

Neal Livingston
Co-Chair- Margaree Environmental Association
c/o Box 55
Mabou, Nova Scotia
B0E 1X0

September 18,2010

Final Summation to URB Biomass Hearing Port Hawkesbury Biomass Project P- 128.10

The Margaree Environmental Association is calling on the URB to completely reject the approval of the capital work order to approve the expenditures for NSPI to build this wood incineration electrical plant at Port Hawkesbury.

The role of the URB is to protect the public from unnecessary and unwarranted expenditures by NSPI, and to provide as much assurance to the public as possible that expenditures will not have long term negative consequences to the ratepayers.

This application does not meet this basic means test, or any other. It is an unneeded power plant project; it is not a green project as it professes itself to be; it will not reduce coal burning or greenhouse gas emissions in Nova Scotia; but it will result in increased CO2 emissions.

Any attempt to portray this project as green or renewable, in order to meet provincial requirements for green power, is a sham. Nova Scotians would be angry and would oppose the project if they understood that a wood incinerator was going to be built that would increase the amount of CO2 emitted in the Province, and yet be qualified as part of the Renewable Energy Standard for the Province. Nova Scotians would be even angrier if they knew that the power was not needed on our provincial grid, and was not going to result in a reduction of coal burning and mercury pollution.

This project is a green wash, and it should be dismissed as such. The project itself is in fact quite simply the most efficacious way for NSPI to have a 40-50 year highly profitable expenditure put onto the rate base, through the categorization of this project as being “green”.

If the utility had indicated that it would be reducing coal burning by 60 MW when this biomass plant comes on line, it would be a different story, but this is not the case. The utility has indicated that they do not need the power, and has said that they will not be reducing coal burning.

While the Chair of the Board considers it is part of his duty to approve expenditures by NSPI that meet the provinces RES guidelines, we suggest that it is the Board's duty to protect the public against projects that are a risk to the public good and increase the cost of power.

The RES laws were put into place to help reduce pollution from existing power plants, not to add more pollution to the generation system. Other jurisdictions are taking steps to reduce pollution significantly. How will it be perceived if our regulator is approving a “green” project that will increase our pollution? This project does not serve the public interest or lead towards meeting future targets for greenhouse gas emissions.

The government put into place the RES standard to reduce pollution, not increase it. Let us not forget that NSPI is one of Canada’s largest emitters of CO₂, and is coming forward to ask the URB to approve an even higher level of pollution, while calling this power renewable. The regulator should reject this project simply on that basis.

As is backed up by numerous letters from the public that have been submitted to this hearing, the proposed increase in cutting to forests in Cape Breton and Eastern Nova Scotia is not acceptable to the public. While the utility may portray this cutting as a 10% increase for Nova Scotia, it is quite clear that in Cape Breton and Eastern Nova Scotia cutting for this wood incinerator may increase harvesting by as much as 50%. Newly issued government reports speak at length about the cutting rates in Nova Scotia being unsustainable. The URB must take these reports into account.

If this 60 MW plant will not be reducing coal burning, and it is not needed as power on the system, then what is this all about? We are asking the URB to determine whether or not NSPI and its parent company EMERA, with their stated plans to build and own transmission from Nova Scotia to New England is using the RES standards as a way to prepare generation that can be exported. At a time the people of the Province think that NSPI is going to be reducing coal burning and pollution, in fact this may not be what is being planned at all. The URB should be using its expertise to understand what is being planned in this regards. It is unacceptable for the URB to make a ruling approving this facility, based on an RES standard that may in fact be meaningless in terms of its original legislated intention, which was to see reductions in coal burning.

Waste wood availability in the amounts that this plant will require, and availability at a reasonable cost, are highly contentious issues at this hearing. The URB cannot feel comfortable to commit ratepayers to open ended costs for 40-50 years from this wood incinerator, when non-polluting renewable alternatives are available, and will continue to increase in availability. An important indicator of its lack of due diligence is NSPI has not done professional work to determine wind capacity on its system.

