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Maine Perspective
Transcript of remarks by Rob Gardiner
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Transcript:

I'm Rob Gardiner. I've been introduced with my long checkered career. What's interesting is following Beth and Dave, I get the sense that my future is to be the executive director of the Independent Power Producers of Maine.

I'm here to talk about gas, which is the current topic of controversy in the region. Let me just briefly summarize some of the things about gas that we need to all understand. I think we all know it comes out of the ground in a vapor state. It's transported in pipes mostly as vapor. It's stored most efficiently as liquid, but, of course, it then gets consumed as vapor again. So it's coming in these pipes from the southern United States and western Canada, for the most part, to this region, although we are getting some from eastern Canada. Not as much as everybody predicted from the oil fields, the gas fields off of Sable Island. But we do have this big gas line going down as a result through the state of Maine now, which allows gas to be used in Maine and connects us to the rest of New England in terms of the gas supply. We have relatively limited use of gas in Maine. As you know, it's mostly electricity generating plants that are at the point of consumption. We do have some industrial use along the gas line. We also have some distribution systems primarily in Portland and Lewiston for commercial and residential, but those are not big consumers in this state. In southern New England, in the Boston market in particular, there's more space heating because they have a much more expanded distribution system there, and so the market demand is in southern New England primarily at this point and the increase in gas usage over the last decade has been almost exclusively for electricity generating plants. Lets just get those sort of assumptions understood.

It's very important to understand that gas has its peak periods of consumption in the winter, when both space heating and electricity demand is high we have supply crunches in New England. During a cold snap we've had real serious supply limitations and this is a problem for us because so much of our supply comes, most of our supply, comes to us on these pipelines from far away, and consumers between us and the source of supply get to tap into that gas earlier, and so we're the ones at the end of the pipe and that can be a serious problem. Interestingly in southern New England there's a fair bit of transportation of liquid gas by truck to get around the limitations of the pipeline in that part of the region. But we don't see any of that, I don't think, in Maine.

So the advantages of gas, and again I want to talk about it in general, it burns cleaner than oil, or coal, more easily; has about half the greenhouse gas emissions; much, much less sulfur and nitrogen oxide emissions. It's burned in almost all brand new combined cycle electric generating plants. Combined cycle, I think probably most of you know, goes through a turbine like a jet engine at very high temperatures, and then it is the

waste from that, the waste heat is used to create steam to drive a steam generator, so you have those two cycles which are generating electricity, and it's a simply much more efficient system of turning BTUs into electricity than the other fuels that we use for the most part. But more importantly, these new plants are designed to operate with very low emissions. You have so many old oil and coal plants in the region which do not have good pollution control equipment on them, which are grandfathered, and their continued operation is much cheaper for the owner of those plants, than it would be to build a new coal gasification system which could be quite clean but isn't. Our laws, I think we all understand, allow continuation of old dirty plants. And so gas is a means, under the current political system, of getting us to a much cleaner electricity supplies than what we have under our other fossil fuel alternatives which were so much part of the charts that you saw.

However, there are serious disadvantages to gas. I mean it's expensive. We've heard that, we know that. It tracks, the price of gas is tracking the price of oil. We've seen both double in the last year, and that's an obvious problem. It is also a fossil fuel, meaning it's, you can get it out of these trash piles, but for the most part the gas that's available to be used is like oil: it's in the ground, it's got a limited capacity. There are differences of opinion about how much the reserves are, how close we are to extracting them all and using it up. But the point is, like any other fossil fuel, it is a limited supply and we are going to run out of it at some point. These are mostly from foreign sources that we get gas. I mean, yes, we get some from the southern parts of the United States but most of it's coming from foreign sources which means every dollar you pay for gas, right off shore, it's going away. Going out of the Maine economy, going out of the US economy. Clearly not a smart idea. This is even before you figure the cost of security issues. Fighting wars over fossil fuel supplies abroad. And then finally, you've got to recognize, even gas, a clean burning fuel, is dirtier than conservation. And it's dirtier than wind, and some of the other renewables. So there are serious problems with gas.

