PWU Submission to MNRF on ERO 019-3514, Ontario's Draft Forest Biomass Action Plan

The Power Workers' Union (PWU) is pleased to submit comments and make recommendations to the Ontario Ministry of Natural Resources and Forestry (MNRF) regarding Ontario's Draft Forest Biomass Action Plan. The PWU is a strong supporter and advocate for the prudent and rational reform of Ontario's electricity sector and recognizes the importance of planning for low-cost, low-carbon energy solutions to enhance the competitiveness of Ontario's economy. The PWU represents the majority of the skilled workers that operate and maintain Ontario's electricity production and delivery systems.

Ontario launched the "*Sustainable Growth: Ontario's Forest Sector Strategy*" in August 2020 to sustainably grow the forest sector to create jobs and prosperity for thousands of Ontario families and, encourage innovation and investment in this sector. Part of this Strategy includes the development and implementation of a Forest Biomass Action Plan "*to provide support for economic development through the increased use of mill-by products and underutilized forest biofiber*." The PWU appreciates the opportunity to review and comment upon the MNRF's Draft Forest Biomass Action Plan (FBAP).

The PWU has advocated for increased investment in Ontario's significant renewable biomass resources and related infrastructure for the last two decades. Experience elsewhere in the world has demonstrated the economic, environmental and social benefits of such investments: jobs, high-tech innovation, more low-carbon energy, reduced emissions and increased energy security. Recognizing these benefits, the PWU actively supported the conversion of the Thunder Bay and Atikokan Generating Stations (GS) to renewable, low-carbon biomass (two world firsts), related research at Confederation College and at Lakehead University and the development of two local wood pellet plants. Most importantly, these investments sustained existing jobs and created new ones in local, Indigenous and Metis communities in the area. The Atikokan GS is fueled by local wood pellet producers. The station directly employs approximately 65 people and supports hundreds of jobs in biomass harvesting, pelletizing and transportation associated with wood pellet providers and research.

The PWU believes that Ontario Power Generation's biomass-fueled Atikokan GS represents a significant opportunity to advance the objectives of Ontario's Forestry Strategy and draft Forest Biomass Action Plan. The Atikokan GS station offers two major benefits for meeting Ontario's future energy needs — strategically located flexible low-carbon electricity and a hub for a low carbon energy centre that leverages the heat output. The following two recommendations support these underutilized low-carbon energy resources.

1. Maximize the contribution of Atikokan GS to provide low-carbon electricity to meet growing demands in the Northwest Region.
2. Evaluate the role of the Atikokan GS in the development of a low-carbon energy centre that supports the local economy.

Recommendation #1: Maximize the contribution of Atikokan GS to provide low-carbon electricity to meet the growing demands in the Northwest Region.

Maximizing the contribution of Atikokan GS to provide low-carbon electricity is supportive of several actions outlined in the draft Forest Biomass Action Plan: 2.1-Recognizing the value of existing biomass-

fueled generating facilities; 3.4 and 3.5-Federal climate initiatives and the Emissions Performance Standard (EPS); and, Action 5.3-Facilitating discussions between other ministries.

Action 2.1 – Recognizing value of existing biomass-fueled generating facilities

Action 2.1 is intended to "*Ensure that existing facilities that consume biomass for electricity generation are provided ongoing access to the provincial market at fair compensation for the value they provide to Ontario's electricity system. This includes recognizing and, where possible, removing barriers that prevent biomass facilities from optimizing their assets*."

The Atikokan GS is an existing biomass facility in the north which is facing barriers to optimizing its role, assets and the associated economic benefit of available forestry biomass. This low-carbon local supply resource will become more valuable over the coming decade.