The MEA raised the issue at this hearing that NSPI has been essentially granted long term rights to nearly a million acres of Crown land should New Page cease to operate. The MEA is concerned that the public is not aware of the significance of this transfer of rights to such a large amount of Crown Land. This plant may be in fact a way for NSPI, already the province’s largest company, to gain control over a large public resource of forest land on the Cape Breton Highlands. The URB should be considering this matter in this light.

At the hearing the MEA cross-examined NSPI officials and their answers indicate or affirm our reasons why the URB should reject this application.

No Need for new power on the System:

While there is a need to have clean energy on the NSPI system to replace polluting power this plant is not needed for capacity, and thus is being built only to meet a provincial government RES requirement. In this instance the proposed wood incinerator will increase CO2 pollution. It will not be an addition of clean energy, nor is there any way that the plant can be called a renewable energy plant, unless we are changing the definition of renewables as a matter of convenience for this wood incinerator.

Page 253

MR. LIVINGSTON: Can you tell me why the fact that it's an intermittent nature makes any difference in the sense that you're not bringing this power on as a specific need for firm power?

The application doesn't have to do with the fact that you need firm power on your system?

MS. CANTWELL: The application requires RES-compliant energy.

Page 254

MR. LIVINGSTON: I think historically, at least since I've been following energy matters for about 30 years, it seems to me that the firm generation only comes on as it's needed, you know, gets built -- well, and it's needed plus a safety margin, of course. And I don't -- I'm unclear on why you're making the decision for wanting this firm generation versus wind if you don't particularly need firm generation on your system?

MS. CANTWELL: So I think that an important distinction to make is the firm nature of the energy that we sought in the RFP and that we wanted to add for the 2013 RES relates to its predictable nature, and I think the firm characterization that you're making, Mr. Livingston, is really relating to adding capacity to the system and we're not characterizing the firm nature of this project as being a capacity characterization. It's purely that it's predictable and will operate in our system in a way that we can deal with effectively before we understand how additional wind resources will operate in our system and what we need to do to support those.

No Reductions in Coal Burning and an Increase in CO2 Emissions:

In regards to any planned reduction in coal burning, we think the evidence is clear that there will not be reductions.

Corporate executives representing a firm that was going to be reducing pollution from a renewables facility being built would be touting this fact. Such is anything but the case in the following section of the transcript.

CO2 emissions will increase if the wood incinerator plant is built.

Pages 235-240

MR. LIVINGSTON: Yeah, that's correct. I was asking specific questions about wind integration. He was answering them in a general fashion. The biomass plant, will it result in less coal being burnt in Nova Scotia, this biomass project?

[SHORT PAUSE]

MR. McADAM: We believe there's an IR on that, so we're just searching so we can be helpful.

[SHORT PAUSE]

MS. CANTWELL: Maybe it's not as helpful as I thought, but in response to MEA IR-6 ---

THE CHAIR: Just let us get that up for you.

MS. CANTWELL: So in response to the question about whether it would reduce coal burning in Nova Scotia, we say in response to (a) that we're building it to be in compliance with the 2013 RES, and that's the reason for the project.

MR. LIVINGSTON: So it won't be reducing coal burning?

MR. McADAM: I think we can simply describe how we dispatch our generation. The RES-compliant generation that regulations require us to bring on will crowd out existing -- you know, energy from the existing fleet. It will crowd that out as we maintain compliance with the broad slate of environmental regulations, emissions of a variety of types. And so it will -- it will simply crowd that out, and so to predict what gets crowded out is a function of the prices of the other generation that is getting backed off.

So it's highly likely that coal will be a significant part of what gets crowded out, but what happens over the life of the project is a function of prices, and we simply dispatch to meet the regulatory framework that we work within and provide lowest cost.

