



Committee of the Whole

penticton.ca

Committee of the Whole

to be held electronically and at the Penticton Trade and Convention Centre
273 Power Street, Penticton, B.C.

To view the Council Meeting, visit www.penticton.ca

Tuesday, August 17, 2021

Recessed from the Regular Council Meeting at 1:00 p.m.

1. **Call Committee of the Whole to Order**
2. **Adoption of Agenda**
3. **Delegations:**
 - 3.1 Canadian Mental Health Association – SOS Branch 1-15
Leah Schulting, Executive Director & Jon Ferebee, Board Member
 - 3.2 Frontenac Energy Proposal 16-32
Steve Neil, VP Business Development and Land Acquisitions
 - 3.3 Travel Penticton 33-41
Thom Tischik, Executive Director & Jessica Dolan, Travel Penticton Chair
4. **Adjourn to Regular Meeting of Council**



Request to Appear as a Delegation

Preferred Council Meeting Date: Aug 18

Second choice(s): Sept 1

Subject matter: Canadian Mental Health - SOS Branch

Name of person(s) making presentation:

Leah Schulting

Address: 2852 Skaha Lake Rd
Penticton BC

Phone: 493-8999

Email: Leah.schulting@cmha.bc.ca

Please provide details of your presentation or request of Council here: (or provide a detailed attachment)

CMHA needs to find a new space for their programs and services. They have been renting from BC Housing since 2009 at Skaha Sunrise. Due to the re-development of the site CMHA will not be included in the plans. Mayor Vassilaki suggested that we appear as a delegation to seek the City's help.

Please note:

- This form and submissions will become part of the public record.
- The Mayor has the authority to determine if the subject matter warrants the delegation to appear before Council and may determine at which meeting.
- Please submit this completed form at your earliest convenience. Written Requests to Appear are to be received by the Corporate Officer, no later than noon Monday, one week prior to the Council meeting. Please include a copy of all materials that will be discussed.
- If you'd like to share a PowerPoint with Council, email it to the Corporate Officer by 9:30 a.m. Wednesday prior to the Council meeting to be included with the Agenda.
- We recommend you bring backup PowerPoint files with you on a memory stick.
- Delegations are limited to 5 minutes.

Corporate Office
Angie Collison, Corporate Officer
171 Main Street, Penticton, B.C., V2A 5A9

Phone: 250-490-2410
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angie.collison@pentiction.ca



Redevelopment of Skaha Sunrise

- BC Housing purchased 3 motels north of Skaha Sunrise
- Plan is to demolish current buildings and Unity House – residents will be re-housed; CMHA has been evicted

What support does **CMHA** provide to Skaha Sunrise Tenants?

Medication support



Meals program

Crisis Intervention

Supportive Employment (janitorial)

Mental health support

Meals Program



Clubhouse program



Mental Health Advocate – located at Unity House

- One-on-one appointments
- Supports people through housing, ministry and health services.



Community Education

- Suicide Prevention
- Living Life to the Full
- Workplace Mental Health Workshops
- Mental Health First Aid



Mental Health Clients participate in: Supportive Employment

- Janitorial program at Braemore Lodge/Bateman house





Our clients are very concerned about losing mental health support from CMHA

- Who will they go to in crisis if Unity House is not there?
- This situation is creating a whole lot of stress and anxiety for our clients.



Did you know?

- >90% of tenants at Skaha Sunrise are case managed by Interior Health
- CMHA provides over 7000 hours/year of onsite support at Skaha Sunrise

Did you know?

RCMP service calls Q1- 2021:

Victory Church: 145

Compass Court: 55

Burdock House: 22

Fairhaven: 9

Skaha Sunrise: 0

BC Housing is removing CMHA
from Skaha Sunrise— a program
that clearly works and supports
Skaha Sunrise tenants and
everyone in the City

CMHA wants to stay at the current location:

Who will provide mental health support to the > 200 folks living in the south end of the city?

- Skaha Sunrise 80+
- Fairhaven 44
- New facility next to Best Western 80+

Please help by:
Advocating to BC Housing to
include CMHA as part of the
redevelopment of Skaha
Sunrise

Committee of the Whole Report

penticton.ca

Date: August 17, 2021
To: Donny van Dyk, Chief Administrative Officer
From: Ian Chapman, Acting GM of Infrastructure
Subject: **Frontenac Energy Proposal**

File No: 0550-20

Staff Recommendation

THAT Council receive into the record the report dated August 17, 2021 titled "Frontenac Energy Proposal" regarding an innovative energy generation facility on City owned land.

Strategic priority objective

Asset & Amenity Management: The City of Penticton will ensure the services we provide to our residents and visitors are reliable and cost effective by proactively investing into our natural and built assets.

Background

Frontenac Energy has approached the City with a proposal to participate in an energy project that would be a first of its kind in North America. At a high level, Frontenac Energy would like to purchase a City owned property, construct a processing plant which converts recycled aluminum to electricity, steam, water, hydrogen and alumina (a valuable industrial commodity), and sell the electricity produced to the City. The facility would produce approximately 1MW of green electricity, with the possibility of expansion to as much as 3MW in the future. Frontenac proposes to sell the electricity directly to the City at the Fortis off-peak price for a period of 25-years, and the other bi-products would be sold privately.

In addition to the green electricity produced, Frontenac estimates that the facility will produce 1,100 tonnes of green hydrogen gas annually. The use of this green hydrogen gas in place of fossil fuel has a potential to reduce carbon by approximately 12,000 tonnes/year. A snapshot of Frontenac's process and facility layout from their website can be found in Attachment A.