Well, I mentioned the supply crunch that we have had in the last couple of winters with gas in New England. And we all know that the market response to supply shortage is: build a LNG terminal. So we have seen more than twenty proposals for terminals to be built in New England in the last two years. Obviously, there's a lot of money to be made at one of these terminals. Whoever gets there is going to do very, very well. The chairman of FERC has been asked how many do we need in New England. And he said one, maybe two. So look at what's going on there. We have been saying at Conservation Law Foundation, and other environmental people have been saying that we really need FERC to do a study of the demand and the alternatives to meeting it. Those alternatives should include conservation, they should include pipeline enhancements, and they should include LNG terminals. But right now, all we're getting is consideration of LNG terminals. We also say that FERC, with all these twenty proposals, should proactively study the alternatives for terminals and try to help us find the best one. But no, they're just going to let them line up in front of the FERC office and give permits out to the first one in. I have to say I find it very ironic that on LNG issues this federal administration is advocating unfettered Darwinian economic forces, and we the environmentalists are the ones who are looking for an alternative which, could I use the term "intelligent design" to describe it?

Let's talk about the nine projects in New England that are still active, under consideration, for terminals. Three in Maine, all of them in Passamaquoddy Bay. Quoddy LNG is the first one that came in that area. That's the one on Indian tribal land. The second one is Down East LNG, which is just eight miles north of the Quoddy LNG site. And then, last month we heard of another one in Calais, I don't even think it has an official name yet, which is further up the St. Croix River estuary. So all very clustered together. Then we have two in Narragansett Bay. One of those is Fall River, which is the only one to have received a FERC permit, right downtown, right in the middle of downtown Fall River. The other one was in Providence, and that has been denied a FERC permit, it also was in a downtown site that interestingly has an LNG storage tank there already, one of those served by trucks. Then there are three in Massachusetts Bay. These are off shore sites, very different. Two very similar ones, one called Northeast Gateway being proposed by Excelerate company, thirteen miles offshore of Boston. Second one in the same area called Neptune, which is sponsored by a conglomeration of companies that includes the Distrigas company that owns the Everett Plant. And then, just a few weeks ago, we've got a new one on Outer Brewster Island, which is the outermost of all the islands in Boston Harbor. And so this one would actually be on land but then have an underwater pipeline. It's near Hull, and all of these would connect to what's called the hub line, which is an underwater pipeline, that sort of goes around Boston and Massachusetts Bay. And then the ninth one is in Long Island Sound between Connecticut and New York. Technically, it's considered part of New York, but it's really almost in the middle of Long Island Sound, called Broadwater.

So we have all these projects. The Passamaquoddy and the Narragansett Bay projects are basically on land, and most of them have storage. The Massachusetts Bay and Long Island projects are offshore and have little or less storage. So let's compare these nine sites. Let's pretend we were FERC, and we say well, how are we going to make these decisions here as to which one is the better site? I would propose the following criteria, which are perfectly obvious to anybody and I think most LNG developers would agree with exactly what I'm going to say.

First, deepwater access. These are big tankers. They're not as big as the super oil tankers, but they're almost that big, and the trend is to get bigger, so they really need to be in very deep water. Offshore, obviously, gives you an advantage of natural deep water. But Passamaquoddy Bay, for example, is a superb deep-water harbor. Very protected, but very deep water, unusually deep water. So there's an advantage for Quoddy and the offshore. The Narragansett Bay sites, because Narragansett Bay at its mouth is deep water, but when you get up to Providence and Fall River is not, require a lot of dredging. Serious disadvantage for those sites.