MR. LIVINGSTON: *But if there was a perception that the 60 megawatts of biomass power would be replacing 60 megawatts of coal generation, that's not the case? The IR said no as well.*

MR. McADAM: *Our dispatch is more complicated than that, so I wouldn't want to say that's exactly what's going to happen.*

MR. LIVINGSTON: *Is it possible that the greenhouse gas emissions total that you put out will increase because of this biomass plant if you're not reducing coal burning?*

MS. CANTWELL: *If you could turn up Liberty IR 50?*

MR. McADAM: *Pardon me?*

MS. CANTWELL: *If you could turn up Liberty IR 50?*

MR. McADAM: *While it's being turned up, I'll just ---*

MS. CANTWELL: *The attachment, please. If you could turn to the attachment? So what this attachment shows is using the IRP base plan of the 2009 update -- IRP update, the addition of the biomass plant and its effect on the existing generation on the NSPI system, so it's one scenario where different plants could be backed down to make room for the biomass plant.*

MR. LIVINGSTON: *Okay. And my question was if you include this biomass plant and existing coal generation, will the -- is it -- will the greenhouse gas emissions be staying the same or going up on the short term and long term? I guess I'll rephrase the question. Is it possible that greenhouse gas emissions are going to go up from the building of this plant, not down?*

MR. McADAM: *We're required by the law of the Province of Nova Scotia to reduce our greenhouse gas emissions by 25 percent by 2020, and so our greenhouse gas emissions will be going down.*

MR. LIVINGSTON: *Between 2010 and 2020, do they have the possibility of going up from the building of this plant?*

MR. McADAM: *There are some steps in that reduction process, and I haven't got that in front of me, but we are -- we will be progressively reducing our greenhouse gas emissions in compliance with those regulations between 2010 and 2020.*

MR. LIVINGSTON: *But will the effect of this plant raise greenhouse gas emissions between 2010 and 2020?*

MR. McADAM: *I don't see how it can. We will be reducing our fleet-wide greenhouse gas emissions by 25 percent over that period.*

MR. LIVINGSTON: *But you could be reducing that in 2019 or 2020 at the last minute to make the compliance?*

MR. McADAM: *No. As I said, there are steps -- and I haven't got the details in front of me but I think there are three intermediate steps over the 10-year period that require us to step down our emissions over that time.*

Wood Supply:

In regards to wood supply, the MEA suggests that this supply is not assured in any way. Not only is it controversial that NSPI has been given the rights to a supply of wood on Crown land, but also it is more theoretical than functional for NSPI to have access to the supply, and at an affordable cost, if New Page ceases to be in business. There are also other matters affecting future supply, such as changes and restrictions over time as to how forests can be harvested, as well as the impacts of higher market prices from competition, or the impacts of climate change on forests.

Page 248

MS. CANTWELL: *So the biomass, for the purposes of this project, is not the other parts of the tree. Biomass, for the purposes of this project, is stem wood. It's not the tops and limbs or the stumps, and what this provision allows for is for NSPI to harvest 175,000 tonnes of biomass, so stem wood, from the Crown land. We would harvest that like anybody else.*

MR. LIVINGSTON: *But biomass is a byproduct of normal forest operations and it would seem that if those normal forest operations were not taking place, you wouldn't be able to get the biomass. So the supply seems to be at risk by failure of the company to operate, NewPage, unless you were totally taking over all of the rights to harvesting on the Crown land. And if you*

weren't, your supply is insecure, and if you were taking over all the rights to Crown land, it would be rather extraordinary, I would suggest. It doesn't seem to be legal clarity that has any clarity at all relative to supply. In fact, the clause really means nothing.

