

COMMENTS ON THE DRAFT RENEWABLE ELECTRICITY REGULATIONS

Executive Summary

The Ecology Action Centre has strong support for the province of Nova Scotia's concrete and ambitious renewable electricity (RE) targets, such as 25% RE by 2015 and 40% by 2020. The Ecology Action Centre has concerns that the methods for achieving RE targets can be significantly improved, particularly in the areas of Community Feed-In Tariffs (COMFITs) and the proposed application of forest biomass as a source of RE. The Ecology Action Centre wishes to remind government that the 'big picture' must always be borne in mind when crafting energy policy, as it will have significant implications for future generations of Nova Scotians, environmental sustainability in the province and the urgent global climate imperative for GHG reductions (see Figure One).

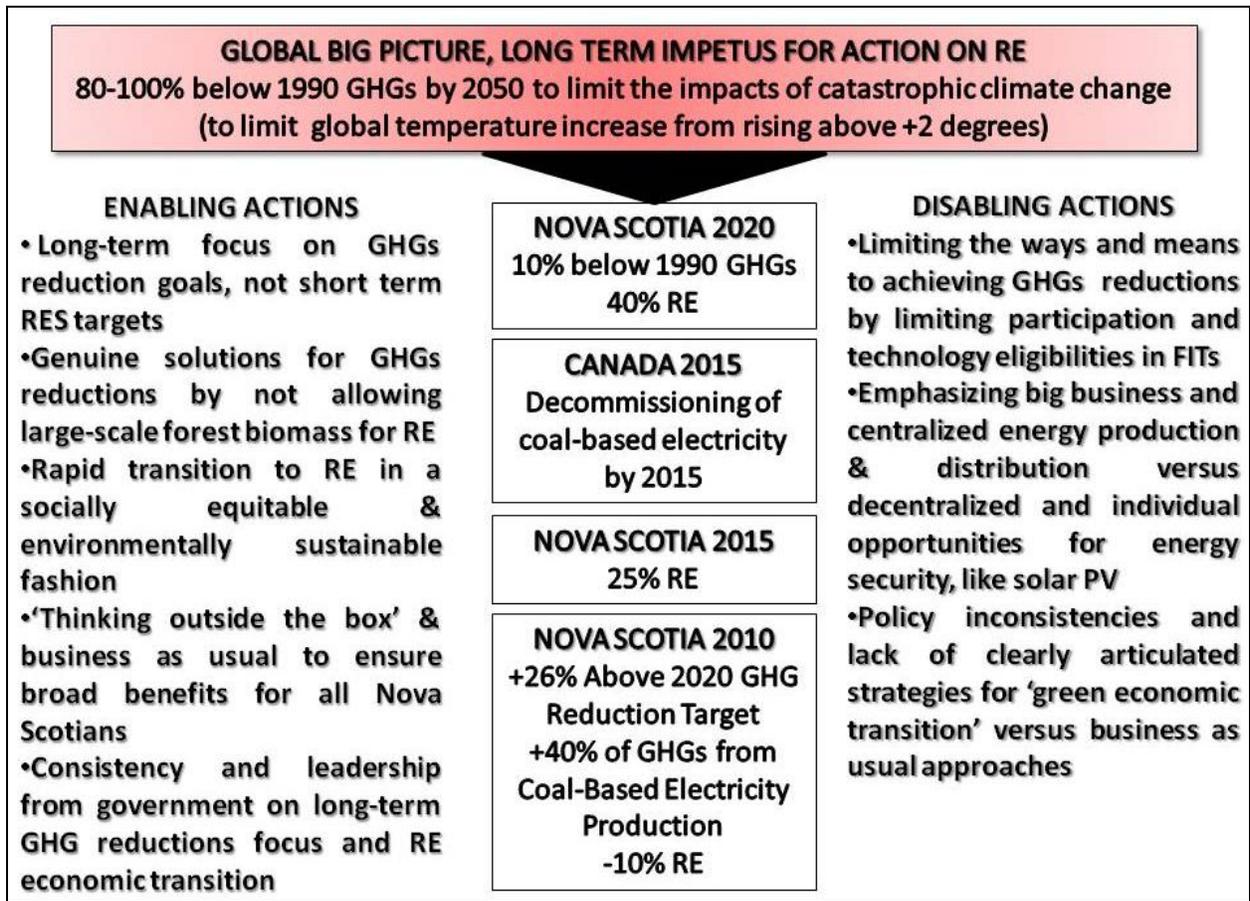


Figure One: The "Big Picture"

COMFITs: Broad Benefits & Energy Security

The EAC believes that FITs should be considered for all RE procurement, not just community-scale energy. International experience has shown that FITs are more



efficient and effective than any other procurement method¹. In general, the proposed COMFIT program is a good first step but international experience demonstrates that a FIT for all RE procurement is a more efficient and economic way to progress. As such, we recommend that this FIT initiative be extended to both small and large-scale applications.

The EAC shares concerns that the proposed regulations have put forward a model that will still rely heavily on large scale Request for Proposals and Independent Power Producer procurement, and while the proposed Feed In Tariffs are a commendable inclusion, provisions for solar PV and solar heating technologies should be included in the list of eligible technologies to encourage uptake and participation in urban areas. This will create opportunities to build upon and strengthen the existing solar services industry in NS, while capitalizing on the widespread and proven solar potential of the province.

An example of Differentiated Solar FIT for consideration: A green heat feed-in tariff (i.e. geo-thermal/solar hot water) based on Ontario Green Alliance's proposal, is currently being implemented in the UK: <http://solarfeedintariff.co.uk/2010/03/uk-households-to-harness-solar-thermal-potential/>)

The EAC shares concerns that the eligible stakeholders (23) for Community Feed-In Tariffs do not include individuals, farmers or small/medium sized businesses. Experience from other jurisdictions provides cause for concern of these omissions may restrict widespread participation Nova Scotians in these government policy incentives and may result in under-performance of the FIT. Limiting projects to distribution connection may also restrict potential for RE uptake (23d). Ensuring transparency and accessibility to grid connection information and considerations for grid connection costs in the setting of the FIT will enable greater participation at the community level.