Ontario's 200 MW Atikokan GS is capable of flexibly providing electricity to the region and hence the provincial grid. The station has played a significant role in meeting peak needs and providing extended backup to the hydroelectric production in the region and grid connections with Manitoba. Currently, the station's capacity to deliver low-carbon, renewable biomass generated electricity is underutilized and can increase production to enhance reliability and energy security in the region in the following ways:

a) Atikokan is critically located to meet the electricity demand growth in the Northwest Region:

   Ontario's Independent Electricity System Operator (IESO) forecasts an increasing demand for electricity in the Northwest driven by urban growth, new supply lines to remote communities and new mining developments. These forecasts do not include the impacts of electrification as Ontario decarbonizes its economy.[1]

   - *Urban:* IESO forecasts growing electricity needs in municipalities and other customers served by the local distribution companies in the region, including Thunder Bay.
   - *Remote Communities:* The new Watay Transmission line will connect many remote communities resulting in increased demand on the existing provincial grid.
   - *New mining developments and the Ring of Fire:* New mining developments are planned near Red Lake and Pickle Lake north of the Atikokan GS. Additional projects are expected in the "Ring of Fire" area northeast of Thunder Bay.

   Atikokan GS is strategically located to supply the Watay Transmission line and the lines for new mining projects near Red Lake and Pickle Lake. It is also a source of generation to the west of Thunder Bay that can complement the supply Thunder Bay receives from Southern Ontario via the East-West (E-W) tie line. Furthermore, using Atikokan's low-carbon alternative to supplying demand in Thunder Bay would reduce the load of the E-W tie line enabling that line to serve the Ring of Fire as it is developed.

   The station is well positioned to be a significant local supplier of low-carbon electricity to meet the growing regional demands.

b) Atikokan can reduce the risk to the region of the IESO's forecast shortfall in electricity generation capacity in the province.

[1] IESO, NW IRRP Webinar #1 Presentation, May 2021

The IESO's current Integrated Regional Resource Plan (IRRP) for the Northwest Region is reliant upon electricity imports from Southwestern Ontario via the E-W tie line for supplying the region. The E-W tie line project contributed to the decision to close the Thunder Bay GS. When the 3000 MW Pickering Nuclear Generating Station retires in 2025, the province will not only rely on carbon emitting gas-fired generation but will also face an overall capacity shortfall, the solution to which has yet to be resolved.[2] Increasing production at the Atikokan GS can significantly reduce the reliability risk exposure in the north to Ontario's looming capacity shortfall risk in the south. Considering that natural gas fired generation relies on imported natural gas, primarily form the U.S., displacing it with locally produced biomass generated electricity is an economic benefit to the region that will accelerate achieving the benefits of the Forest Biomass Action Plan.

c) The Atikokan GS can bolster the reliability benefits of the Manitoba interchange and local hydro.

The Atikokan GS provided a critical role in compensating for lower hydroelectric production earlier this year, a situation that is not atypical for hydroelectric production and highlights the importance of water availability. Hydroelectric production in the Northwest has experienced similar conditions in the past. Manitoba has similarly experienced several droughts over the last decades which have negatively impacted the reliability services that the interchange with that province provides to Ontario.

Atikokan GS is well positioned to be a significant local supplier of flexible and baseload, low-carbon electricity to meet the region's future electricity demands and support the provincial grid, including power transfers with Manitoba. The forestry biomass fueled station represents reliable and environmentally-responsible energy security for the Northwest.

Actions 3.4 and 3.5 – Federal climate initiatives and the Emissions Performance Standard (EPS)

Action 3.4 is intended to "*Integrate the benefits of forest biomass use in provincial Emissions Performance Standards and relevant provincial strategies*". Action 3.5 states the action plan will "*Advocate on behalf of Ontario's forest biomass users and provincial interests during the creation and implementation of national climate change initiatives, such as the Clean Fuel Standard*".

Significant national climate change initiatives are being implemented by the federal government in the form of its Net-Zero (NZ) 2050 emission targets, the escalating carbon price to $170/tonne by 2030, the Output Based Pricing System (OBPS), and the Clean Fuel Standard (CFS).

