

The Alliance of Nova Scotia Sawmillers Opening Statement

Mr. Chair, Members of the Board, thank you for the opportunity to provide this Opening Statement. The ANSS is a group of sawmillers in the province of Nova Scotia with an interest in the development of biomass combined heat and power projects. We will only be able to undertake such a project, however, if the rate set in this hearing warrants the investment. We agree with Synapse that the goal should be to set a rate that will encourage a reasonable level of development activity.

We therefore approached the COMFIT rate setting process by asking the question, how will we know if the rate proposed by the UARB consultants is a rate that will allow us to construct a project?

To answer this question, we needed to determine what the cost of generating electricity would be at a plant that would reasonably match the scale of operations of a typical sawmill in Nova Scotia. We secured expertise in two key areas of engineering and project finance. The experts we selected both have substantial experience in dealing with biomass power projects, which is a niche technology class that differs from conventional generators.

To understand key operating parameters of the power plant such as capital cost, O&M costs, fuel requirements and energy production we commissioned ESI Tennessee to perform an engineering study for a small CHP plant. ESI has extensive and focused experience with steam and power projects and particularly biomass projects. This study is the foundation for the ANSS COMFIT analysis.

The other critical element in determining the cost of generating electricity is determining the terms under which the project is likely to be financed. The ANSS retained Mr. Jeff Bodington, based largely on his extensive experience with financing biomass power projects. Mr. Bodington was asked to take into consideration all of the variables for a small CHP plant in the 2MW range and to determine what the terms of financing would be.

Capital Cost

The ANSS work has demonstrated two areas of substantial difference between our estimate of the COMFIT rate and the Synapse estimate. These areas are the capital cost estimate and the terms of financing for the project. ESI has estimated that the capital cost required to construct a plant in the 2.4 MW range is \$6.56 million/MW while Synapse has estimated that the cost is \$3.77 million/MW for a 2.05 MW plant

ESI believes the source of error and resultant low capital cost estimate stems from acquiring individual price quotations for major equipment and not adequately accounting for balance of plant construction costs to actually integrate and build the facility. In contrast, ESI's estimate is a complete estimate that provides a fully operational "turnkey" power plant.

allocation, as these capital and fuel costs are typically shared. While the proportion of sharing may be debatable, the sharing should not be.

4. Boiler Efficiency - Synapse has overestimated boiler efficiency at 80% in its analysis, where ESI has estimated the boiler efficiency at 69%.

5. Other O&M Expenses - Synapse does not appear to include operating expenses such as the cost of water, water treatment chemicals, ash disposal and other O&M expenses. These are included in the ESI O&M cost estimate.

I've included in the hard copy of this document a table which summarizes the main differences between the Synapse tariff assumptions and the ANSS tariff assumptions.

Table 1 – Differences Between ANSS and Synapse

Differences Between ANSS and Synapse		
Item	ANSS	Synapse
Capital Cost (\$/MW)	\$6.56 million	\$3.77 million
Equity Assumption*	100% at 17.5%	40% at 13%
Debt Assumption	0%	60% at 9.5%
Labour (\$/yr)	\$194,780	\$50,000
Parasitic Power (%)	14%	0
Extraction Steam Cost Allocation	Shared 50/50	100% to heat user
Boiler Efficiency (%)	69%	80%
Other O&M (\$/yr)	\$127,264	\$0.00
* 13% if a reopener or FAM is used for fuel		

The capital cost and financing assumptions by a large margin create the biggest difference between the ANSS rate and the Synapse rate. However, parasitic power consumption, labour estimates and the other differences have a cumulative effect that is significant as well. The ANSS sought to determine an accurate cost of generating electricity from a small scale biomass CHP plant such that a COMFIT rate could be established to facilitate the construction of these plants. Based on the expert evidence that we have filed and the analysis that has been performed, we are very confident that we have provided strong and reputable information to assist the Board in making its decision for the biomass CHP COMFIT rate.

Thank you.