Page 250

MR. LIVINGSTON: *So I guess my simple point is what do you do in a situation where commercial forestry operations are not taking place? How do you deal with not being -- how do you deal with the harvesting? It seems to me that your supply is totally at risk if NewPage ceases to operate because you're not allowed to harvest the trunk of the tree and use it for biomass.*

259-261

MR. LIVINGSTON: *No, it would be NSPI in the long term if -- it was just another reference. If government regulations change which might restrict wood supply, if you're only -- if NewPage closes down and you're only allowed a portion of the wood supply you need from Crown land, how can you be certain that you can get the wood supply you need? Because this is a long, long, long term commitment that you need wood supply in a competitive market.*

MS. CANTWELL: *Well, I think it's difficult to deal in a hypothetical, but regulations change from time to time and we would adapt to those regulations and source a supply of wood. The trees will still be there.*

MR. LIVINGSTON: *But it's the termination of -- unless you're able to pass any price onto the consumer, it's both the supply of wood and the price that I think are the critical issues to gaining confidence to getting this project approved.*

So just because there are theoretically trees growing and you get a wood supply, it doesn't mean that you can get the wood supply. So how -- is there any specific plan you have for ensuring you have a long-term wood supply besides the piece of it from Crown land?

MR. McADAM: *So I think you make a good point about the uncertainty associated with any source of fuel that a utility like Nova Scotia Power would use, and at this point in time we have a*

lot of exposure to solid fuels, and one of the reasons you would pursue this project is because of the diversification opportunity it provides us.

And so, yes, it will provide exposure to a different kind of fuel source and we need to do further diversification and we take comfort in the fact that the plant is located in an area with a proven source of wood supply.

We've carefully audited, supplied evidence on the record as to the adequacy of that wood supply on a sustainable basis and, yes, there can always be changes in regulations, but in our view, having a diversified fuel portfolio is our best defence against changes and market conditions and regulations. And so, you know, this project helps us achieve that.

Alternatives:

NSPI has admitted to not doing work to understand how to add significant more wind power onto their system, instead of building this wood incinerator. NSPI is relying on a preliminary study, the Hatch study which was done for the Province. The Hatch study bears little relation to any real work a utility would do in this regards.

Page 225-234

MR. LIVINGSTON: *The only referencing to wind integration studies that I've seen is the Hatch study and in the information regarding the Hatch study, has NSPI separately done wind integration studies?*

MS. CANTWELL: *No, we have not.*

MR. LIVINGSTON: *As a private company running the system to be interested in integration of wind and purchasing a lot of wind power, why haven't you done wind studies?*

MS. CANTWELL: *The province commissioned the Hatch study to which we are a participant and as I think we stated earlier today with the addition of the wind projects under contract and currently being built, NSPI will engage in studies to understand the impact of winds on our system once it's in place.*

MR. LIVINGSTON: *So in the last decade NSPI hasn't spent any money on its own studies regarding wind integration?*

MS. CANTWELL: *Not that I'm aware of.*

MR. LIVINGSTON: *It's kind of extraordinary. So you're in the business of buying power and you're in the business of buying wind power but you haven't been spending any money on studying integration at all?*

MS. CANTWELL: *So as I've said, we were participant in the provincially-mandated wind integration study and that study was an indicative study that provided some early result and as the study indicated itself, further study is required once the actual wind is in operation on the system to understand the effect. So I think what can be known in advance of the wind being in operation is known and we need to know more once it's built.*

MR. LIVINGSTON: *So you're suggesting that the only way to model your existing system relative to wind integration is in real time with real wind systems, that you have no other way of purchasing modelling or modelling your existing generation in a modelled fashion, for instance hydro plants coming on and off, and looking at how you can respond -- you spend no money at all in integration studies?*

MR. SAVORY: *Let me try to give you the answer, Mr. Livingston. So without -- so the art to this is trying to match a weather forecast to actual wind farm production and correlate the two so you can actually forecast in advance. So without having the real assets on the ground and correlating these things, it becomes a theoretical exercise similar to what Hatch has already performed. You can only model to a certain degree without real experience and try to match it up to the weather and how -- and based where you have your wind farms located, the diversity of that is really the art to what we're talking about here.*

MR. LIVINGSTON: *I emailed about half an hour ago Anne O'Brien and Nancy McNeil -- you have them? Yeah, because I wanted to call up one which was a MS Word document which was some email correspondence I had with James Taylor in 2002. And in October 2002, I met with James Taylor specifically to discuss how the utility might look at wind integration. And Mr. Taylor at that meeting said that they were looking at putting a little bit on and seeing how it*

works and my position in the meeting was actually if you have to -- my correspondence is at the bottom of these emails. There's two rounds of correspondence and responses.