A video overview of their technology can also be found on their website at www.frontenacenergy.com.

Council, at a closed Council Meeting, reviewed the Frontenac proposal. Accordingly, staff proceeded with the negotiation of a non-binding term sheet with Frontenac and this was reviewed and supported by the Sustainability Advisory Committee at a closed committee meeting and then presented and approved by Council at a closed meeting.

Financial implication

The proposal would result in financial benefits to the City in a number of ways. First, by purchasing a small amount of power from Frontenac at off-peak rates, the City will reduce peak consumption charges currently being paid to Fortis BC. For 1MW of electricity, the magnitude of these savings is estimated around \$165,000 annually. As noted above, if additional power can be purchased (potentially up to 3MW), these savings will increase accordingly. Secondly, Frontenac is proposing to pay the City an annual cash payment of \$250,000. Staff understand this is a portion of what they will receive in the form of a carbon credit for the overall operation. Finally, the sale of the land would generate revenue to the City, which would be transferred to the Land Acquisition Reserve, as would the industrial operation via property taxes, which based on initial construction values are estimated to be in the range of \$75k per year.

There would be some legal costs associated with preparing the applicable agreements, as well as staff time to negotiate and administer the agreements. These costs will be absorbed within the Electrical Utility's existing budget.

Analysis

There are many details that are addressed in the term sheet. Some of these include:

- Identification of a suitable location and negotiation for the purchase in accordance with the City's Land Disposition Policy.
- Determination of the land use implications for the desired site. The City's zoning bylaw may permit this use without rezoning (Utility Services are permitted in any zone), however, if there is no rezoning required, the City will want to consider how to best engage the public with respect to the proposal (including any aesthetic and potential nuisance aspects of the use).
- Careful assessment of the structure of any agreements to ensure all legislative requirements are being met (including ensuring there is no assistance to business).
- Confirmation that Fortis BC is supportive of this project and that any notice requirements in our wholesale power purchase agreement are met.
- Confirmation of the terms and conditions of how and when the power is supplied to the City.
- Assess the financial and commercial viability of this venture, given that Frontenac is a relatively new company (not yet registered in BC) and this project would be a first of its kind in North America.

While the electricity and hydrogen being produced from the proposed plant are "green" forms of energy, the City's electricity is already green, and therefore there is no direct reduction in the carbon impact from the City's operation. Having said that, there may be the opportunity in the future to purchase hydrogen gas as our fleet evolves, which could reduce the carbon impact. Further, if the hydrogen gas is sold and used locally then it would reduce carbon emissions within the City which is a positive outcome. However, the

primary driver to explore this opportunity are the direct financial benefits to the City from the power purchase and the annual cash payment.

Work on the Power Purchase agreement has commenced and next steps include definition of a robust public engagement process and detailed investigation and planning around the proposed location and design of the plant itself.

Public engagement is expected to commence in the late Summer/Fall.