Okay, the second criteria would be proximity to the pipeline, a major supply pipeline. The Quoddy sites are about eighteen to twenty-five miles away from the pipeline which runs through Baileyville, just north of Calais, and there's a little bit of an obstacle of the Moosehorn National Wildlife Refuge. They have to get through or around. So the exact route isn't known, but it's not too far to go eighteen to twenty-five miles. I mean, it costs, but as a total, as a percentage of the total project development cost that pipeline link is not excessive. But it's interesting in Massachusetts Bay, where they're thirteen miles offshore, they only have two to ten miles to go in order to connect

to that hub line, because the hub line is already there in the water, much closer to them. So they don't have to actually bring it on land with these new projects.

A third criteria would be proximity to markets. As I've said the major market is in southern New England, and obviously it's cheaper to build less infrastructure to get it closer to the market, so the Maine plants proposals are at a disadvantage because we've already got a New Brunswick plant under construction at St. John and there's a proposed one for Nova Scotia at the other end of the pipeline that would perhaps be feeding to that southern New England market through Maine, and so while you can increase the capacity of the Maine pipeline primarily by increasing pumping stations and avoiding some little bottleneck issues without putting in brand new pipeline all the way down. **[tape cuts out]**

And then there's the terminal site where it ties up for twelve hours to five days, depending on which proposal, in order to do its offloading, a stationary target at that point.

Now, I do have to talk just very briefly about LNG and safety zones. FERC has safety zones for LNG facilities, but they're limited, too, under the rules right now; they only cover the land-based tank. Well, you can put a berm around a land-based tank. And so if there is any liquid that spills out, it doesn't flow all over the place. You can contain it. Now, remember, LNG doesn't burn. It's got to be vaporized before it burns. And it's got to mix to between five and fifteen percent with oxygen before it'll burn. Then it burns like crazy. But the conditions of the likelihood of that happening is very slim and conditions have to be just right. If you have that kind of a spill around a bermed, on-land tank, you have a relatively limited kind of pattern for that vapor cloud which could ignite. So it's counterintuitive to think that over water it'll be worse, but it will be worse. Because when it spills out of a tanker onto the water, whether it's tied up at the terminal or whether it's on its way to the terminal, you get a spill that moves horizontally very fast and vaporizes very fast and creates a huge cloud, and that's the large scale conflagration that people are worried about. Just want to make sure we all understand how this scenario works. Sandia National Laboratories did the big study of this about a year ago it was published and we haven't yet got new rules governing those safety situations over water, but the old FERC rules apply, really, only to the land situation, and that's just completely inadequate. The other thing the Sandia report said that's noteworthy is that the risk of an accidental spill is really quite small, and the size of an accidental spill is likely to be quite small. But the risk of a deliberate, terrorist kind of spill, since 9/11 has just gone way up. So while the industry has a terrific safety record up until now, it doesn't mean that somebody can't create a monstrous disaster, and we need FERC to wrestle with that question in a way that they haven't yet.

So, if you have this possibility of such a safety problem, even though it's a slim possibility, the question is where do you put your terminal? We you probably don't put it in a build up area like Providence or Fall River, where there are thousands of people living within the safety zone that ought to be created. Obviously, if you put it off thirteen miles in the ocean you've got a very good safety situation in terms of if something goes wrong there isn't going to be anybody out there except the employees of the LNG company to be affected by it. And then you've got in the middle a place like Passamaquoddy Bay, a rural area that does have some population. It's certainly less than Providence but a lot more than the offshore terminals.

Storage capacity. Liquid storage is the only option in New England because we don't, unlike other regions of the country we don't have sort of underground caverns where you can store it as a vapor, so storage is a very important factor. It gives you much great flexibility in when you get to use it. So when you have these cold snap peaks you have a capacity built up that you can draw down more quickly. If you don't have that it just makes your natural gas use, your terminal that much less valuable. It takes a ship five to seven days to offload if it's turning its cargo into vapor and putting it into pipelines to get into the distribution system that way. If it's just offloading liquid to a liquid tank it's able to do that in less than twelve hours. So you have an issue that has come up in the Quoddy Bay, Quoddy LNG proposal where they don't have room for a tank right there. So they don't have storage. They've talked about maybe putting storage tanks in Robbinston, eight miles away. But current technology only allows for it to be offloaded from a tank, tanker, through a pipeline as liquid into a liquid storage tank of about two miles before you sort of can't contain it as a liquid anymore because its got to be -260 degrees Fahrenheit to stay as a liquid. They say that they can improve that technology and probably there are ways to do that, but it hasn't yet been done so this would be the first of its kind. So in terms of storage I think we're looking at the AES proposal off of Outer Brewster Island as probably the ideal, comparing these nine. With Downeast LNG probably being the second best. Quoddy being in the middle category, and the offshore sites, which have no storage capacity, would clearly be at the greatest disadvantage.