The top one actually if you go a little higher, sorry -- a little higher than that -- a little higher than that. Okay. So that's my first -- a little higher then -- okay, so that's my first email to him after the meeting and it refers to -- you know, it appears to me that if you really were interested in wind you'd do some significant studies around wind integration and not just put one turbine on a two-turbine line to see if they work. It seemed to be completely ridiculous. That's why I wanted to meet with him.

And if you go up higher to the top of the page, it was his response and I guess I'd like to put this in as an undertaking but in the first part he talks about, you know, obviously hydro can be turned on and off quickly and that's a way of matching and also coal plants have a way of matching. So there is the whole idea that you can study your own system and look at how quickly you can respond to varying loads.

And in the next set of correspondence down below that, at the very bottom of it, the very bottom is my email back to him after he emailed me and raising more points which is if it's going to be costly, let's say it's going to cost you, you know, 6 percent more to have a bunch of wind on, it might cost you 6 percent more to reduce emission, so what's the difference; and his response is quite interesting which is just above that. He's the Vice-President of -- for renewables at that point at power generation.

If you just got up in the page a little higher where he says "Dear Neal," there, yeah. What's interesting there is that he actually is saying that you do a lot of modelling and you're going to be spending money on doing modelling in the next while.

So I guess my question is if in 2002 you were saying you were not doing it and you said you were going to be doing it, why haven't you done any?

MR. McADAM: *I don't think we have anything to add to the record. We've described where we are in terms of wind integration. We've described the available information and study information and, you know, we'd like to see how the wind behaves that's under construction and*

be able to make the best decisions about those actual assets that now have actual locations and will be providing actual performance fairly soon.

MR. LIVINGSTON: *So wind isn't new. I mean certain jurisdictions around the world have large amounts of wind integrated; Germany, Denmark, Spain, even India. You could join in now. You could be hiring experts and consultants from those areas to do modelling around your system but I guess you haven't.*

MR. McADAM: *I think we've had some discussion that says a system's ability to integrate wind is very much specific to the existing generation, the characteristics of the system and then it's going to be specific to where the wind turbines are actually located in the province and how those turbines actually behave when they -- when they come online.*

And so the applicability of what's been going on other places would not be terribly helpful except in the most general possible way and we don't -- you know, we need to understand specific impacts and bring forward specific economic solutions.

MR. LIVINGSTON: *So you haven't looked for the best experts in the world in wind integration to get hired and work for you. That's what you've told us.*

MS. CANTWELL: *Can I just comment on the email trail here, Neal? The planning that ---*

MR. LIVINGSTON: *I would to get the question I asked first and then I think it's more appropriate that you comment on that because I did just ask a question.*

MR. McADAM: *If you could just repeat your question so we get ---*

MR. LIVINGSTON: *I said you haven't searched for the best wind integration experts in the world to come and look at your system and work for you, even on a consultant basis.*

MR. McADAM: *Our attempt would be to engage suitable expertise when there is enough wind on the ground for them to study. And so the time to do that will be when there is enough on the ground for them to study.*

MR. LIVINGSTON: *And if that approach could be looked at as not the best approach from a regulatory perspective, then it might cause you not to get this plant approved by the fact that you hadn't done any integration studies in the last decade.*

MR. McADAM: *I'm not sure of your question.*

MR. LIVINGSTON: *Well, you seem to be saying that you, as a corporation, will do wind integration studies at your pleasure and on your own timing, but you're not saying that this is going to have the best impact on the system over all.*