Attachments

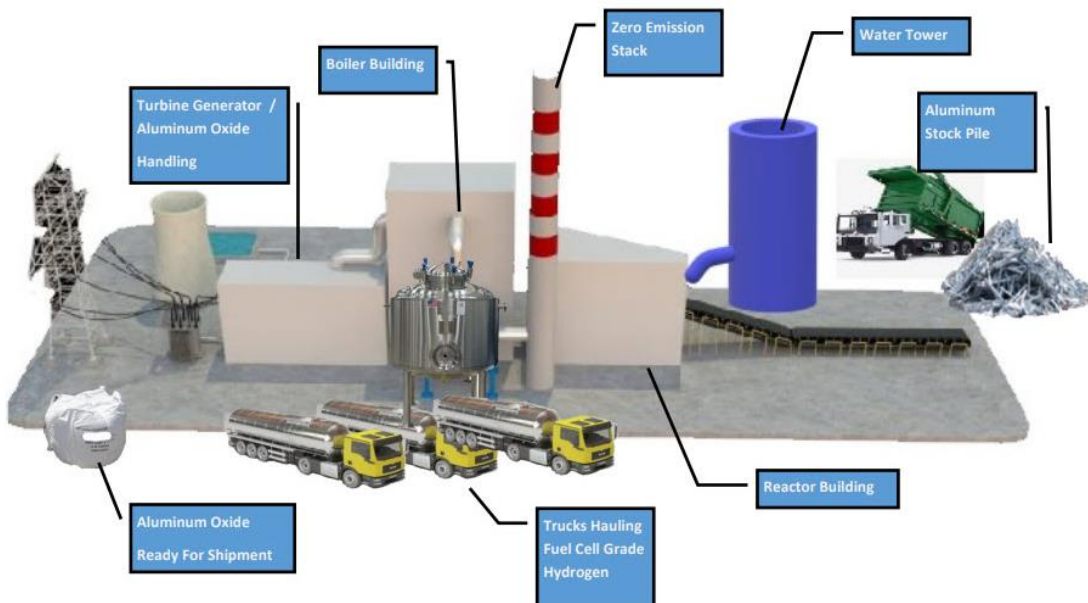
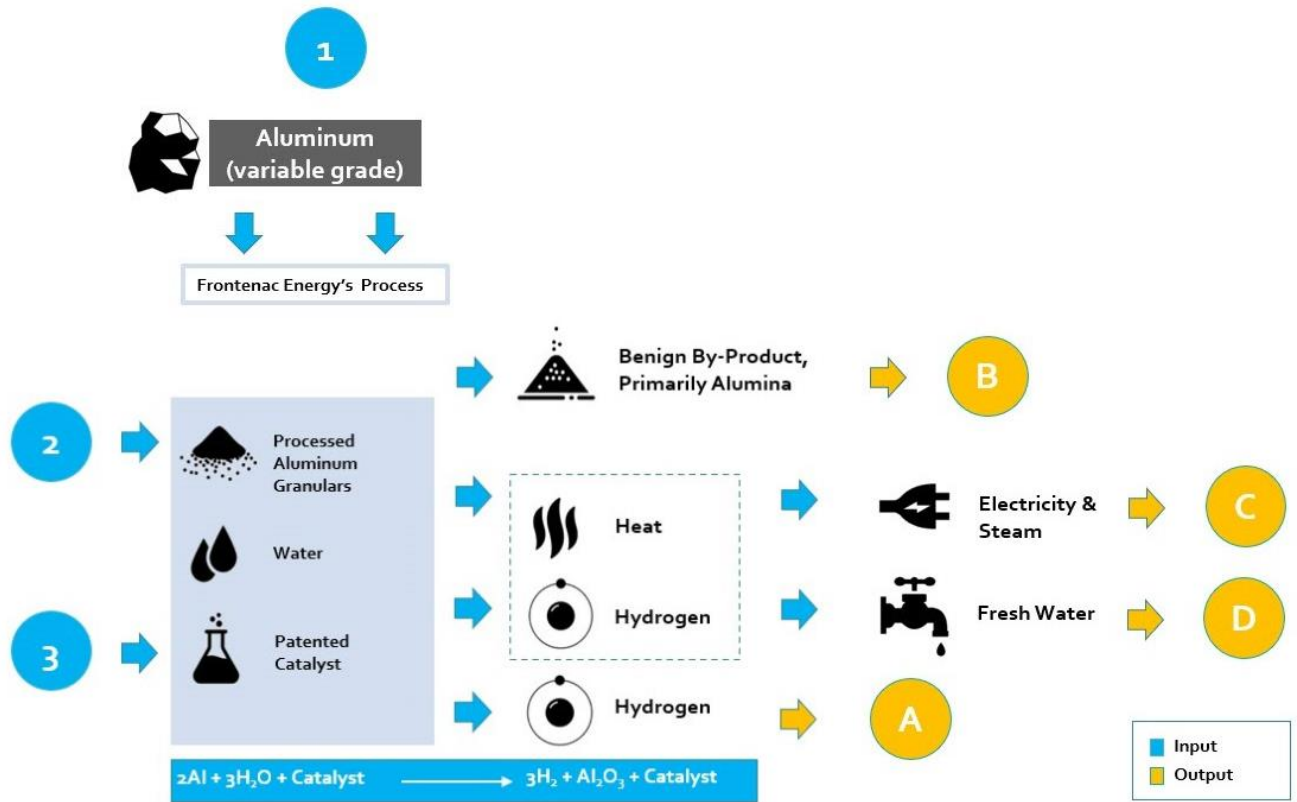
Attachment A – Frontenac process and facility diagram

Respectfully submitted,

Ian Chapman, P.Eng,
Acting GM of Infrastructure

Acting GM of Infrastructure <i>IGC</i>	General Manager of Finance <i>AMC</i>	Director of Development Services <i>BL</i>	Chief Administrative Officer DyD
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Attachment A – Frontenac process and facility diagram (www.frontenacenergy.com)



Frontenac Energy

Clean. Affordable. Secure.

In Partnership with the City of Penticton

David White, Founder & CEO

Steve Neil, VP Business Development and Land Acquisitions

Frontenac Energy – Who Are We?



- Frontenac Energy produces green hydrogen using recycled aluminum
- We are based in Toronto and are 100% Canadian owned
- Founded by David White, Chemical Engineer (Queens University)
- We have assembled an outstanding group of engineers specializing in power reactor design, boiler technology, along with reactor heat transfer and mass balance specifications used in the creation of hydrogen
- We are a collection of good people looking to partner with like minded individuals