The absence of climate policy direction to inform IESO electricity planning decisions inhibits the potential for the Atikokan GS to act as dramatic accelerator for the forestry biomass sector in Northern Ontario. Several factors related to these initiatives could impact the future use of biomass at the Atikokan GS and its role in Ontario's Forest Biomass Action Plan.

a) Implications of Thunder Bay's Net Zero Strategy

Recently, Thunder Bay committed to becoming Net-Zero, aligning with Canada's climate goals.[3] This further increases the need for low-carbon supply options in the region, and further municipalities could follow. A City of Thunder Bay analysis of its Net Zero strategy suggests that electrification

[2] IESO, APO, 2020.

[3] EarthCare Thunder Bay, Thunder Bay Net-Zero Strategy, 2021.

could increase demand significantly by 2050.[4] Findings of other forecasts done at the provincial level suggest there will be a 21% increase in energy needs and a 200 MW increase in capacity needs in the region.[5,6] These needs are in addition to and exacerbate the aforenoted currently identified capacity shortfall for the province and the region.[7]

Absent increasing production at the Atikokan GS, the only way to supply the increased demand growth in the region is through the E-W tie line bringing natural gas-fired generated electricity from southern Ontario, contrary to the Net Zero ambitions of Thunder Bay. IESO's plan to renew gas-fired generation is also facing pressure from municipalities all over the province.[8] As a result, the IESO is initiating an engagement to explore options for reducing that reliance on gas-fired generation.[9] The positive implications to the biomass action plan and the role of the Atikokan GS are considerable.

b) The OBPS and Ontario's Emissions Performance Standard (EPS)

The federal government's escalating price for carbon to 2030 should be considered when comparing biomass generation to the carbon-emitting natural gas options being considered by the IESO. For example, it was the comparative cost of natural gas-fired generation versus biomass generation, absent a carbon price that was used to justify the closure of the Thunder Bay biomass GS and that will certainly be a factor in the IESO's decision regarding the expiration of the Atikokan GS's current contract in 2024, the loss of which would set back the Forest Biomass Action Plan. The "cost" of the carbon emissions associated with gas-fired generation should be included in such an IESO cost comparison.

The federal OBPS will place a $170/tonne carbon price on the entire output of new natural gas-fired generation. The design of Ontario's EPS does not burden natural gas-fired generation with a carbon price.[10] Two options exist to advance the objectives of the Forest Biomass Action Plan: (1) the EPS could be modified to fully apply this carbon price to gas-fired generation; or (2) the value of forestry biomass fired generation options in the North to be used in decisions by the IESO could assume that the $170/tonne carbon price that will prevail across the economy applies to gas fired generation.

c) Clean Fuel Standard (CFS) Opportunities

The federal clean fuel standard (CFS) can incent the decarbonization of the trucking sector that supports forestry in the Northwest. The CFS is currently drafted to apply to the displacement of liquid fuels, such as diesel used in trucking, and not gaseous fuels such as natural gas. The CFS could be applied to using the low carbon output of the Atikokan GS to create hydrogen for fueling hydrogen trucks, an additional measure for decarbonizing the forestry sector.

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[4] SSG, Thunder Bay Community Energy and Emissions Plan, 2020.
[5] Strategic Policy Economics, Electrification Pathways to a Low Carbon Economy, 2021.
[6] Growth based on average Ontario forecast applied to the Northwest region given IESO's statement that LDC demand forecast is similar across the province (ref. Northwest IRRP Webinar #1 Presentation).
[7] IESO APO and resource adequacy engagement 2020/2021 repeatedly confirm that estimating electrification demand resulting from decarbonization of the economy is not part of its mandate.
[8] City of Toronto.
[9] IESO Gas Phaseout engagement, PWU submission
[10] Ontario's Emission Performance Standard, 2020.

Maximizing the fit of these initiatives with Ontario's Forest Biomass Action Plan will be critical to the future role of renewable forestry biomass in the region.

