

From: Welch, Thomas L
Sent: Thursday, August 08, 2013 11:01 AM
To: Ben D'Antonio
Cc: Heather Hunt
Subject: RE: Hydro Call Thurs: add'l policy question

True

From: Ben D'Antonio [<mailto:bendantonio@nescoe.com>]
Sent: Thursday, August 08, 2013 10:48 AM
To: Welch, Thomas L
Cc: Heather Hunt
Subject: Re: Hydro Call Thurs: add'l policy question

Also - to clarify - I am less worried about the Canadians' strategy and more suggesting that deal strategy be formulated behind closed doors. The court of public opinion can be fickle and recalcitrant...

Ben D'Antonio
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BenDAntonio@nescoe.com

On Aug 8, 2013, at 10:29 AM, Welch, Thomas L wrote:

Interesting point, though I think it is likely the Canadians have figured out their best strategy and don't care much what I think. As I reflect further on this, there is an interesting feedback loop at work: reducing the basis in the NG market by building more pipeline reduces the likely cost of the hydro contract, while a hydro contract, by providing a source of non-gas production for NE, reduces the amount of pipeline that will be needed to reduce the basis. I assume that is what you are referring to re the combo deal benefits.

TW

From: Ben D'Antonio [<mailto:bendantonio@nescoe.com>]
Sent: Thursday, August 08, 2013 10:24 AM
To: Welch, Thomas L
Cc: Heather Hunt
Subject: Re: Hydro Call Thurs: add'l policy question

My rationale for suggesting that the nexus between two potential deals be discussed in non-public fora is merely concern for potential unintended consequences that may affect negotiating stances. If both deals are likely to move forward, there seems to be little risk. If gas goes forward and hydro doesn't, again little risk. But, if hydro goes forward but gas doesn't, does public discussion of the nexus harm any potential state bargaining position? While this third possible

outcome seems the least economically rational, it may have tangible effects. Given the temporal and political dimensions of these issues, I am merely suggesting a cautious approach.

However, as you well know, the potential benefits of a combo deal are material and may outweigh precautionary concerns.

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On Aug 8, 2013, at 10:08 AM, Welch, Thomas L wrote:

I have no problem with your sharing my emails with B&V on the subject; I've made the point a few times publicly. Interesting question about whether the Canadians would be profit-maximizers. I've never known them to be anything else, but you never know. I'm not sure why the discussion of how HQ or others might price their contract relative to a gas pipeline should be non-public; can you give me your rationale on that?

As for sharing the B&V results, I agree that at this point they are preliminary and directional at best, so I will keep the particulars inside the NESCOE "circle."

TW

From: Ben D'Antonio [<mailto:bendantonio@nescoe.com>]
Sent: Thursday, August 08, 2013 9:57 AM
To: Welch, Thomas L
Cc: Heather Hunt
Subject: Re: Hydro Call Thurs: add'l policy question

Chairman Welch,

I think the two concepts you put forward are plausible, as they reflect rational economic behavior. The first, that the proxy for the cost of a firm contract for hydro in the Gas-Electric Base Case is likely too low, is a concept that B&V may (should?) and NESCOE probably should discuss in one or more of the three final reports (Gas-Electric, B&V Hydro, NESCOE Hydro). The second, that the same hypothetical contract for firm hydro power would likely cost less if a new gas pipeline (or two: AIM + ?) were built, seems more appropriate for non-public discussion. I rhetorically question whether the folks on this afternoon's call will be able to follow a verbal explanation of these concepts...

The two points are based on ascribing economically rational, profit maximizing behavior to the Canadians. One wonders whether there are other considerations that may influence their behavior... which could have the effect of mitigating profit maximization (and by extension the magnitude of customer costs), but would not likely directionally affect your cogent syllogism.

As both of the studies are attempts to estimate the magnitude of customer net benefits, at least as a solution-sorting exercise, I respectfully request that you use caution in the characterization of the results. Are you comfortable with me sharing your emails with B&V?

Please do feel free to use the call as you see fit.

Thanks,
Ben

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On Aug 8, 2013, at 9:32 AM, Welch, Thomas L wrote:

I recognize that any number in the B&V study will be “wrong.” My points are, first, that it is not the construction cost of the hydro facilities that will likely dictate price for export contracts; it is the expected avoided cost of the buyer. Quebec’s political imperative is to build cheap power sources and use the profit (the difference between their cost and market) to support its economy and subsidize its own electricity customers. Second, that unlike more traditional renewable resources, which require a greater subsidy (all else equal) when gas prices fall, the cost to NE customers of obtaining a contract for Canadian hydro is likely to fall with falling gas prices. In other words, you can’t look at the numbers for hydro in isolation from what you are doing in the gas market. The “low carbon” premium, if added to the price, would just make hydro relatively more expensive.