The EAC reiterates that eligible stakeholders for the Feed-In Tariff should include individuals, farmers, and small businesses; these sectors have been cornerstones of FIT programs elsewhere. Farmers in Nova Scotia are interested in installing turbines in 1- 2 MW range to achieve some economies of scale in the investment. Currently they can neither do this through the COMFIT nor through net metering. All ratepayers are paying for the FIT, so it must be ensured that the opportunity to partake in the FIT program is available to all. This requires the inclusion of technologies such as solar thermal and PV, but also requires that individuals are eligible for the FIT rates. This will help realize the widespread participation of many Nova Scotians who would otherwise be excluded from the program. The limitations placed on First Nations participation which require band council approval and ownership of renewable projects at the band level are overly bureaucratic and will hinder their involvement.

¹ See for example: Sawin, 2004; Bechberger & Reiche, 2006; Gipe, 2006; Held et al, 2006; Stern, 2006; Mendonça, 2007; Mendonça, Jacobs & Sovacool, 2010



The directive to the UARB on setting the FIT rates should include all renewable technologies, and especially differentiated prices based on the type, size and scale of the installation.

Differentiated prices based on resource availability should also be included. This advanced FIT model could help to capture the economic potential Nova Scotia's regional 'comparative advantages' (i.e. Fundy tides, Les Suetes winds etc.) As the experience of other jurisdictions has shown, offering a full, diversified, and differentiated portfolio of FIT options increases the potential for FITs to minimize future electricity costs in the future (Mendonca, Jacobs, Sovacool, 2010). This will also increase widespread economic viability and provincial RE uptake, if considered as a part of longer-term economic transition to RE. Supporting all options for Nova Scotian's energy security and participation in energy services production and distribution should be a cornerstone of FIT policy.

The list of cost factors to consider when creating a FIT sends a sound signal to the UARB; however, this list should be expanded to include risk profiles of the potential audience and spin-off benefits for the local economies. All FITs should be set without consideration of grants available, not just the developmental tidal FIT. Grants are politically unstable and cannot be counted on over the long-term.

Leadership on price setting can be taken from Ontario. Their FIT program offers 80¢/kWh for solar PV systems <10 kW for 20 years; no escalation. In Ontario, prices are based on an expected ROI (11%) and subject to change over time. Wind gets 13.5¢ for 20 years at 20% escalation; hydropower 13¢ for 40 years at 20%; biomass 13.8¢ for 20 at 20%; biogas 16¢ for 20 at 20%; and LFG receives 11.1¢/kWh for 20 years at 20%. If profit margins are higher than 11%, the prices can be easily changed, as the Ontario Power Authority has recently demonstrated.

EAC supports and recommends the development of a solar manufacturing and installation strategy for sustainable economic development across province of NS, including rural NS, as soon as possible, as per the European and Ontario experience. FIT rates should be based on (i) the resources of the Province and (ii) the social strategic objectives that should underscore this process. In areas where high values are paid for solar PV, there has typically been a strategic objective to develop a solar industry. If this is not the case, then a high tariff for solar will provide an additional burden on the cost of the FIT without any longer term benefit.

The full potential for Nova Scotian solar in urban business parks, individual homes, communities, farms and agricultural areas could be realized through a solar FIT inclusion. There is sufficient recent evidence to warrants support for the inclusion of a solar FIT for all Nova Scotians to participate in the solar RE transition:

- 1.NSPI solar pilot projects in Shelburne and Kentville
<http://www.nspower.ca/en/home/environment/renewableenergy/newsletter/june2010/solar.aspx>



2. Department of Environment funds for R & D to the domestic solar industry
<http://www.dailybusinessbuzz.ca/2010/06/14/ns-amherst-solar-firm-wins-provincial-ecofunding/>

3. The past success of Conserve NS solar thermal pilot programs

<http://www.conservens.ca/rebates/solar-hot-water-heating.asp>

Differentiated solar PV and solar thermal FITs for individuals will allow urban citizens and communities to participate in securing their own energy security while becoming net producers of green electrons, to supplement the distribution grid. The potential for a non-farm income stream to aid struggling agricultural producers is a ripe opportunity to be optimized through a solar FIT and should be given serious consideration by policy makers at this point in time.

For further industry and solar resources please see:

Canadian Solar Industry Association: <http://www.cansia.ca/>

Solar Nova Scotia: <http://www.solarns.ca/>

Solar & Sustainable Energy Society of Canada: <http://sesci.ca/>

Wheeler Recommendations: A New Renewable Energy Strategy for Nova Scotia (2009)

In 2009, the province of Nova Scotia commissioned Dr Michelle Adams & Dr David Wheeler of the Faculty of Management at Dalhousie University to conduct a stakeholder consultation process regarding the future of renewable energy in the province of Nova Scotia. The Ecology Action Centre actively participated in this process and wishes to return to highlight several of the recommendations that emerged from this stakeholder consultation process and report to the Province of Nova Scotia, as it appears they may have been missed opportunities by government and, as such, it is important they not be overlooked as they have particular relevance to the future success of renewable electricity regulation in the Province of Nova Scotia.

Improving the Regulatory Environment

In their list of recommendations to the Government of Nova Scotia, Wheeler & Adams (2009) stated that:

The Government of Nova Scotia should, "review the mandate of the Utilities and Review Board to ensure that [none of the above] actions are delayed or disallowed, and in the event of any conflict, **make changes to the mandate of the Board accordingly and with immediate effect**" (emphasis added).