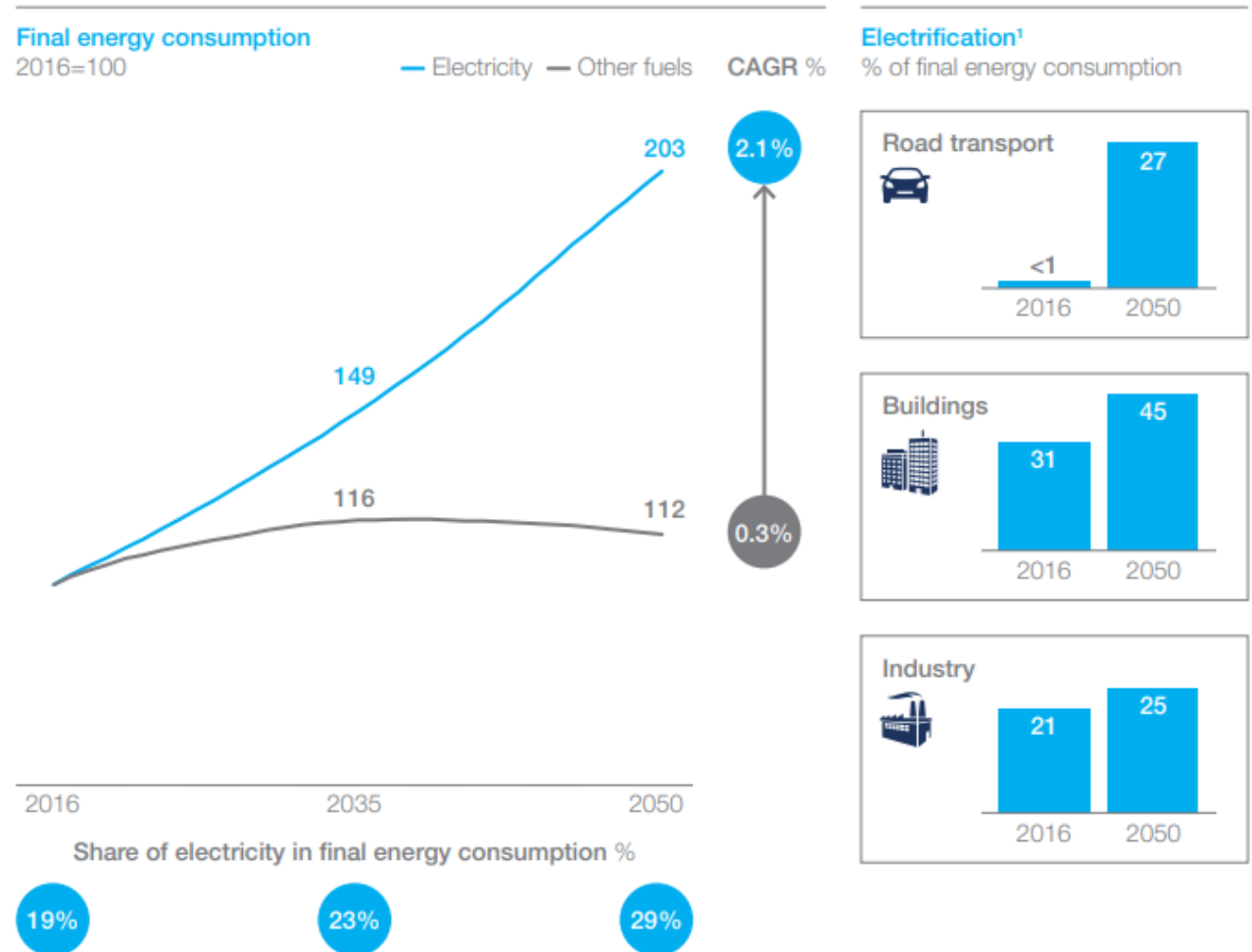
The City of Penticton...A Leader In Green Hydrogen



- Inaugural plant of to be built in Penticton (commencing in the Fall/2021)
- Hydrogen to be used in vehicle propulsion (perhaps even converting City vehicles over to green hydrogen in the future)
- Green hydrogen can also be blended into existing natural gas pipelines in the Penticton area
- Frontenac Energy will also produce green electricity and provide the City with 1MW of power (to be scaled up accordingly in the future)
- High pressure steam is also created and can be used in district heating systems in the Penticton area
- By-products include clean water and benign aluminum oxide (which can be sent back to Rio Tinto/Alcoa to be repurposed in the smelting process, creating a closed loop system)

The Future is Green!

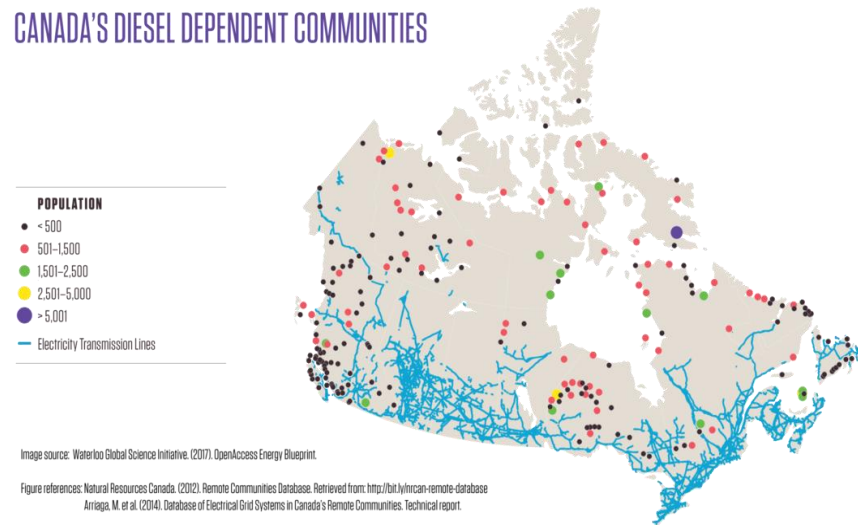
- **Electricity demand doubles until 2050** and grows its share in total energy mix consumption from 19% today to 29% by 2050, as demand for other fuels flattens
- **Uptake in electric vehicles, and higher living standards in non OECD countries** (e.g., China and India) support fast rising demand for electricity
- Within North America, **continued electrification of industry and planned reductions in carbon emissions** provide significant tailwinds for the clean energy industry



¹ Buildings includes residential buildings in OECD Europe and OECD Americas; transport includes passenger cars, trucks, vans, buses, and 2- and 3-wheelers
Source: McKinsey Energy Insights' Global Energy Perspective, January 2019