MR. McADAM: *I think you've rather significantly mischaracterized what we've said, Mr. Livingston. What we've said is that we're able to study the wind in Nova Scotia and the wind generation in Nova Scotia once it's operating.*

MR. LIVINGSTON: *What you said is you've chosen to do it that way but the evidence said that's the only way you could have done it.*

MR. McADAM: *If there were a way to study the actual performance of the wind before it comes into service, I expect we would have pursued that but we're not aware of how to do that. So we're waiting until it's in service.*

MR. LIVINGSTON: *But have you looked at spending money doing that by contacting experts to suggest you do those -- to how you would do those studies?*

Biomass combustion, and all of the costs entailed, has not been compared to wind or solar, which have no fuel costs. In this hearing NSPI is simply refusing to consider these as viable alternatives. The hearing required that alternatives be examined and there has been no evidence put forward that such alternatives were properly and professionally considered under comparable time frames to this proposed project. NSPI's notion of the costs of solar comes from bids several years ago from its RFPs, which were for 15-20 year contracts. This has nothing to do with comparative modeling the life span and costs of solar installations directly compared to the life span of this wood incineration plant

Page 257

MR. LIVINGSTON: *And did you consider solar PV as an option when you looked at alternatives? Did you study that?*

MR. McADAM: *Not for very long. Our understanding is that solar is an order of magnitude different in cost than the other alternatives that we put forward. So we're always aware of it, but our information is that it's multiples of the cost of, you know, wind or biomass which we think are the main renewable compliance opportunities we have available to us.*

MR. LIVINGSTON: So you didn't do modelling related to the 50-year cost of solar versus the 50-year cost of running this plant including with supply? Specifically, you didn't model them against the same timeframes for cost?

MR. McADAM: I don't believe there's information available to us on the 50-year price of solar. We know today's price and we know the state of that technology and we're anxious for the cost of solar to be lower, and so we can include that in the mix.

MR. LIVINGSTON: But if you have -- if you were anxious for the cost to be lower and you haven't looked at the relative cost compared to this factory, how can you be saying you want to wait until the cost is lower?

MS. CANTWELL: So in past RFP processes we have had solar projects fit into those previous processes and the price is an order of magnitude of probably, you know, 10 times more expensive than some of the other projects. Maybe 70 percent is probably a better figure, but it's a good deal more expensive.

To Conclude:

It is important for the URB to rule against this application and to deny this expenditure for the sake of the development of non-polluting sources of renewable energy in Nova Scotia. Such development is essential as Nova Scotia is one of the biggest laggards in the country for cleaning up and replacing polluting sources of coal fired generation.

The Board has tremendous scope within its jurisdiction to engage experts and expert opinion world-wide to ensure that Nova Scotians, as ratepayers, have electrical costs that are not only acceptable on the short term but also the long term. There is nothing in this application for a wood incinerator that should make the Board feel that the long term costs will be reasonable.

Government allowed the creation of a private monopoly to be the electrical provider in Nova Scotia less than 20 years ago. Before this took place the utility had a plan in which it promised to reduce coal fired generation by 2006 by 350 Mw. Nothing like this has taken place, nor has the pollution from these plants been reduced. This liability should not be shouldered by the ratepayers, but by the private company itself to clean up its pollution. Instead of Nova Scotia Power Inc. taking steps to reduce pollution in this application we see a sophisticated scheme for increasing profits to the company's shareholders, while the utility will remain as one of Canada's largest polluters.

The Board should reject this application as it does not meet any of the basic standards from which Nova Scotians can be ensured the lowest possible costs for electricity in the future. In fact this application has the potential to do exactly the opposite, which is to embed long term higher costs, while not reducing Nova Scotia Power's pollution.

The Margaree Environmental Association contends that the Board has never before approved an expenditure for a power plant that was not needed for capacity on the system, unless it was to replace existing capacity. Since this plant is not needed for capacity, and it will also increase pollution emissions, this application should be rejected for approval by the Board.