This recommendation was based on the following observations:

1. The current mandate of the UARB does not provide clear or adequate direction in relation to the integration of renewable energy into the supply mix for the Province, including the ability & authority to set FIT prices.
2. The government must clearly communicate to the UARB the importance which the government wishes the UARB to give to the long term price stability and security of energy supplies in the Province... **The UARB or any other body charged with this responsibility would still require clear policy criteria to work from** (emphasis added).
3. The issue of who should be providing renewables and at what level (NSPI, Independent Power Producers or Community Enterprises) is also a matter for Provincial Government policy. **Government must set out clear policies related to energy procurement, FITs and technology specific RFPs or Expressions of Interest.** (emphasis added).

In absence of clear, consensual and definitive policy criteria from government, particularly on the inclusion of forest biomass as a potential source of renewable electricity (as described in further detail in the next section), the EAC questions the abilities of the UARB to make reasoned and appropriate regulatory decisions pertaining to renewable energy procurement in Nova Scotia.

As such, Wheeler & Adams (2009) recommendation for revision to the UARB mandate in cases of conflict seems particularly salient, with a biomass regulatory approval process set to begin three days after the comment period for RE regulations closes.

Upon further reading of the Public Utilities Act, it appears that the Board has enough discretionary power, including on issues of resource use, and abilities to amend and change regulation in special circumstances, to warrant civil concern of reasonably considered RE proposals and regulatory approval processes on, for example, the use of forest biomass for renewable electricity (RE) in NS. For further examples of Board mandate & discretionary powers see Sections 20.1, 21, 24, 25, 48.1, 56.1, 56.2, 116 & 117 of the Public Utilities Act (Appendix A).

The EAC recommends to the Nova Scotian government that the Wheeler & Adams (2009) recommendation pertaining to improving the regulatory environment by implementing a review process to the UARB mandate be seriously considered and addressed as soon as possible to ensure that appropriate and legitimate civic process is followed in the implementation of RE regulatory approval in the province of Nova Scotia. In this review process, the EAC recommends that carbon emissions reductions should be taken into consideration by decision-makers and the mandate of regulators in determining if projects (of all types, subject to regulatory approval) are in the best interests of future generations and provincial sustainability goals and targets.



Please see also Appendix B for a comparative and recent example of how biomass applications for RE are being reconsidered in the state of Massachusetts, to include high-efficiency standards and carbon emissions reductions criterion.

Forest Biomass Policy Issues

After extensive consultation, Wheeler & Adams (2009) recommended the following, on the issue of forest biomass use for RE:

"...it seems feasible for the Province to commit to a first tranche of biomass projects in Phase I generating around **500 GWh of electricity from sustainably harvested forest and non-forest biomass...** It is also recommended that renewable energy standards be reviewed based on **scientific assessments of carbon life cycle considerations**"

This recommendation contrasts with the forest biomass target identified in Renewable Electricity Plan (2010). It also appears that carbon life-cycle considerations have not been adequately considered in the setting of RES, particularly for 2015. On the issue of forest biomass use for RE, the Renewable Electricity Plan (REP) states the following:

Government will approach the development of biomass for electricity production with caution. Electricity produced from co-firing biomass will play a role in meeting the 2015 target, but will undergo review for post-2015 use. **To ensure sustainability, pending release of the Natural Resources Strategy**, this plan caps new electricity generation from forest biomass at 500,000 dry tonnes (~600-700 GWh) above current uses. Co-firing in thermal plants is capped at 150,000 dry tonnes (150 GWh) (emphasis added)

Please take note that, from the EAC's perspective, the province's REP has recommended two controversial elements regarding the use of forest biomass for RE:

1. The REP gives deference to the Natural Resources Strategy on the use of forest biomass, which is currently under development and not expected to be completed until late 2010 or early 2011. A recently released Natural Resources Phase II Report (Glube et al., 2010) recommended fundamental changes in how Nova Scotian forests are managed, including recommendations that have implications for the future of forest biomass harvesting practices. These include such recommendations as ending whole-tree harvesting, regulating clear cutting, and promoting uneven-aged management. If implemented, this would restrict the economic feasibility of large-scale forest biomass harvesting. The report is available in full at: <http://www.gov.ns.ca/natr/strategy2010/phase2report.asp>
2. Despite the REP given deference to the incomplete Natural Resources Strategy, the REP has proposed a conflicting recommendation for the use of 500,000 dry tonnes of forest biomass for RE, above current uses. The RE regulations, currently



incomplete and in draft form, carry on with the specifics regarding this proposed use of forest biomass for renewable electricity, including significant flexibility provisions and Ministerial powers for meeting future RE standards through forest biomass. As described in detail below, the New Page & NSPI forest biomass proposal currently seeking regulatory approval at the UARB is highly problematic for these reasons.

Wheeler & Adams (2009) noted that, "there is significant concern within some stakeholder groups that the use of forest biomass for any larger-scale energy generation will result in irreparable ecological damage to Nova Scotian forests" and in their consultation with stakeholders, they noted that, "73% of respondents would be less likely to support forest biomass energy if it involved more clear cutting" (Wheeler & Adams, 2009).

On July 26, 2010, NSPI & New Page will begin regulatory approval hearings on a 60MW forest biomass for renewable electricity project proposal. This proposal – meant to assist NSPI in meeting RE supply obligations as proposed under the incomplete & draft of provincial RE standards, as articulated in the draft RE regulations – includes a 40 year power purchase agreement between the project proponents, and projects an increased forest biomass harvest of 144,000+ dry tonnes. Currently, two-thirds of New Page's supply is supplied by clear-cut. An estimated capital expenditure of 208 million CAD is required to retrofit New Page's facility to accommodate this new use. It is the opinion of the EAC this significant investment could be better spent on grid upgrades, wind procurement or any number of better options that are consistent with increasing RE uptake more widely and contributing to GHG reductions.