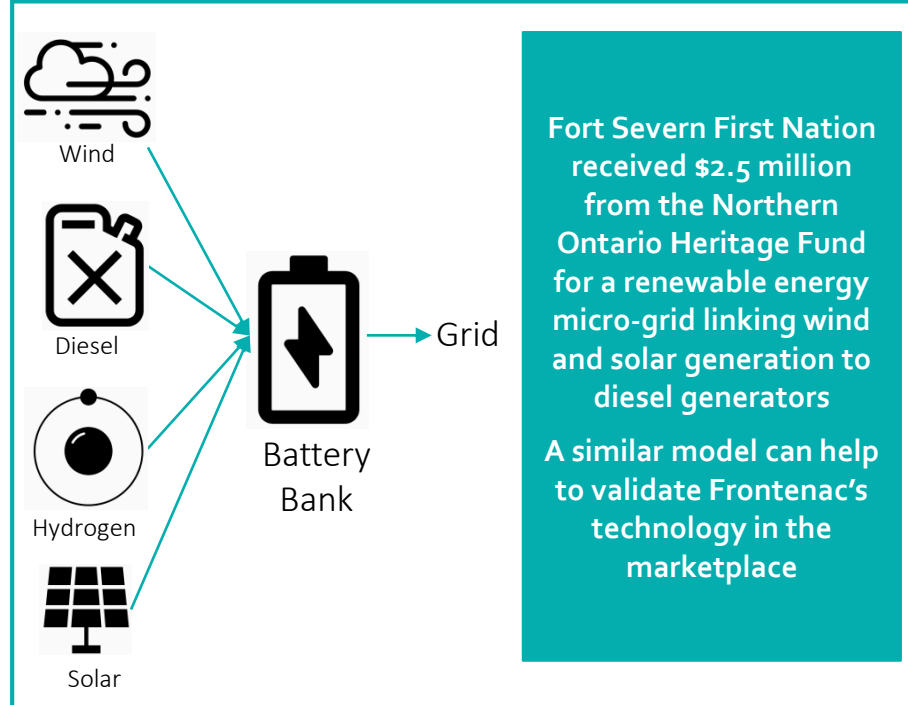
Market Opportunity – Micro Grid Model with Hydrogen

CANADA'S DIESEL DEPENDENT COMMUNITIES



The Pan-Canadian Task Force is working to reduce the use of diesel fuel to generate electricity in Canada's remote communities

Alternative Options for Cleaner Energy (Case Study)



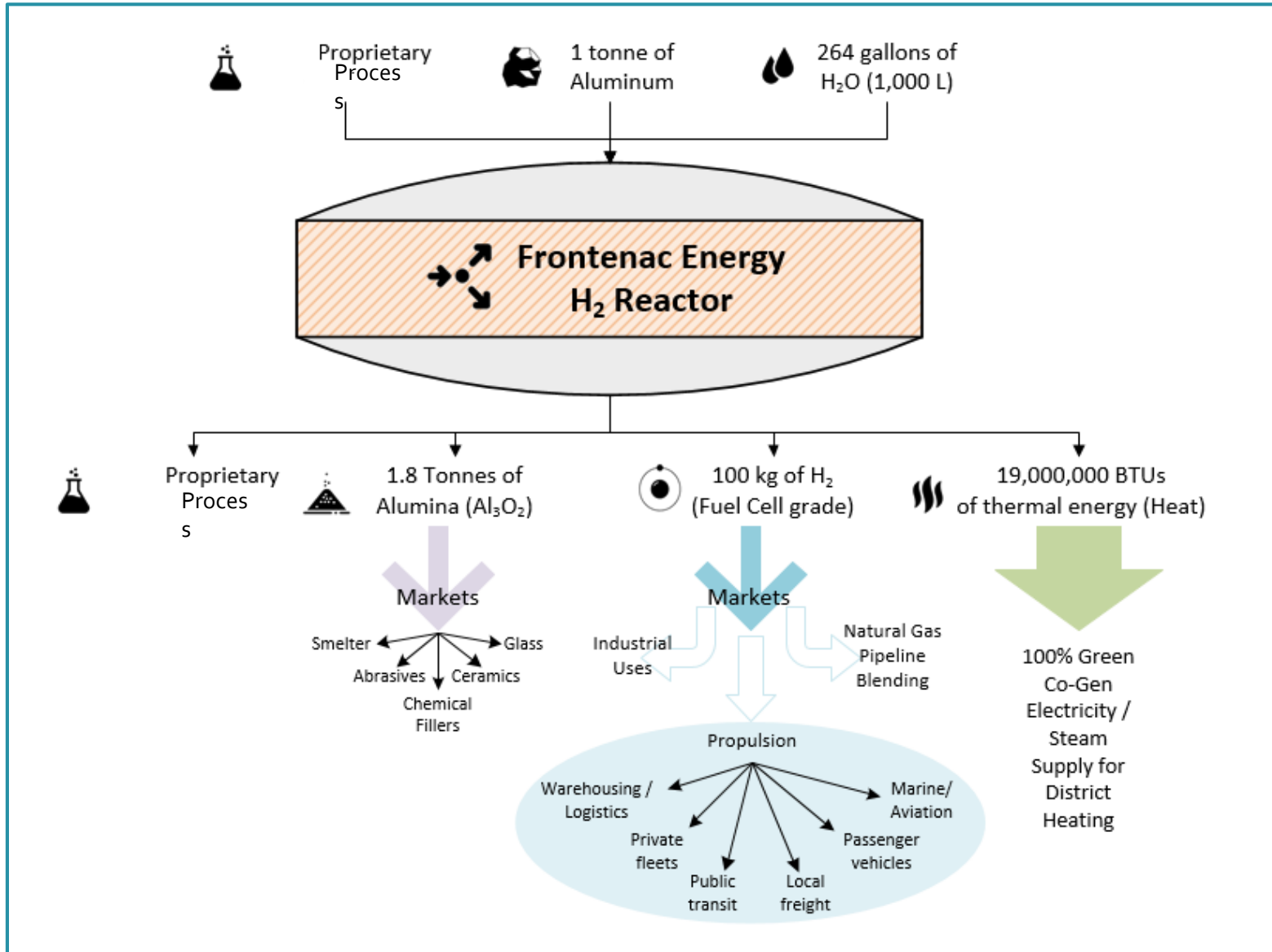
Fort Severn First Nation received \$2.5 million from the Northern Ontario Heritage Fund for a renewable energy micro-grid linking wind and solar generation to diesel generators

