

## Outline for speech to Renewables Association

December 15, 2011

I appreciate the opportunity to be here. I have only brief (by my standards) remarks, to allow time for questions.

There is an excellent book by Thad Cathcart titled The Piano Shop on the Left Bank in which he describes the wood used to make pianos and violins during the 18<sup>th</sup> and 19<sup>th</sup> centuries. He reports that some of the wood was harvested from trees planted by the craft guilds hundreds of years before. Cathcart's point is that more modern instrument makers have difficulty finding wood of similar quality because with very few exceptions, businesses and societies these days don't make investments where the payoff is so long deferred.

A very similar societal dynamic may be at work in the politics surrounding climate change. The momentum of the atmospheric systems is so great that I don't think it is an exaggeration to say that there is nothing that can be done – short of completely abandoning our current global economic systems, something that is both very unlikely and probably extremely painful – that will have any substantial effect within the next century or two on the rate and severity of climate change. I'm sure you are familiar with the recent report that growth in carbon emissions world wide has spiked following the recent recession and now seems set on returning to its pre-recession rate of increase.

I am convinced that for at least the next few decades the seas will rise, storms will become worse and more frequent, deserts will grow, and air conditioning use will increase in Maine no matter how many windmills and nuclear plants are added to our system, and no matter how many electric cars fill the streets of New York or Moscow.

What this means for proponents of renewable energy, I think, is that sustaining public and political support for financial subsidies, to the extent that support depends on arguments concerning climate change, will require the public and politicians to take an uncharacteristically long view of the benefits of their expenditures: the payoff will be very far in the future. I'm not suggesting that this is impossible – the recent evidence seems to be that we are already seeing the climate change impacts, and more rapidly than some models predicted, and that may help persuade the public that there is a problem worth addressing. I am suggesting, however, that the very long lead time between paying for the medicine and recovering from the fever will be a difficult test of political will.

The entire debate over support for renewable energy is, in fact, a variation on one of my favorite themes, namely the “tyranny of the quantifiable.” The greater the perceived certainty of the size and character of the effect, the greater the advantage in the political arena: viz. the classic case of an environmental law that will impose, with certainty, \$10 million in costs, but whose benefits are diffuse, deferred, and difficult to quantify. It's easy to find workers displaced by the regulation to show up at a legislative hearing, but much harder to find the people who will not develop cancer in 20 years.

I raise these points as my own (not the PUC's) observations about the context in which decisions concerning Maine's renewable energy are being made, and because they color my sense of how the public debate concerning support for renewable energy will be conducted in the near term in Maine. To put it bluntly, the question for this group is not only how to best meet Maine's and New England's renewable energy goals; it is whether, in the current economy and the increasing cost of meeting those goals as the existing surplus is absorbed, those goals will be preserved, let alone enhanced.

I should also say, as a preliminary matter, that I don't think the issues raised in that debate will, or should, be resolved at the PUC. The question of how the undeniable but often amorphous benefits of renewable energy should be weighed against the costs imposed on Maine's energy consumers – whether through electricity rates or otherwise – is in my view a fundamentally political question. I think the PUC has, and should continue to have, an important role in evaluating possible retail and wholesale price impacts. I also expect that we will have a role in choosing among projects competing for legislatively determined subsidies based on their relative ability to achieve the requisite benefits at the lowest cost to customers. But I do not expect the PUC will have an opinion on whether a dollar spent by a family in Maine should go towards supporting renewable energy or (for example) higher teacher salaries.

So what does this mean, as a practical matter, for the industry represented here this evening?

I don't know how much weight should be accorded Maine's tradition of supporting environmental initiatives and causes. My strong sense is that, in light of the current economic conditions and political landscape, the focus will be very much more on the near term economic consequences of policy choices.

This suggests to me that this industry has a difficult, but perhaps not insurmountable, challenge: namely, to bring forward in a coherent, plausible, and reasonably verifiable way all of the economic value brought to Maine as a consequence of the support provided to this industry. Unless that value, estimated over a broad range of plausible future conditions, is equal to or greater than the much more easily quantified cost, the discussion is likely to be difficult.

Identifying the sources of economic benefit from the support provided to the industry, whether in the form of the RPS or mandated long term contracts, is only the beginning, but I will share my own thoughts on the kinds of benefits that could be included in the calculus:

\* Economic development value, with the important proviso that it is important to show why this particular economic development should be chosen if anything is to be given support. The Colgan study prepared earlier this year provides some evidence of such benefits, and more – and more granular and specific – evidence would help the conversation.