To be clear, the public understanding is that it is the proposed, draft RE Standards that includes the controversial provision for the use of large-scale biomass is a key driver for NSPI to pursue RE procurement from New Page, in the form of large-scale biomass, as a part of its obligations in meeting the provincial target of 25% renewable electricity by 2015. NSPI has shared that its obligations to meet the RES are a key driver for considering the New Page proposal, that, from the EAC's perspective, is otherwise is a highly cumbersome, inefficient, costly, unproven and unsustainable mechanism for meeting RES targets in a legitimate manner that will contribute to GHG reductions.

It is worth noting again that this hearing will begin just three days after comment for RE regulations closes. Upon EAC inquiry at the Board regarding the proposed timeline for Community Feed-In Tariffs, the Board advised that timelines for COMFIT have been extended until late fall, due to incomplete RE regulations. Is it appropriate process to be forging ahead with a biomass project proposal hearing, in the absence of clear RE regulations and provincial policy directives on biomass, as well as what appears to be conflicting government policy frameworks on the future use of forest biomass in the Province of Nova Scotia, while community based FITs are sidelined?



Ultimately the question is how is the UARB expected to make an appropriate decision in this case, given a lack of appropriate policy guidance from government? Similarly, how is the Nova Scotian public expected to have confidence that good governance has been exercised given the UARB's very liberal mandate that includes significant discretionary powers to amend and change regulations as it so sees fit?

Wheeler & Adams (2009) observed that a path forward on the issue of forest biomass was, and is, "...contingent on the ability of stakeholders to come together in a consensual way to identify and define sustainable harvesting practices, and pursue the 'win-win' opportunity that we believe most definitely exists. Currently there appears to be a lack of willingness and/or capability on the part of key stakeholders to secure such a consensus. In the absence of such a consensus emerging **we must rely on Government Departments to bring forward the 'high level standards' that will provide guarantees on ecological integrity and work with all stakeholders to implement such standards in the shortest timeframe.** Other guidelines and standards can be developed over time" (emphasis added).

Similarly, the DNR Phase II Report also recognizes that the necessary shift in forest management in Nova Scotia will not be easily accomplished and it will require the unprecedented cooperation of government, citizens, and numerous organizations.

Given the overwhelming evidence, the EAC advocates that government, of its own accord, should give consideration to intervening at the UARB level to put a hold on this particular case, to ensure that there is consistency in policy, as well as transparency & accountability in civil process, on the important policies and regulations that will have an effect on the future sustainability of NS's natural forest resources. Government must exercise leadership and ensure that all stakeholders are in agreement with regards to the high level standards that guarantee the ecological integrity of Nova Scotian forests for future generations.

Other policy issues regarding the RE inclusion of forest biomass, but extending also to other RE sources, include the following observations:

- There is inadequate provision in Environment Assessment regulations to fully capture potential environmental impacts of proposed RE sources/scales, as has been proposed in RE Plan & draft RE regulations. Further, it worth noting that the NSPI/New Page proposal will not be subject to provincial EA as it is a retrofit to an existing facility. There are significant issues that arise from this policy incoherence between DOE and NSE for the future of RE projects and regulatory approval processes, including the need for consideration of changes to Air Quality standards to capture potential impacts. Mitigation of environment impacts and effects ultimately must be given greater precedence in regulatory proceedings, particularly for experimental tidal technologies. For further examples regarding Environmental Assessment please see: Class I & Class II undertakings (Sections



11.1, 11.2 & Schedule A: Class 1 -2e & Class 2 - 1d) of the provincial Environmental Assessment regulations (Appendix C).

- Large scale forest biomass-electricity has little to no alignment with provincial climate change goals and objectives, which include a 10% GHG emissions reduction below 1990 levels, by 2020. Be reminded that currently NS is 26%+ above this target and 'leveling off'. Given the scientific evidence, large-scale forest biomass seems a controversial diversion from the real potential of ocean & wind energy for Nova Scotia to rapidly address GHG mitigation from electricity and do its small part in the global effort to avert an impending climate crisis. Again, please see Appendix B for a reasonable precedent from Massachusetts.
- A differentiation of between types of biomass needs to be clear and explicit in the biomass definition provided by the RE regulations and should include provisions for regulating waste to energy. As well, the biomass definition needs to be used clearly and consistently within the regulations.
- It is clear that agricultural biomass is a key resource that could play a role in meeting targets, especially if considered for renewable heating applications, and especially if farmers are given greater opportunity, under the proposed COMFIT. The current exclusion of farmers is an oversight and lost opportunity for capturing the economic potential of provincial FIT incentives for biomass at a small and sustainable scale. Coppicing should be given greater emphasis and consideration as a sustainable opportunity for biomass harvesting.
- Increasing agricultural biomass competitiveness with forest biomass could and should occur through a specialized FIT. Thus, this should be given further consideration in the RE regulations
 - A program such as the bio-economy crop initiative in PEI or similar to the developmental tidal FIT would assist in the realization of market-competitive agricultural biomass. This may be best as a FIT for heating and/or for on-farm applications, as just introduced by the United Kingdom.

It is the belief of the EAC that forest biomass should not be included as a renewable fuel until the harvest limits have been determined through the Natural Resource Strategy. Government processes should yield to each other and at a minimum any forest biomass renewable electricity projects currently under consideration should be placed on hold until the conclusion of the RE electricity regulatory process.

If any form of biomass is to be used in the short-term, high-efficiency parameters should be set, and ideally should be limited to small scale co-generation and primary heating applications for individuals, farmers and community district-heating applications.



The EAC wishes to reiterate and encourage government to show consistency and leadership to address these issues of questionable process regarding in particular the issue of forest biomass. A poor regulatory precedent now sets a low-bar for the future of RE in Nova Scotia and certainly is not in the best interests of Nova Scotians and the long-term sustainability of the Nova Scotian environment.

