

**Written Submission for the Pre-Budget
Consultations in Advance of the Upcoming Federal Budget**

**By: Gitxsan Development Corporation
on behalf of the Gitxsan Hereditary Chiefs**

Recommendation 1: That the government continues supporting clean energy innovation and clean energy in Indigenous communities programs.

Recommendation 2: That the government provide funding in the amount of \$100 million for the execution of Indigenous Clean Energy projects through Natural Resources Canada programs such as Indigenous Forestry Initiative (IFI), Clean Energy for Rural and Remote Communities (CERRC), Clean Growth and Investments in Forestry Industry Transformation (IFIT).

Recommendation 3: That the Federal government provide \$53 million to fund the commercialization of Canadian torrefaction technology and the creation of Indigenous jobs at the South Hazelton, British Columbia Hazelton BioEnergy Ltd pellet plant.

Hazelton BioEnergy Ltd.
South Hazelton, British Columbia

Hazelton BioEnergy Ltd. is a shovel-ready project that will significantly help with the restart of the economy in Northwestern BC. This project will support the struggling forestry industry, commercialize a Canadian technology and create 100 new jobs that will aid in the COVID19 recovery and for many years to come.

The Gitxsan Hereditary Chiefs have been looking for an economic opportunity to lift their people out of the extreme levels of poverty and social assistance. Over the years, the Gitxsan have taken several steps to generate economic opportunity for their people. First the Delgamuukw v British Columbia case of 1997, then creating Gitxsan Development Corporation in 2011 to bring business to the region. In 2015 the Gitxsan Hereditary Chiefs approved the Prince Rupert Gas Transmission Line with the hopes of the pipeline bringing economic opportunity before Petronas decided not to make Final Investment Decision into the project. The community continues to search for the right opportunity and with the forests as a core resource for the Gitxsan, this project provides a logical opportunity for economic growth.

The Gitxsan *lax yip* (territory) is 33,000km² of Northern British Columbia. Gitxsan Development Corporation has been investigating forestry related economic opportunities that will honor the Gitxsan values and create jobs. Through programs like Natural Resources Canada Indigenous Forestry Initiative and the Clean Energy for Rural and Remote Communities, Gitxsan Development Corporation and its subsidiaries have installed 5 bioheat projects in the region and created a pellet and wood chip delivery business. During the pellet shortage in the winter of 2020, Gitxsan Energy Inc. effectively transitioned residential pellet users from single use plastic bagged pellets to bulk pellets or a barrel of pellets exchange program.

The Gitxsan have partnered with Airex Energy of Quebec to create a pellet plant that specializes in torrefied pellets, a drop-in replacement for coal in coal-fired power plants as well as bioheat pellets that will be utilized domestically for bioheat. This project is aligned with many of Canada's priorities including the commercialization of Canadian innovation in green technology, reconciliation with Indigenous people, increased employment of Indigenous people, utilization of 'waste' wood fibre, transition off fossil fuels to renewable energy and creating new international markets for Canadian goods.

Project Overview:

Coal-fired power plants represent one of the world's largest sources of carbon dioxide emissions (CO₂, the main heat-trapping gas affecting climate change). Coal plant emissions must be cut substantially to fulfill new legislative laws and to support climate change action plans. Co-firing with biomass as a coal substitute, provides the lowest cost and greenest solution. To-date, the problem has been in the handling of traditional wood (white) pellets that are not water resistant and require a significant capital investment on the part of the coal-fired power plant operators to facilitate the proper fuel

handling, storage and processing systems necessary to handle such a pellet fuel.

Torrefied pellets (TPs) are water resistant (unaffected by water) and are the best positioned biomass derived energy source due to their energy density, lower handling and shipping costs, and the ability to burn like coal without significant capital expenditures to retrofit handling, storage and processing equipment. TPs are low moisture, CO₂ neutral, coal-like in texture, renewable fuel with a high energy density of 21 GJ/tonne. It is produced using a patented torrefaction process that cooks the wood in an oxygen-starved environment prior to pelletizing, much like roasting coffee.