\* LMP and capacity price suppression value, for projects that are likely to bid at or close to zero. I realize that the current NESCOE position on exempting renewable project bids from capacity market bid mitigation by the ISO (where they bid “too low”) is a sore subject with the generation community, but I think as a political matter, it may be that renewable generator interests are better served when they can point to cost reducing effects they may bring to the market. On the LMP side, there is some interesting material contained in the economic impact study just presented by ISO-NE concerning the LMP effects of building significant amounts of new wind generation in Maine. That study suggests, among other things, that the LSE energy expense for NE as a whole could be reduced by over \$300 million/year if 500 MW of wind were added in Western Maine if all transmission constraints were removed.

\* Hedge value for long term contracts. This is a tricky one, because the value of the contract itself is largely determined by the relationship, unknowable in advance, between the contract and market prices. But there is evidence to suggest that the reduction in volatility itself has value (by reducing future price risk) independent of what the particular contract/market relationship is.

\* Jeremy informed me that this group might be interested in my perspective on long term contracts, and in particular whether the current low natural gas prices suggest an opportunity for lower priced contracts. I confess I had not thought about natural gas prices as providing an opportunity for more such contracts, because my expectation would be that, with natural gas prices and expected market LMPs low, the amount of subsidy required by a price-taking resource would be greater, not less. On the other hand, since there is clearly an absolute limit on how much lower gas prices can go (I don't know what it is, but it is certainly above zero), it may be that, as the absolute price of the alternative to the contract approaches the theoretical minimum, the hedge value of any long term contract increases (since most plausible futures will have higher LMPs). That relationship might provide an opportunity to show the value of such contracts. This is an area where I think the PUC will tread very carefully. Some of you may recall that one of the reasons I got this job in 1993 was the reaction to price increases driven to a significant degree by my predecessors' enthusiasm for long term contracting, and the legislature has, to this point, constrained the PUC's authority to commit ratepayer dollars to such contracts.

\* On the related question of whether Maine can meet its renewable goals without long term contracts, I simply don't know. In part for the reasons I noted before, I don't know how much confidence anyone should have in the continued political support for the policies that drive REC revenues, and even with such support, REC prices are subject to enormous uncertainty concerning supply and cost of entry. I can see the value of such contracts to the developer; what is less obvious is the extent to which the state in general, or the PUC in particular, should fund those contracts.

\* Infrastructure development value. To the extent that other states maintain their RPS objectives, it may prove to be the case that building the resources in Maine, and building sufficient transmission to interconnect those resources, is the most cost-effective approach for other New England states, and/or for New England as whole, to achieve their policy objectives. There are significant side benefits to building out Maine's infrastructure, especially if you can get someone else to pay for most or all of it. There is also an interesting political element to this, in that if we are going to try to persuade MA to pay for transmission and support Maine's renewable generation, it might be awkward to abandon or reduce Maine's own RPS. FYI, the PUC is actively involved in an effort through NESCOE, in response to FERC Order 1000, to see if a regional approach to transmission planning that reflects public policy objectives can be achieved.

\* Expertise value. One of the central questions for any state economy is "what do I have to sell that the rest of the world wants to buy?" An important part of the answer for Maine seems to be strong wind on and off shore, open land, lots of trees, and big tides. If Maine can address the particular challenges of harvesting those resources without compromising other assets (tourism being only the most obvious), and can establish itself as a center of learning and expertise on how to do so, that in itself could provide a basis for showing additional value to be set against the near term cost of supporting renewable projects.

\* Finally, Jeremy also asked if I could provide some thoughts on utility ownership of generation, and whether in hindsight I would have restructuring in the same manner with respect to splitting generation from T&D. The short answer is that there is no short answer. Moreover, I'm constrained in what I can say on the subject because there is an active case before the PUC where the question of what the current law allows is an issue. I will, however, offer a couple of thoughts (again entirely my own), which should not be taken in any way as my view on how the current case should or will come out.

\* First, I think the structural decisions made at the time of restructuring concerning the separation of generation and marketing from T&D were correct, but I also think that the passage of time, the maturity of the market, and the experience gained in monitoring market behavior suggests that it would be reasonable to take another look at whether the same extent of separation should be required going forward.

\* Second, I think the judgment to shift risk from utility ratepayers to private investors for generation was and remains correct. In the short run, that has led to the Forward Capacity Market and all its tribulations. In the long run, with the development of greater demand side participation in the market and a more dynamically operated T&D system, the overall load curve should flatten. This should have the felicitous consequence of reducing the "missing money" problem that the FCM is intended to address, and thus reducing the importance of the FCM itself.

I would be happy to take any questions from those of you who wish to postpone dinner further.