Green Jobs & Nova Scotia's Green Economy of the 21st Century

On the strategic implementation of RE in Nova Scotia, Wheeler & Adams (2009) recommended the following items be given consideration by Government:

"Department of Labour and Workforce Development and the Department of Education Working with the Departments of Natural Resources, Economic and Rural Development, Environment and Energy and with Schools, Colleges and Universities, civil society organizations and NSPI jointly convene a **high level task force to develop a strategy for education, human capital development and outreach to Nova Scotians and to students in Schools, Colleges and Universities on questions of renewable energy development**. This task force should report with recommendations for significantly enhancing the capabilities and knowledge of Nova Scotians on renewable energy" (emphasis added).

"Department of Economic and Rural Development working with Nova Scotia Business Inc., inNovacorp, the Universities, the Community Colleges, the Departments of Natural Resources, Environment, Energy and Education and with civil society organizations and NSPI, Convene a **high level task force to discuss a commercialization and human capital development strategy for ocean energy and make clear recommendations on roles for government, business and academia in pursuing an aggressive commercialization strategy**. This task force should report with recommendations for significantly enhancing the R&D, outreach and effectiveness of Provincial ocean energy commercialization" (emphasis added).

Ensuring public support and exemplifying broad benefits of the proposed RE plan and regulations requires that government give consideration and take leadership action on these practical recommendations. Truly these recommendations are among the practical implementation tools required to move from RE policies and principles in theory to RE project actualization and benefits in reality.

The EAC believes that a clearly articulated 'Green Jobs' strategy that includes the identification of labour & market sector baselines for renewable energy & energy efficiency/conservation, as well as giving consideration to other 'green' technologies and occupations is required. This should include:

- clearly defining 'green jobs', based upon a best-practices scan of other jurisdictions;



- documenting the economic, social & environmental barriers and opportunities for 'green jobs' through consultation with key stakeholders, including NGOs, municipalities, industry & academia;
- developing a strategic outlook for the appropriate educational, research & market sector incubation & development tools and timelines required for building human resource & domestic capacity for achieving provincial sustainable prosperity goals & targets as quickly as possible
- See for example: *British Columbia's Green Economy: Building A Strong, Low-Carbon Future, February 2010* by Globe Foundation

As a related opportunity, the EAC encourages that consideration be given to including the requirement of domestic content in the RE regulations to give priority to Atlantic Canadian manufacturers, which in turn could create jobs, increase market size and entice local renewable manufacturing industries, including strengthening Nova Scotia's nascent solar PV & heating, wind, wave & tidal technologies manufacturing industries. Ultimately this could contribute to laying the foundation for NS's green economy of the twenty-first century.

Further, giving consideration to an inter-provincial trade agreement on renewable energy technology with Ontario could greater provide further viability to the success of renewable electricity in Nova Scotia.

As much as possible, the province should work to ensure that RE generated in NS first services the needs of Nova Scotian markets, before being allowed to be exported. This requires greater stipulation within the RE regulations. Recent announcements regarding increases in inter-provincial grid transmission capacity is commendable, but must not allow for indiscriminate imports, and should give priority to energy that is consistent with Nova Scotia's ban on nuclear energy, such as Lower Churchill Falls hydro-electricity. This should be clearly reflected in the proposed RES.

Provincial – Municipal Collaboration & Administration

On administrative implementation of RE, Wheeler & Adams (2009) recommended that,

Department of Energy & Service Nova Scotia and Municipal Relations - in concert with the Union of Nova Scotia Municipalities and other stakeholder groups Work to ensure there is **maximum clarity, consistency and fairness in the establishment of planning guidelines and by-laws regarding renewable energy developments**, (particularly with respect to wind) and the creation of designated inclusion and exclusion zones, and any special provisions for the built environment (emphasis added).

The EAC advocates that as a part of the Renewable Electricity Plan's implementation, it is imperative that DOE & SNSMR work with all Nova Scotian municipalities to develop an MOU and provincial statement of interest, as soon as possible to be reflected in Municipal Government Act, to better facilitate, and provide appropriate guidelines for



municipalities, with regards to the spatial planning required for renewable electricity generation.

This includes the need for consideration to be given to the changes required, such as: appropriate technology specific setbacks and designated zoning reflected in Municipal Planning Strategies & Municipal Land-use Bylaws. Giving consideration to further municipal requirements for revenue sharing with community members residing in close proximity to a generation facility, to garner greater support, may also be required at the municipal level.

A failure to address this will result in unnecessary red-tape & bureaucratic inertia that will impede actual development on the ground, weaken public interest and support and thus hinder and prohibit the province's progress towards 25% RE target by 2015.

As a part of this process, municipalities should be required to host public consultations and create energy plans in their land use planning before developing significant renewable electricity infrastructure. There is an opportunity for integration with the 2014 Climate Change Mitigation & Adaptation Planning Gas Tax (ICSP Phase II) planning to be rolled out by SNSMR.

The one window committee for permitting and approvals is well designed to include representation from many departments; however, it should also include representation from municipal government, such as the Union of Nova Scotia Municipalities and opportunities for non-governmental consultation and comment. Also, municipalities should retain some authority in the permitting process to ensure that municipalities have the capacity and expertise to respond to local concerns and questions regarding renewable electricity developments. To maintain this capacity, they often rely on the income from permit approvals.

The province can ensure effectiveness of rapid uptake of RE by having tiered streams of administration & application processes that take into consideration project scale & size to allow for greater fast-tracking of small scale renewable projects likely to be developed by municipalities, co-ops and other stakeholders (Section 23 of draft RE Regulations).

'Streamlining' processes will need to include setting minimum application response times from the 'one-window' administrator; in the RE regulations (see Section 28)

The EAC recommends this response time be no more than 3 to 6 months to ensure projects are implemented as soon as possible, as widely as possible, without delays.

