcomes (and it is premature to come to that conclusion at this time), then the proper response is legislative or regulatory adjustment of state energy and/or environmental policy. The proper response is certainly *not* the shifting of development expense via manipulation of wholesale market tariff language. Moreover, the resource planning horizon is relevant in such policy considerations: in my view, the only real relevant requirement to consider in the context of energy resource development is a national, all sector cap on carbon emissions. And ultimately, by selecting specific resources for their carbon characteristics now, we do not alter emissions under a cap program, we only administratively alter the compliance path.

But perhaps more importantly, this begins to leak into what the proper role is for the ISO in these deliberations. I begin with the following assumptions:

- That at least for the time being, we want to maintain the reliability of the transmission grid, and so we need to continuously identify reliability needs, and that such *transmission* planning is a vital function of the ISO

- That ISO serves other critical functions in our region – namely, to provide power system and market data, to identify the magnitude and electrical characteristics of capacity needs, and to evaluate the location and type of transmission system upgrades needed to maintain compliance with NERC standards.
- Of course ISO needs to focus on administration of the tariff and markets, and the constant evaluation, monitoring, and evolution of the region’s market activity and market rules.
- I also think that the tariff contemplates ISO’s evaluation of potential transmission projects that could provide benefits by reducing system congestion costs. Importantly, I do not mean congestion that *could be* created if certain generation sources were added in certain locations – this, again, is generation interconnection by another name. I mean *existing* congestion, the magnitude of which can be identified by actual locational differences in realized market prices.
- Finally, as regulators and policymakers, I think we all recognize and deeply appreciate ISO’s generic and big picture analysis and input on system needs, system challenges, and system opportunities. In such guidance and analysis, ISO plays a vital role, filling a planning gap left by the unbundling of electric utilities with restructuring. These are critical inputs to state deliberations related to resource planning, and help guide policymakers’ evaluations of energy and environmental policy.

But that is pretty much where ISO’s role should end, and the role of state legislatures and regulators and market participants should begin. In all matters the guiding principle should be, and I thought had been, that ISO should not insert itself in or interfere with market outcomes. And I wonder if we are starting to cross that line; this concern nudged at me in the rollout of the scenario analysis results, but has hit me head on in this workgroup process, and in the ISO’s issuance of its Strategic Plan.

Generic observations of power system challenges can be useful, such as the scenario analysis, or independent reviews of power system needs by industry observers and stakeholders. But they must not lead to or predetermine resource selection outcomes, which are the province of state legislators and regulators. Opinions on whether we will or will not meet renewable or environmental standards, or whether or not specific generating development options will depress market prices, or lower the marginal price of a carbon allowance, are valuable judgments that should be considered in the development of state law and policy, but they can not and must not be used as any formal justification for infrastructure development or the allocation of transmission or any other system costs, where those determinations are made in a forum that is driven only by stakeholder committees and subject only to the jurisdiction of FERC.

And that is where I fear we are headed. Some will say that these are just studies – let them go; issues of cost allocation can be dealt with much later. But I find that to be a careless and naïve approach, given that we are talking about price tags in the billions – meaning billions of dollars of cost risk for our ratepayers, above and beyond the costs of reliability upgrades, without any guarantee of benefit. And ask any of the entities with proposals under Attachment N or K: where do they see it heading? The answer you will

get is a quick trip to a market efficiency benefit determination (though it remains unclear what that means), to inclusion in the regional system plan as a regional benefit upgrade (also unclear what that means), to construction and regionalization of the costs. For example, in the context of this working group (and as continuing in the PAC), ISO conceptualizes modeling “net benefits” using production cost analyses that focus in part on producer surplus ignoring transmission interconnection costs, that include proxies for REC prices as a post-processing net benefit to certain postulated projects, and that configure the modeled system with power systems and/or generation proposals that are neither part of the current bulk power system nor identified anywhere in the current generation interconnection queue. These and many other components of these modeling approaches, assumptions, and inputs are both highly questionable and critically important, yet they have received very little review and virtually no agreement in either this committee or the PAC. Nonetheless, the analysis continues and project developers may already be representing these analyses as complete and determinative.

I recognize that the language in Attachments N and K is vague, and may not have been developed with a careful understanding – or possibly even any consideration – of how they might be interpreted or used by ISO or stakeholders in the region. But while I suspect some would love this, I personally hate the prospect of this Attachment tail wagging the tariff dog, and continuing to divide states in our region, preventing collaboration on the pressing regional energy issues that we must confront together, if we are to successfully address the impacts of high energy costs and the challenge of climate change.

So I would just urge us to not proceed down the path of regulatory battle, data and modeling wars, painful and unsatisfactory settlement discussions, and ultimately highly divisive legal challenges. And I agree with my colleagues in Connecticut that the first and best way to avoid this is to stop interpreting the tariff attachments as a vehicle for regionalization of the cost of *any* transmission that is not truly needed for system reliability.

In closing, I’ll just point out what we do know: there are vast wind, hydro, biomass and other low-carbon resource options within and just beyond the borders of our region – resources that are counted in Gigawatts, not Megawatts. Given our current energy and climate challenges, we would be fools to ignore these options, or to not work aggressively and cooperatively as a region to capture them for the benefit of all. And with apologies to those in the generating community that remain focused on development of more fossil resources, I have to admit – I like the renewable options much better. All else equal, I’d much rather see us meet load growth with wind generation than with gas generation, with hydro generation rather than coal generation.

There are many options out there to explore – from straight-up merchant transmission, to open-season like approaches, to coupling transmission costs with energy under long-term contracts, to Hydro Quebec Phase II-like joint ownership/benefit models. I certainly do not know what the answer is, I only know what the answer is not. And that’s the continued pursuit of regionalization of the costs of transmission projects that are not

strictly needed to meet specific transmission system reliability needs identified by ISO. If we can let go of that, we can roll up our sleeves and see if there is a way to work towards a common understanding and agreement on the right path forward.

NOTE: These comments reflect my personal observations, and do not necessarily reflect the position of the Commonwealth of Massachusetts, the Department of Public Utilities, or other members of the Commonwealth Utilities Commission.