A similar model can help to validate Frontenac's technology in the marketplace

Communities are looking for a clean energy solution; government funding has enabled some communities to improve their infrastructure, but they are still not fully off diesel

Frontenac Energy can provide the baseload power requirements of diesel along with district heating options with a significant reduction in greenhouse gas emissions

Inputs & Outputs



- Three unique inputs are required for the reaction to proceed: aluminum, water, and our proprietary process
- The proprietary conversion process can react the lowest or highest grades of aluminum feedstock and still generate bulk quantities of hydrogen gas
- The large amount of exothermic heat is harnessed to produce clean electricity or process steam/hot water, while yielding an environmentally benign alumina by-product, for repurposing in numerous markets

Revenue is generated by selling...



High Purity Hydrogen Gas

- Fuel Cells
- Baseload Power
- Bottled Gas
- Cars
- Trains
- Vehicle Fleets
- Back Up Power
- Zero Emissions
- Other Vehicles
- Military Applications
- Water From Burning



Clean Energy (via heat and/or hydrogen)

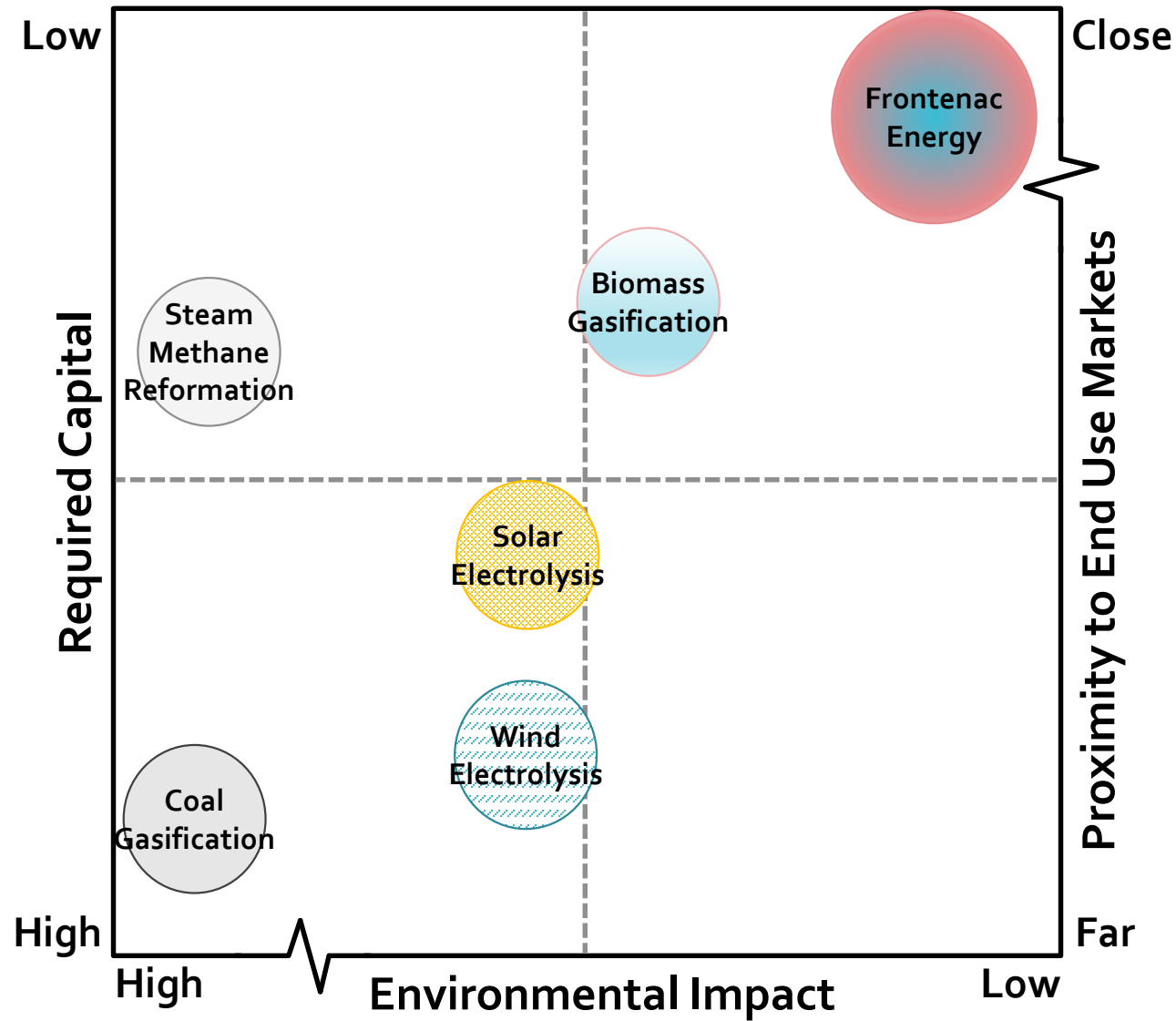
- Electricity
- Heating and cooling
- Commercial Buildings
- Greenhouses
- Process Steam
- Water Distillation