Summary

To conclude, there is an ongoing concern among stakeholders with the Province's regulatory process, most importantly the need for the Utilities and Review Board to consider type, size and scale of RE in the setting of FITs. In addition, the regulator needs



to take greater consideration of non-cost variables such as carbon, forest sustainability, environmental progress and sustainable prosperity policy directions in its regulatory decision-making criteria. As Wheeler/Adams (2009) recommended, this may require a Mandate Review of the Public Utilities Act in the event of conflict to ensure appropriate regulatory oversight is enshrined within the mandate of the provincial regulator for RE, including environmental compliance and other non-cost variables.

In sum, a full-cost accounting approach in the regulation and implementation of RE is strongly supported by the Ecology Action Centre. Consideration to the long-term environmental sustainability and GHG reductions required to avert catastrophic climate change should underscore the RE regulations and implementation regimes of the province of Nova Scotia to ensure that the moral obligations and responsibilities to future generations are not lost.

Best Regards:

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Appendix A: RE Regulatory Implications & the Public Utilities Act

The Wheeler Stakeholder Consultation Report on Renewable Energy made the following recommendations regarding the Utilities & Review Board:

- Utilities and Review Board through a multi-stakeholder process involving NSPI and other stakeholders should review the **Tariff for Transmission and examine the need for a Distribution Tariff** in light of the policies and service standards established under the Government's Renewable Energy policies. This should be published by July 1st 2010.
- **The Government of Nova Scotia should review the mandate of the Utilities and Review Board** to ensure that actions are not delayed or disallowed, and **in the event of any conflict, make changes to the mandate of the Board** accordingly and with immediate effect.

On the second recommendation, it is the belief of the Ecology Action Centre that currently there is a conflict of interest regarding the Board's ability to adequately rule on proposed use of Forest Biomass, as a part of meeting the targets of the draft Renewable Electricity regulations, and as one of the ways and means proposed to meet provincial renewable electricity standards under the Renewable Electricity Plan & Energy Strategy.

We believe that this proposed recommendation regarding the use of forest biomass conflicts with the provincial Natural Resources Strategic planning, which currently is considering dramatic reduction in provincial clear-cutting by 2015. Also, we have found there are also implications regarding this recommended use of forest biomass on the provincial Environmental Assessment process (see Appendix C).

From our perspective, there is a significant conflict of interest between the provincial government and the mandate of UARB, in proceeding to regulatory process that is giving consideration to a 60MW proposal using forest biomass (as a ways and means of meeting RE targets, but without clear and explicit provincial regulation on the targets that it is supposed to be meant to contribute to achieving) and/or the conclusion of the province's strategic planning on natural resources, to which the RE Plan defers authority. Both of these incomplete policy processes have significant implications for the future use of forest biomass as a source of renewable energy in the province of Nova Scotia.

This conflict of interest calls into question the abilities of the Utility and Review Board to adequately make decisions in the public interest, and thus the EAC recommends, in light of conflict, that the Wheeler recommendation regarding the need to make changes to the mandate of the UARB be pursued to ensure that accountable, transparent decision-making in the long-term interest of Nova Scotians and the Nova Scotian environment is executed by the UARB. Find below a preliminary assessment of



the Public Utilities Act and observations of the suggested changes to meet the aforementioned objectives.

| Public Utilities Act | Observations of Required Changes to Public Utilities Act |
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| <p>Power to exclude certain corporations from Act</p> <p>20 (1) The Board may, by order or regulation, exclude from the scope of this Act any corporation which does not, at the time of such exclusion, own, operate, manage or control any tramway for the conveyance of passengers or any plant or equipment for the production, transmission, delivery or furnishing of heat, light, water or power, either directly or indirectly, to or for the public and the Board may, from time to time, revoke, alter or modify any such order or regulation, provided that any corporation so excluded may be afterwards declared by the Board to be within the scope of this Act.</p> | <ul style="list-style-type: none"> Ability of the UARB 'from time to time, revoke, alter or modify any such order or regulation, provided that any corporation so excluded may be afterwards declared by the Board to be within the scope of the Act' (20.1) requires a change to remove Board highly partial discretionary powers and thus ensure greater Board accountability and rulings to ensure the meeting of provincial RE regulations and targets, |
| <p>Power to hear proposals and recommend legislation</p> <p>21 Whenever any public utility or person shall propose any change in any law relating directly or indirectly to the property or operations of any public utility, the proposed change may be submitted to the Board, which may take evidence and give public hearing thereon, and the Board may recommend such bills as will, in its judgement, protect the</p> | <ul style="list-style-type: none"> The Board in its powers to hear proposals; should be required to take into account pending provincial/federal legislation and be responsive. This is particularly relevant, as in the NSPI/New Page case currently to be heard before the Board, in light of pending Strategy regarding use of Natural Resources, proposed renewable electricity regulations and implications for provincial environmental assessment processes. The Board should yield, by its own discretion, by government intervention or by changes in Public Utilities Act, to provincial policy processes. The recent precedent from Massachusetts (Appendix B) sets a high benchmark worthy of serious |

