

**Issue Note on Biomass Energy Purchase Agreements
A Critical Component of BC's Integrated Forest Industry
Submitted by Industry Members of the BC Pulp & Paper Coalition**

Executive Summary

There are numerous industrial companies in the BC Forest Sector generating biomass based energy and selling some of that generation to BC Hydro under Energy Purchase Agreements (EPAs). This includes the Pulp & Paper and Sawmill Sectors with EPAs that will begin to expire at end of 2017. With the planned expenditure on Site C, BC Hydro has indicated through its planning documents and recent rate application that it intends to only renew 50% of expiring biomass EPA volumes at considerably lower prices than the current contract prices that resulted from open bid processes. The Pulp & Paper Sector asserts that this is not a viable path forward for biomass generators and will have unintended consequences for BC. The renewal of these EPAs is critical for maintaining the present fiber supply chain balance in the forest industry, while providing a valuable supply of renewable, dispatchable energy.

The BC Forest Sector is a key economic driver of the provincial economy with more than 7,300 businesses accounting for \$12 billion in annual GDP, 31% of all BC manufacturing sales and nearly a quarter of all direct manufacturing jobs throughout the province. The Pulp & Paper Sector accounts for over 20% of this economic contribution to BC, primarily in rural communities. These facilities have the infrastructure in place to provide the most cost-effective biomass power generation for BC and reduce air emissions from slash pile burning.

BC Hydro's terms of reference for its planning process does not, nor is it expected to, account for the full importance of Biomass EPAs to BC's Forest Sector and the economic and environmental benefits that are derived from these EPAs. Therefore, expiring Biomass EPAs should be extended with comparable terms and conditions until a sustainable framework can be developed that works for rate payers, the BC government and at-risk communities.

In its deliberations, the BCUC is encouraged to look at the full potential of renewables in BC as a cost effective option if Site C does not progress along its current timetable. According to BC Hydro's wood based biomass report (July 2015) for the 2015 Integrated Resource Plan Update, there is almost 200 MW of additional biomass power potential in BC (not including standing timber) over and above the existing EPAs under contract. This does not include additional biomass potential from higher forest utilization rates and use of biomass pellets that are currently exported from BC to produce green power in other countries. Table 1 shows that Biomass power has many key attributes that distinguishes its value from other sources of electricity.

Table 1. Generation Type Characteristics

Type of Power Producer	# of EPAs	Firm	Freshet Dispatchable	Supports Cogeneration	Renewable	Near Major Users
Run of River Hydro	70	✗	✗	✗	✓	✗
Storage Hydro	14	✓	✗	✗	✓	✗
Wind	8	✗	✗	✗	✓	✗
Biogas	7	✓	✗	✓	✓	✓
Energy Recovery Generation	4	✗	✗	✓	?	✓
Gas Fired Thermal	4	✓	✓	✓	✗	✓
Municipal Solid Waste	1	✓	✗	✓	✗	✓
Solar	1	✗	✗	✗	✓	✗
Biomass	19	✓	✓	✓	✓	✓

Biomass Energy Policy Background

1. Bio-energy power Acquisition by BC Hydro

- Beginning in 2008, BC Government Energy and Climate policy supported BC Hydro's acquisition of biomass power. This was achieved through several paths including the Phase 1 Biomass Power Call, Phase 2 Biomass Power Call, Integrated Power Offer, Standing Offer Program and bilateral agreements.
- This achieved several policy objectives:
 - Environmental –phased out beehive burners as sawmill waste was directed to power generation;
 - Competitiveness – preserved competitiveness versus jurisdictions that support biomass power;
 - Investment – supported investment in BC, driving mills to improve efficiency and divert steam capacity to renewable power generation;
 - Economic – provided a solid foundation for the Forest Sector, supporting more than 145,000 jobs in BC and encouraged development of closer ties to utilize wood waste for the benefit of BC; and,
 - Climate Leadership – Over the past two and a half decades, the sawmilling and pulp & paper sectors have reduced their greenhouse gas (GHG) emissions by 62%.
- BC Hydro currently has biomass EPAs with 19 generators in BC which are forecast to supply between six and seven percent of BC Hydro domestic power in 2017.
- 16 of these generators are located at forest products facilities; either at pulp mills or sawmills. These EPAs provide 739 MW in generation capacity and supply 2,615 GWh.

2. Biomass fuel and Industry Considerations

- Sawmills provide the majority of the fuel, primarily bark, required to generate the biomass EPA energy.
- The amount of bark required to generate the energy supplied under the biomass EPAs is the equivalent to approximately 40% of all the bark generated at BC sawmills (approximately 2.2 million dry MT annually).
- The increase in power generation that resulted from biomass EPAs resulted in the phase out of beehive burners and induced pulp and paper mills to invest in efficiency to divert steam to power generation.
- Biomass EPA generators and their sawmill suppliers support thousands of high paying jobs in BC – a major differentiator compared to other types of renewable power.
- Without renewal of Biomass EPAs under economically sustainable terms, generators will cease or reduce generation, resulting in surplus sawmill waste, increased forest residues and slash pile burning. This would be moving opposite to the direction that has been set by the province in recent mandate letters for the Ministers of Environment and Finance.
- Loss of EPA revenue will make generating facilities and their supplier sawmills less competitive, leading to job losses.
- Without a viable outlet for its fiber byproduct streams, a sawmill would not be able to operate, leading to further job losses, particularly in rural communities.

3. Summary Considerations

- BC Hydro's current position on biomass EPA renewals will place at risk:
 - the volume of dispatchable renewable power,
 - employment, especially in rural communities, and
 - competitiveness of the BC Forest Products sector.
- Given the overarching benefits of biomass EPAs, there is a need to coordinate BC Hydro EPA prices for biomass power and BC Government policies to reflect the full value of biomass electricity generation to the province and its rural communities while protecting rate payers from unsustainable inflation.

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