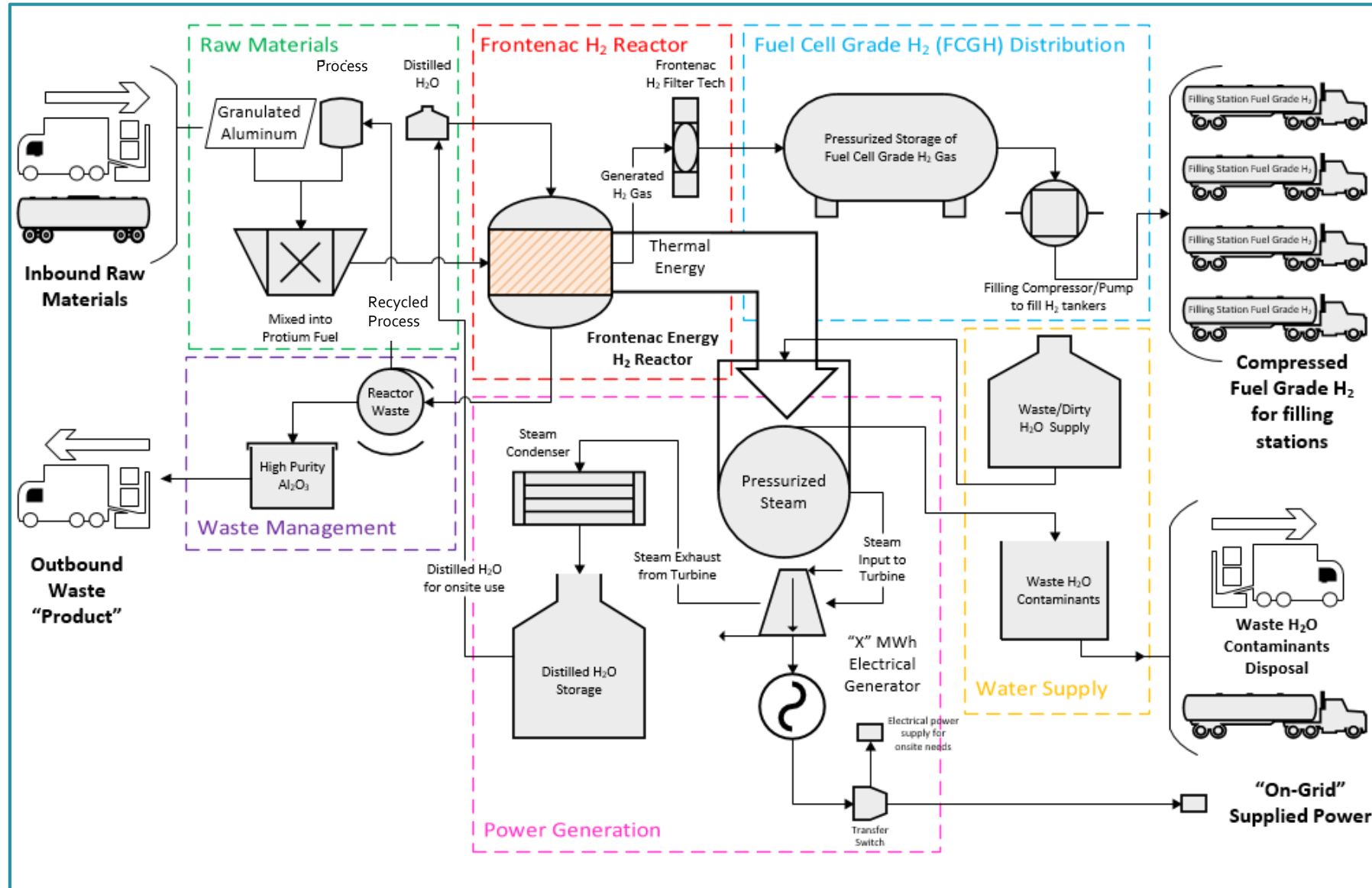
Carbon Offset Credits

- Tax mitigation
- Meeting industry or corporate carbon emission targets
- Reducing carbon footprint

Cost Effective Green H₂ Within the Last Mile of End User



Fuel Cell Grade H₂ Production and Electricity Generation



Our Engineering Team

Recognized leaders across the full scope of engineering, procurement and construction for power generation projects in Canada and abroad



DAVID WHITE
CEO & Founder

Over 30 years of experience in the construction of power generation facilities. As founder of Plan Energy, a full service EPC company, he successfully led the organization from start up to an established full services construction company, managing operations and growth by building functional teams with clear and consistent leadership. He holds a Bachelor of Science in Chemical Engineering from Queens University.



KEN STEWART
Chief Engineer

Over forty years of experience in the design and management of equipment and systems associated with thermal power plants, petrochemical and process industries. Background includes detailed boiler design and preparation of technical proposals for a major boiler manufacture in the large industrial boiler market and Senior Mechanical Engineering position in the thermal engineering consulting field.