Hazelton BioEnergy Ltd. (“HBE”) will be a commercial scale torrefied pellet plant in South Hazelton, BC, that will produce a “green” coal replacement known as a torrefied (black) pellets. The pellet plant will utilize forestry and sawmill operation residuals along with pulpwood alleviating forestry operations of a perpetual problem, wood waste disposal. **The pellet plant will create over 46 direct full-time positions for the region as well as 64 indirect positions; an estimated \$7 million in salaries and wages per annum.** The plant would also produce white pellets to meet the need for a dependable source of white pellets for residential and commercial bioheat installations. The present lack of supply is a major problem across the entire region in addition to the demand that has been identified in both the Yukon and Northwest Territories.

The proposed plant will produce a total of 100,000 tonnes of pellets annually. Production will consist of 80,000 tonnes of torrefied pellets for export as a coal replacement for coal fired power plants and 20,000 tonnes of white pellets for the Canadian bioheat marketplace. The net capital cost of the project is \$53 million CAD (\$3.0 million CAD for working capital is included). First production is scheduled for Q4 2021. The plant is expected to generate annual revenues of \$23 million CAD.

The production facility in South Hazelton, British Columbia will utilize a former sawmill site that possesses much of the required infrastructure. Situated at the confluence of the Skeena and Bulkley Rivers in North Western BC, South Hazelton was chosen as the location because of abundant woody-biomass resources in the region, and its access to the Port of Stewart for exporting shipments to large power utility customers presently using coal as fuel but needing to reduce their carbon footprints, whether local or overseas.

The prime source of feedstock for the plant will be sawmill residuals from two locally owned sawmills in close proximity to the proposed plant site. In addition, low quality logs and logging residues that would be chipped will also be utilized in the operation. The supply of low quality logs will come primarily from the Kispiox Timber Supply Area (TSA) as there does not exist a stable demand for market pulp logs and/or #4 grade logs. In addition, there will be small entrepreneurial businesses who will be providing fibre to the plant from their smaller tree farm licences.

Market:

Target markets are power producers in Japan and Canada. Product for export will be transported by transport truck to the Port of Stewart, a distance of 254 km. Product will be sold under long-term contracts (7 - 20 years). We are currently negotiating an off-take agreement with a number of large utilities in Japan through our commercial partner Mitsui & Co., one of the largest general trading houses in Japan. At present, we have a signed MOU for 40,000 tonnes of TPs through Mitsui & Co. in addition to having identified approximately 8,000 tonnes of demand for the white, bioheat quality pellets. It should be noted that this type of white pellet is of much higher quality than the traditional white pellet that is produced in Canada for export to the power markets.

According to Hawkins Wright, a leading market research firm in the bioenergy sector, the global industrial pellet market, which consists of wood pellets and torrefied pellets, is expected to grow from 17.6 MT in 2018 to 35 million MT in 2026. Demand for industrial pellets in the coming years will be driven by co-firing biomass and a number of coal-fired power plant conversions in Europe, Asia and North America.

In Japan, the government plans to derive approximately 4% of its energy needs from biomass by 2030 and has adopted favorable feed-in tariffs (FIT) for certified biomass. More than 800 projects totalling 12,000 MW have already won government approval. One company in Japan we have identified is already seeking a supply of 850,000 tonnes per year by 2023. They also estimate the market in Japan could easily reach 7.5 million MT by 2030.

Parties involved:

HBE business structure will be a Limited Partnership with several private investors lead by Gitxsan Development Corporation (GDC). Airex Energy Inc. is the technology supplier and will also be a Limited Partner. The Hazelton facility will be the first large commercial scale torrefied pellet plant in North America.

Gitxsan Development Corporation ("GDC") is an indigenous, for profit company, incorporated in the Province of British Columbia. GDC is 100% wholly owned by the Gitxsan Hereditary Chiefs and is the business arm of the Gitxsan Nation.

Airex Energy Inc. is a spin-off of Airex Industries Inc., a private company founded in 1975 that specializes in industrial air filtration and air-handling equipment. In 2010, in response to customer demand for clean fuel than coal or bunker fuel, Airex Industries started developing a proof of concept of the torrefaction-based CarbonFX biocoal pellet technology. In 2015, with funding from the Canadian Government through Sustainable Development Technology Canada (STDC), Airex completed the proof of concept plant capable of producing 2,000kg/h or 15,000 tonnes/year.