I don’t really have a recommendation relative to the hydro procurement, because, fundamentally, I don’t think it has any real chance of being an economically superior solution. It would be purchased, if at all, to satisfy a carbon goal. My points are intended to indicate that if there is value in minimizing the price of achieving that goal, finding ways to lower the NE market price is important.

TW

From: Heather Hunt [<mailto:heatherhunt@nescoe.com>]
Sent: Thursday, August 08, 2013 9:16 AM
To: Welch, Thomas L
Cc: Ben D'Antonio (bendantonio@nescoe.com)
Subject: RE: Hydro Call Thurs: add'l policy question

Ben is at MC and may send you a note later on, before the call.

Is your concern the hydro analysis in the B&V Gas-Elec study on a stand alone basis or it combined with the Hydro Study? The Hydro Study will include T costs and much more hydro info than the Gas-Elec

Study, and policy observations/conclusions about the two that we'll look to make can reflect the two studies. An observation the states offer could be something along the lines you set out here.

We don't know how the Canadians will price that power - reps of theirs here in New England will mention a premium for the low carbon attribute, but in any case whatever number one assumes will be wrong. We plan to lead with caveats and disclaimers about what a study is and what it can't be considered.

Definitely raise the point on the call today and make any recommendation you want. It's only helpful for everyone to hear views or concerns or caveats.

Heather Hunt
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----- Original Message -----

Subject: RE: Hydro Call Thurs: add'l policy question
From: "Welch, Thomas L" <Thomas.L.Welch@maine.gov>
Date: Thu, August 08, 2013 8:35 am
To: "Heather Hunt" <heatherhunt@nescoe.com>
Cc: "Ben D'Antonio (bendantonio@nescoe.com)" <bendantonio@nescoe.com>

I'm not sure that this call is the place to raise this point (again), but the B&V study may significantly overstate the benefit/cost ratio of a contract for large hydro, and does not fully explore the interrelationship between gas and hydro pricing.

It appears that B&V is estimating a levelized annual cost for a firm contract for Canadian hydro sized at 1200 MW (365/24) as \$180 million/year, based on their estimate of construction costs of additional hydro capacity (not including transmission costs). That suggests to me that they are representing that the price (levelized) for the energy (again without transmission) would be on the order of \$17.12/MWh, based on the following: $\$180,000,000 / (365 \times 24 \times 1200 \text{ MW}) = \$17.12 / \text{MWh}$. I would, however, expect the Canadians to price such a contract not at their own levelized cost of construction (though they might offer than price to their own customers), but just below the expected market price in the target market, which in NE is more in the range of \$50 to \$70/MWH – assuming that the gas pipeline constraint is minimized or eliminated. If the constraint is not eliminated, the contract price would, I think, be much more expensive.

This suggests an interesting interplay between the economic benefits of a large hydro contract and the gas price in NE. While a hydro contract could have some price hedge value against unexpected increases in the price of NG, the value of that contract (and thus the benefit/cost ratio) will vary inversely to the expected price of gas delivered to NE. Put most simply, if you want a relatively lower price for Canadian hydro, it would be a good idea to minimize the basis differential for gas coming into NE.

Comments welcome.
Tom Welch

From: Heather Hunt [<mailto:heatherhunt@nescoe.com>]
Sent: Wednesday, August 07, 2013 5:37 PM
To: Littell, David P; Bergeron, Denis; Michael Harrington; George McCluskey; Meredith Hatfield; Marion Gold; kate.brock@governor.ri.gov; Tracy Babbidge; Mark Quinlan; Ed McNamara; Chris Recchia; Nicholas Ucci; Steven Clarke; Welch, Thomas L; Katie Dykes; Ann Berwick; barbara.kates-garnick2@state.ma.us; margaret.curran@puc.ri.gov; Mark Sylvia
Cc: Ben D'Antonio; Allison Smith; Jason Marshall; Dorothy Capra; Jeff Bentz
Subject: Hydro Call Thurs: add'l policy question

On Thursday August 8th at 4pm, in addition to the items we noticed on Friday, we would like to hear from each state its policy priorities/objectives in connection with transmission/hydro imports development. As you know, Black & Veatch is providing information about, and a recommendation on commercial approaches to, such development. To inform B&V's thinking about potential commercial approaches right for New England, it would be helpful to hear your primary objectives. A sample list of objectives is attached to facilitate your thinking. It is non-exhaustive and so if your priority is not on the list, please do not feel constrained by the list. On the call, it would be very helpful if each state could identify its primary objective and what might be your second and third highest priorities/objectives.

Also attached is a PDF version of the confidential draft hydro Whitepaper. In addition to modifications we'll make based on your feedback, we will also modify based on the work that B&V is providing so that the two documents are complimentary, comprehensive and not duplicative.

Talk tomorrow at 4 - 404-920-6777; Code 54 79 3643#

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