GARY GRAHN
Senior VP Operations

Over 25 years of experience in project management, engineering and construction/EPC across oil and gas, industrial, power generation and mining. He has held senior project management and executive management roles at Babcock and Wilcox, Alstom Power, SNC Lavalin, AMEC, Hatch, and most recently at Ontario Power Generation. He holds a mechanical engineering degree from the University of Alberta and an MBA from Concordia University.

A scalable technology that transforms an economic, abundant and underutilized resource into clean, base-load power, in a world that values energy security now more than ever

- Zero-emission low energy input production of high purity H₂ utilizing scalable modular technology that is deployable within the last mile of end-use markets and consumers
- Process elicits a reaction that is self sustaining, highly exothermic, producing high quality heat, hydrogen gas, alumina and carbon offsets
- The hydrogen gas (fuel cell grade) and reaction heat can also be harnessed to produce electricity and steam, while yielding an environmentally benign alumina by-product
- Our solution is cost competitive with fossil fuels yet provides a significant reduction in GHG emissions
- Our technology produces multiple outputs, providing flexibility to take advantage of the most lucrative opportunities across the globe as resource prices fluctuate, energy requirements grow, and GHG legislation becomes more widespread and punitive

Accomplishments & Strengths of Frontenac Team

- Have assembled an outstanding Team of Engineers to lead Frontenac's reactor and fuel design (all with extensive experience in the nuclear power field)
- Currently having the carbon credits for our green hydrogen, green electricity and green aluminum oxide both authenticated and valued by BlueSource Group (Toronto)
- Have secured secondary aluminum suppliers in both Canada and the United States
- Have assembled an outstanding Business Development Team in Western Canada
- Have assembled an outstanding Business Development Team in Eastern Canada
- Have assembled an outstanding Business Development Team for the First Nations Communities across Canada





- Frontenac Energy will produce green electricity and provide the City of Penticton with 1MW of power (to be scaled up accordingly in the future)
- Frontenac Energy to sell the power to the City of Penticton at \$0.054/kwh (during both peak and off load hours)
- Frontenac Energy to share a part of the revenue generated from the selling of carbon credits with the City of Penticton
- Frontenac Energy to provide skilled employment for 15-20 Penticton residents
- Frontenac Energy to explore various partnerships with Okanagan College-Penticton Campus
- Establish the City of Penticton as a true leader and pioneer in the environmentally safe production of green hydrogen

TRAVEL
Penticton



MRDT APPLICATION

- **Travel Penticton has a proven track record for past 4 ½ years**
 - Delivery of professional Destination Marketing initiatives
 - Amid challenging times of high water, summer wildfires, COVID-19 pandemic, and staff shortages
 - Travel Penticton has remained flexible and offered Members, events, facilities and the region a wide variety of tourism marketing opportunities
- **Current MRDT will end June 30/2022**
- **The 3% application required by Destination BC nine months prior**

- **Travel Penticton current working to re-apply to continue the MRDT for the next 5 years commencing July 1, 2022.**
- **Travel Penticton must follow the 5 Year Plan submitted with the application**
- **TP has majority approval for 3% MRDT from accommodators**
- **Cities from Kamloops to Osoyoos are at 3% MRDT**
- **Travel Penticton is looking to obtain Designated Recipient status to secure planning and budgeting for 5 year term**

Travel Penticton with 3% and Designated Recipient status will;

- Create a new Convention Bureau to represent meeting, conference and event facilities
- Consultant already hired to facilitate the process
- Pre-fund a convention bureau for 12 months (Allocated **\$350K** to start)
- Continue to provide quarterly reports and presentations to the Membership and City
- Provide an Annual Report to Membership and City
- Provide an Annual Report to Destination BC and Ministry of Finance

- Work with City Development Services and Economic Development on tourism based and destination development initiatives
- Collaborate with other City departments
- Continue to offer a City representative position on the TP Board
- Work with the City on community events that encourage distance travellers/participants for medium to long stays
- Continue to provide a position on the Travel Penticton Board for Meetings & Events (currently held by PTCC representative)
- Offer a COVID-19 recovery strategy and support initiatives
- Work with the City to develop a Plan for OAP Affordable Housing Funds.

- **The Designated Recipient status will ‘close the loop’ on the administration process**
- **Travel Penticton already provides all required reporting**
- **Travel Penticton does all of the required work as per Destination BC**
- **Travel Penticton is accountable to Destination BC and the Ministry of Finance for Marketing Plans and fiscal management**

- **Travel Penticton accommodation consultation**
 - Travel Penticton has secured positive support over 82% (36 of 44) of properties representing 91% (1688 of 1846) of total available units.
 - Accommodators support the change to 3% pursuant to Travel Penticton becoming the Designated Recipient and support the creation of the Convention Bureau.
- **City Council and City Development Services Staff**
- **All on [Travelpenticton.com](https://www.visitpenticton.com) corporate site**
- **The MRDT is a Provincial Consumer Tax**

- **Any changes will require Travel Penticton to revisit all Accommodation Properties to obtain a new signatures**
- **We have significant concerns the Accommodation Properties will not support 3% MRDT if the City remains as the Designated Recipient**
- **This could have the potential to have them only approve 2% MRDT (status quo) or no MRDT at all**
- **This could jeopardize the creation of the Convention Bureau**

THANK YOU

Questions?