You need to avoid conflicts with other uses. Shipping, fishing, recreation and then something I'll call lifestyles. Massachusetts Bay sites have some conflict with shipping. They're trying to keep that down, but I think there are some conflicts. Fishermen are quite opposed to it, a lot of fishing complaints. Recreation is a real problem for the AES plant on Outer Brewster Island because it's in a national recreation area. It's going to be a serious conflict there. The Passamaquoddy Bay sites have sort of less severe conflicts because there aren't as much of any of those things going on in Passamaquoddy, but the lifestyle issue. People who moved to that region, moved there because it doesn't have things like LNG terminals there, and they're very opposed to it.

And then lastly, I think we look at a whole range of environmental protection issues which are very site specific and very hard to sort of measure. We don't have information, enough information, about these different projects to really evaluate their environmental impact yet because they haven't filed that information. It's not available publicly, but things like dredging and fish and other marine habitat impacts. Anything to do with endangered species. The visual blight, the lighting, the, just the appearance of it, the tankers, some people object to it. The noise pollution. There's a lot of water consumption and discharge from the tanker itself. Closed and open loop systems for the regasification. These are all environmental issues that are very important but it's very hard to evaluate them at this stage.

So this is what we want FERC to do, but what's FERC doing? None of what we just suggested. What they're doing is they're letting them come, first come, first served. First one up was Fall River. If you just look at those criteria we just talked about, Fall River is certainly the worst site of all the ones that have been discussed. The worst for safety. The worst for dredging. Terrible conflicts with shipping and land traffic. Conflicts with recreation and lifestyle. Even conflicts with the US Navy. I mean, this is a terrible site but that's where we are.

So, summing up, our position has been that we need to have some greater use of gas. We want to be able to use it to offset the dirtier coal and gas plants, and not just meet new demand. Because that way we can get cleaner air, we can reduce acid rain problems, we can improve human health situation in New England, and because, also, it's going to take conservation and renewables some time, and during that time for them to have the improvements in the systems and the new things built. We've got a lot of those dirty plants that could be shut down if we increased the use of gas. So we're not against the use of gas or the importation of it through an LNG terminal. But we think there should be some other conditions applied. One, we've got to advance policies on conservation at the same time. You've got to find a way to link these two. New England Governors' Conference did a terrific study of gas usage and different ways of meeting the gas demand situation, supply-demand balance, and they said that conservation was the best way to address that supply-demand balance. So we've got to get something going on conservation. Second, we've got to tighten the pollution control situation on the old oil and gas plants so that we can retire them and really clean up the air. Third, wind power, as you've seen earlier today, people talked about it. We have tremendous potential for wind power. As we're looking to increase any use of gas we need to think about that in conjunction with wind and other renewables and things like that that we want to have happen and make sure that our transmission systems are integrated. Because wind, as you all know, has a thirty to thirty-five to forty percent capacity factor, and when the wind isn't blowing there will be heavier demand on gas plants to meet whatever the demand is. And then lastly, we need to work to design the best alternative for new LNG terminals in New England using the criteria that I've mentioned. We're going to collaborate. We're not going to oppose this, but we will oppose any failure to comply with the NEPA requirements that alternatives be studied in allowing such a large new facility to be built.

So that's the picture that we have on gas. Thank you for your attention and I guess Charlie will go on to the panel.