Support to Action 5.3: Facilitating discussions between other ministries

Action 5.3 indicates that the: "*MNRF's Forest Industry Division will facilitate discussions between other ministries, federal agencies, investors, technology providers, and forest sector partners to increase the use of forest biomass*".

Increased dialogue between the MNRF and the Ministries of Environment, Conservation and Parks (MECP) and Energy, Northern Development and Mines (MENDM) would help advance Atikokan GS's future as a provider of low carbon electricity to the region and accelerate achieving the benefits of the Forest Biomass Action Plan.

a) The MECP is responsible for carbon pricing of electricity generation via the EPS, which is the subject of a current consultation.[11] The MNRF should coordinate with the MECP to ensure that the EPS properly prices carbon emissions from gas-fired generation to ensure the Atikokan GS is being fairly valued when the IESO is considering supply options.

b) The MENDM is responsible for the development of Ontario's northern economy, as well as long-term energy planning for the entire province. The MENDM recently held a consultation to guide the preparation of the next LTEP which currently does not consider electrification of Ontario's economy. More coordination between the MNRF and the MENDM regarding the role of forestry biomass energy, particularly the Atikokan GS, could help the province meet its emission targets and optimally shape the IRRP for the Northwest.

Recommendation #2: Evaluate the role of the Atikokan GS in the development of a low-carbon energy centre that supports the local economy.

Anchored on an expanded biomass-fueled generation of electricity, Atikokan GS's geographic location, transportation and grid connections, 741 acre site, locally available biomass experience and infrastructure, large available supply and unexploited heat output are all positive factors for a successful development of a low-carbon energy centre. Such a centre around the Atikokan GS would be supportive of the following four actions in the draft Forest Biomass Action Plan:

- Action 1.6: Support development of regional clusters that increase value generation from the use of forest biomass.
- Action 2.2: Publish a report that quantifies the financial contribution of forest biomass to individual facilities and the entire forest sector, and its socio-economic contribution to local communities and the provincial economy.
- Action 3.3: Look for opportunity to make forest biomass projects eligible in relevant economic development and business support programs.

[11] MECP EPS consultation, 2021

- Action 4.2: Work with Indigenous communities to take a stepwise approach to bring about greater Indigenous involvement and benefit from the use of forest biomass:
    - create network connections; foster partnerships with industry; and encourage agreements between industry and Indigenous communities.

For example, the unused bioheat at Atikokan GS could support additional low-carbon energy production from the site, sustain and expand the region's bioeconomy, support greenhouse operation, attract local commercial and new users and create partnerships with Indigenous and Metis people. Such an anchor is also supportive of other government policy objectives: Ontario's Made-in-Ontario Environment Plan, First Nations (FN) Economic Growth and Prosperity Table and, Connecting the North Transportation Strategy.

Potential uses for the bioheat from Atikokan GS include:

- Pellet plant producer
- Greenhouse complex
- Energy Battery Storage facility for helping meet peak/back-up demand
- Bio-refinery
- Collection depot for spent batteries and solar panels from Northwestern Ontario—Indigenous and Metis and local communities and mines. Collection could be expanded to Manitoba.

The advantages inherent in the creation of an Atikokan low-carbon energy centre will continue to expand the significant economic, environmental and social benefits to the Northwest of the station's role in the Forestry Biomass Action Plan.

Closing

The PWU has a successful track record of working with others in collaborative partnerships. We look forward to continuing to work with the MNRF and other energy stakeholders to strengthen and modernize Ontario's electricity system. The PWU is committed to the following principles: Create opportunities for sustainable, high-pay, high-skill jobs; ensure reliable, affordable, environmentally responsible electricity; build economic growth for Ontario's communities; and, promote intelligent reform of Ontario's energy policy.

We believe these recommendations are consistent with, and supportive of Ontario's objectives to supply low-cost, low-carbon, and reliable electricity for all Ontarians. The PWU looks forward to exploring our recommendations further with the MNRF and will continue to participate ongoing stakeholder engagements.