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| <p>interests of the public and such public utility, and transmit the same to the Attorney General. R.S., c. 380, s. 21.</p> | <p>consideration by the province.</p> |
| <p>Powers imposed by contract or other Act preserved</p> <p>24 Subject to this Act, the powers, rights, privileges and obligations secured to or imposed upon any public utility by any statute, or by any contract or agreement made under the authority of any statute, shall not be subject to the provisions of this Act, and nothing in this Act contained shall authorize the Board to alter, enlarge or diminish such rights, powers, privileges or obligations or to impair the obligations of any contract, except any contract or agreement relating to rates, tolls, charges or schedules which the Board is authorized by this Act to regulate and control, but the Board may at any time inquire into any such rights, powers, privileges or obligations in so far as the exercise or observance thereof affects the public interest and may make such recommendations to the Legislature in connection therewith as may be deemed just and proper. R.S., c. 380, s. 24.</p> <p>25 The Board may, from time to time, make, revoke and alter rules and regulations for the effectual execution of its duties and of the intention and objects of this Act, and the regulation of</p> | <ul style="list-style-type: none"> • Given these discretionary powers (Section 24/25), the Board should be recommending to the legislature: • The need for a revised & clarified mandate for the UARB, as reflected in the Public Utilities Act, in light of proposed RE regulations and objectives presenting new aspects for consideration in the regulatory landscape, and, • The need for greater clarity of authority and deference to provincial policy processes, in light of the situation presented before the Board, as in the case of New Page/NSPI |

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| <p><u>the practice and procedure with regard to the matters over which it has jurisdiction and such rules and regulations, when approved by the Governor in Council, shall have the force of law. R.S., c. 380, s. 25.</u></p> | |
| <p>Resources to be used</p> <p>48 (1) Notwithstanding anything contained in this Act or any enactment, the Nova Scotia Power Incorporated may in the operation of its generation and transmission plant or like facilities take steps to maximize the use of indigenous Nova Scotia resources, and the Board shall, where an application is made to the Board to determine the revenue requirement of the Company, include in such requirement the cost of such use.</p> | <ul style="list-style-type: none"> • Beyond Board consideration of the 'revenue requirement of the Company,' in consideration of 'indigenous Nova Scotia resources' by NSPI – the Board's mandate should be extended to include consideration of provincial policy objectives, including greenhouse gas mitigation objectives, 'green' economic development objectives, sustainable use and cost implications of the use of 'indigenous Nova Scotia resources' – economically, as well as external environmental & social costs associated with the use of indigenous Nova Scotia resources • Distribution and transmission costs factors require further explicit provision within the Act, in order to increase the abilities of independent power producers and community players to take advantage of provincial incentives for renewable electricity |
| <p>Duty to customer respecting pressure and frequency</p> <p>56 (1) Before commencing to supply electrical energy to any customer a public utility shall declare, in writing under the hand of its proper officer, or its agent thereunto duly authorized, to such customer the constant pressure, and, if from an alternating current source, the frequency, at which it proposes to supply such electrical energy at the customers' terminals.</p> | <ul style="list-style-type: none"> • The use of intermittent renewable power supplies requires revision to 56.1 & 56.2 and explicit provisions to account for the intermittency factors associated with wind, solar, tidal energy |

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| <p>(2) The variation of pressure, and in the case of alternating currents the frequency, at any customer's terminals, unless otherwise ordered by the Board, shall not under any conditions of the supply which the customer is entitled to receive, nor at any time, exceed four per cent from the declared constant pressure or frequency, whether such variation is due to the resistance of the service lines or apparatus belonging to such public utility, or to any action or effect produced by such apparatus, for which the customer cannot be shown to be responsible, or partly to a variation of pressure in the distributing mains from which the supply is taken. <i>R.S., c. 380, s. 56.</i></p> | |
| <p>GENERAL</p> <p>Interpretation and construction of Act and powers of Board</p> <p>116 (1) This Act shall be interpreted and construed liberally in order to accomplish the purposes thereof, and where any specific power or authority is given the Board by the provisions of this Act, the enumeration thereof shall not be held to exclude or impair any power or authority otherwise in this Act conferred on the Board.</p> <p>(2) The Board hereby created shall have, in addition to the powers in this Act specified, mentioned and indicated, all additional, implied and</p> | <ul style="list-style-type: none"> • In light of the observed issues and proposed changes to ensure the Board's decision-making powers is reflective of the goals and objectives of provincial environmentally sustainable prosperity; the general interpretation of the Act and Board powers should be more greatly reflective and accountable to the intent and purpose of EGSPA |



incidental powers which may be proper or necessary to carry out, effect, perform and execute all the said powers herein specified, mentioned and indicated.

(3) A substantial compliance with the requirements of this Act shall be sufficient to give effect to all the rules, orders, acts and regulations of the Board, and they shall not be declared inoperative, illegal or void for any omission of a technical nature in respect thereto. *R.S., c. 380, s. 116.*

Conflict with and application of

117 (1) Any Act whether enacted before or after the fourteenth day of April, 1943, relating to a public utility as defined by this Act shall be read and construed as subject in all respects to the provisions of this Act and, in case of conflict, the provisions of this Act shall prevail unless the contrary intention is expressly stated.

(2) This Act applies to the Nova Scotia Power Incorporated and the Nova Scotia Power Incorporated is a public utility within the meaning of this Act.

(3) repealed 1992, c. 8. s. 35.



Appendix B: Massachusetts Biomass Precedent - See Attached PDF

Appendix C: Environmental Assessment Implications

There are several provisions contained within the Environmental Assessment regulations which, in the context of this proposal and the pending Renewable Electricity regulations, will require cross-departmental attention to ensure that consistency and environmental accountability. Ultimately, consistency in regulation will avert conflict and contradiction in provincial regulation and processes, which are commendably aimed at ensuring sustainable prosperity and environmental progress in Nova Scotia.

First, the current environmental assessment regulations were last amended on September 15, 2009. Between then and now, the Department of Energy's proposed renewable electricity plan has 'changed the playing field' which, from the EAC's perspective, requires further amendments to the environmental assessment regulations (including regulatory review triggers & scoping criteria) to ensure consistency that stay 'up to speed', in light of recent changes.

More specifically, with regards to Class I & Class II undertakings (Sections 11.1 & 11.2), the EA regulations state that undertakings listed in Schedule "A" are the triggers to determining provincial environmental assessment. In light of changes emerging from the renewable electricity plan & regulations, the EAC believes that specific amendments are required to the Schedule A triggering criteria.

