Biomass Information: Ecology Action Centre, March 2011, Jamie Simpson

1. **Biomass electricity is wasteful compared to biomass heating.**

The Nova Scotia Power / NewPage Corp. biomass plant in Port Hawkesbury will waste 64 trees "up the chimney" for every 100 trees they burn (best case scenario). In other words, NSPI and NewPage will capture only 36% of the energy contained in the trees they burn, provided that their systems function perfectly.[i] When generating electricity only, their biomass plant will waste 78 trees up the chimney out of every 100 they burn (21.5% efficient).

Nova Scotia Power will waste the energy of 70 trees for every 100 trees they burn in their proposed biomass project at Trenton (30% efficient).[ii] If, however, biomass is used for home heating in a modern woodstove, efficiency can be upwards of 80% or more (that is, only 20 out of every 100 trees are wasted). Same is true for biomass heating in homes, schools and hospitals.

The Nova Scotia government has repeatedly refused to require minimum efficiency standards for biomass energy. Without a minimum efficiency requirement, the term "combined heat and power" is meaningless.

2. **Biomass electricity will rely on new forest harvesting, not on "waste" wood.**

While the media often report that biomass energy will be generated from "waste" wood, the fact is, all scraps from sawmills are already fully utilized. Nova Scotia government is allowing 1 million tonnes of new forest harvesting for biomass energy.[iii] This is a roughly 20% increase in provincial forest cutting levels, which is also roughly the equivalent of adding a new pulp mill in Nova Scotia in terms of forest consumption.

3. **Biomass electricity is not cheaper than wind energy.**

Biomass electricity is more expensive than medium and large-scale wind energy. Nova Scotians are being forced to pay higher electricity bills to subsidize burning trees for electricity. NSPI is spending $208 million on the NewPage biomass project, the cost of which will be passed on to Nova Scotians through their electricity bills. And the proposed rate to be paid for biomass electricity under the "feed-in tariff" program is 12% higher than for medium-scale wind projects (>50kW).[iv] Again, the increased price will be added to Nova Scotians' electricity bills.

4. **Biomass harvesting will provide little benefit to woodlot owners.**

The prices offered for biomass wood are low – current prices range from approximately $31 to $36 per delivered tonne.[v] Once trucking and harvesting costs are removed, there is little if anything left over for the landowner – except a potentially degraded woodlot.

5. **Biomass energy will increase clearcutting in Nova Scotia.**

Because biomass is such a low-value product, clearcutting is the only cost-effective cutting method for biomass. If one million additional tonnes of biomass is cut every year by clearcutting, as the government now allows, it would be the equivalent of clearcutting a one-kilometre-wide strip from Yarmouth to Sydney (650km) once every 4.5 years.[vi]

6. **Biomass electricity, as being developed in NS, will increase our net carbon emissions for the foreseeable future.**

According to research by the Manomet Centre in Massachusetts, burning biomass for electricity can increase carbon emissions over the short-term, even when it replaces coal.[vii] The reason is that wood releases far more carbon than coal for the same amount of energy. Of course, forests can eventually grow back, if allowed to grow back, but meanwhile, net carbon emissions are increased for decades. If natural gas is replaced by biomass for electricity production, carbon emissions will increase for roughly a century.

Thanks to Manomet's research, Massachusetts is changing its renewable energy regulations. The NSPI / NewPage project would not be approved as renewable energy under Massachusetts' revised regulations.

However, if biomass is burned to heat homes, schools and hospitals in highly efficient stoves, and displaces heating oil, then carbon emissions are reduced within several years.[viii]

7. **Government is allowing biomass development to go ahead in absence of any province-wide regulations on cutting forests for biomass.**

The government's Renewable Energy Plan states that biomass development must defer to the government's Natural Resources Strategy. And yet, the government is ignoring its own energy plan by allowing biomass development to go full-steam ahead in complete absence of the over-due Natural Resources Strategy.

8. **Public (Crown) land is being used for low-efficiency biomass energy production.**

Government has opened 600,000 hectares (6,000 square kilometres) of Public land to biomass harvesting by NewPage Corp. to feed their biomass project. Should the NewPage mill close, the biomass cutting rights on this Public land will be transferred to Nova Scotia Power Inc.

9. **The government has repeatedly promised to end whole-tree harvesting for over a year, yet whole-tree harvesting continues unabated.**

Companies such as Northern Pulp Corp and Bowater Mersey continue to whole-tree harvest Nova Scotia's forests.

10. **Almost all of the allowable biomass harvest will be taken up by large corporations.**

Ohio-based NewPage Corp. will use some 385,000 tonnes per year in their Port Hawkesbury biomass project. Nova Scotia Power Inc. will use an estimated 300,000 tonnes of forest in their proposed Trenton biomass project. Wall Street-based Northern Pulp will use a yet-to-be-known amount in their Pictou mill,[ix] and the Maryland-based Lockheed Martin will also use a yet-to-be-known amount in their proposed Sydney (Cape Breton) biomass project.

Whole-tree harvesting operation by Northern Pulp Corp., Caribou Mines, NS, Nov. 2009

[i] Efficiency numbers from evidence submitted by NewPage Corp during a Utility and Review Board hearing, 2010
[ii] Manomet biomass study, 2010: www.manomet.org/node/322
[iii] NS Renewable Energy Plan: April, 2010
[iv] Synapse Consultant report to the NS Utility and Review Board, February 28th, 2011
[v] Personal communication with a forestry contractor 2011
[vi] Assuming 70 tonnes of biomass harvested per hectare; thanks to Tom Welch for this illustrative idea
[vii] Manomet biomass study, 2010
[viii] ibid
[ix] Press release by MP Peter MacKay, January 20, 2011: www.petermackay.ca/news/5765/