Be reminded that Schedule A of the EA regulations states the following criteria with regards to energy undertakings that trigger may provincial EAs. Please note the highlighted/bold text that, at a minimum from the EAC's perspective, will require some attention and amendment in order to ensure consistency, clarity and accountability in the sustainable advancement of the provincial renewable electricity plans, regulations & projects designated as means of achieving renewable goals, which at present time calls for the controversial inclusion of forest biomass.

| Class 1 Undertakings | Class 2 Undertakings |
|--|---|
| 1. A corridor for 1 or more electric power transmission lines that have a cumulative voltage rating equal to or greater than 345 kVA. 2. An energy generating facility, other than an | 1. An energy generating facility, other than an emergency generator, that meets any one of the following: (a) it has a production rating of more than 25 |

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| <p>emergency generator, that meets any one of the following:</p> <p>(a) it has a production rating of at least 2 MW derived from wind, tides or waves;</p> <p>(b) it has a production rating of at least 2 MW and no more than 25 MW derived from hydroelectricity, other than run-of-the-river facilities under 10 MW;</p> <p>(c) it has a daily fuel input rating of at least 11 000 GJ and no more than 31 000 GJ derived from natural gas;</p> <p>(d) it has a daily fuel input rating of at least 250 GJ and no more than 2500 GJ derived from fossil fuels other than natural gas;</p> <p>(e) it has a daily fuel input rating of at least 4000 GJ and no more than 10 000 GJ derived from fuels other than fossil fuels, but excluding solar power.</p> | <p>MW derived from hydroelectricity;</p> <p>(b) it has a daily fuel input rating of more than 31 000 GJ derived from natural gas;</p> <p>(c) it has a daily fuel input rating of more than 2500 GJ derived from fossil fuels other than natural gas;</p> <p>(d) it has a daily fuel input rating of more than 10 000 GJ from fuels other than fossil fuels, but excluding solar power.</p> <p>2. A water reservoir that has a storage capacity of 10 000 000 m³ or more than the mean volume of the natural water body source for which it is a reservoir.</p> |
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Class 1 (2e) & Class 2 (1d) undertaking triggers are not sufficiently well-defined criteria, so as to capture the potential environmental impacts of potential large-scale forest biomass projects, such as the current NPPH/NSPI proposal. For instance, is it clear to the province, what the daily fuel input will be for 60MW of forest-biomass electricity? If not, this clearly requires amendment and consistency with the proposed draft renewable electricity regulations, which has called for inclusion of large-scale forest biomass.

Finally, be reminded that Section 11.3 of the EA regulations states specifically:

If the Minister is of the opinion that any of the following is an undertaking, the Minister must classify the undertaking as either Class I or Class II and must advise the proponent in writing of the classification and, if not already registered, the requirement to register the undertaking in accordance with the Act and regulations:

- (a) A policy, plan or program;
- (b) A modification, extension, abandonment, demolition or rehabilitation of an undertaking.

Ministerial powers to intervene are a commendable inclusion in the current EA regulations. Section 12 of the EA regulations offers factors relevant for the Minister's decision-making & intervention. The EAC wishes to raise attention to several of these factors, and raise questions for the Minister of Environment's consideration, in light of the proposed NPPH/NSPI forest biomass proposal:

12 b. the size, scope and complexity of the proposed undertaking;

What are the environmental impacts of forest biomass to provide 60MW electricity? What are the air quality & GHG impacts of forest biomass as a source of renewable electricity?

12 c. concerns expressed by the public and aboriginal people about the adverse effects or the environmental effects of the proposed undertaking;

For intervention concerns on the NPPH/NSPI proposal raised from a diversity stakeholders, please see:

http://www.nsuarb.ca/index.php?option=com_content&task=view&id=73&Itemid=82



12 da. whether environmental baseline information submitted under subclause\ 9(1A)(b)(x) for the undertaking is sufficient for predicting adverse effects or environmental effects related to the undertaking;

See also the above-mentioned website for more information.

12 e. potential and known adverse effects or environmental effects of the proposed undertaking, including identifying any effects on species at risk, species of conservation concern and their habitats;

In the absence of an EA, this information appears to be insufficient.

12 f. project schedules where applicable;

Is it appropriate for there to be a regulatory hearing for the approval of a renewable electricity project (July 2010), utilizing forest biomass, in the absence of clear renewable electricity regulations (not due until Fall 2010)? Does the UARB have authority to rule on this proposal in light of an absence of clear provincial regulation? Is it appropriate for there to be regulatory approval for forest biomass as a source of renewable electricity in the absence of a finalized Natural Resources Strategy (not due till 2011) for the province, and an interim recommendation for dramatic reductions in clear-cutting by 2015?

12 i. such other information as the Minister may require.

Is it appropriate for there to be regulatory consideration of forest biomass in the absence of appropriate environmental assessment triggers that adequately consider the environmental implications of large-scale forest biomass for electricity generation?

The EAC raises these important questions for your consideration and potential opportunity for intervention.

Given the proposed renewable electricity plan & regulations – and proposal from NPPH/NSPI proceeding before the UARB - the EAC's strongly encourages the Minister of Environment to exercise discretionary powers (in accordance with the criteria mentioned above) to ensure that NPPH/NSPI proposal is truly in the interests of sustainability of Nova Scotia's forests, improved air quality &



greenhouse gas emissions reductions. The EAC questions if alternatives, including the no-go option, been considered by the project proponents.

In summary, in the absence of appropriate EA oversight, closure of the provincial renewable electricity regulations and Natural Resources strategic planning process, the EAC is of the opinion that the NPPH/NSPI proposal is premature, not appropriately regulated and thus requires greater government oversight and discretion before being allowed to proceed to regulatory hearings before the UARB.