Advancing a $1.5 Billion project introducing new environmentally responsible iron-making technology to Canada

Respectful development considering environment, First Nations, and Community

Developing a World-Class, Low-Cost Merchant Pig Iron Facility

Pig Iron is a high demand product made from iron ore and enables use of recycled scrap steel by steelmakers

Partnership with POSCO and Primetals to use their Leading-Edge FINEX Ironmaking Technology

Strong Support from the Provincial Government and NB Power

Proven Management and Execution Team
Why Maritime Iron

**Sustainable Ironmaking**
- Reduction of New Brunswick Power GHG footprint by 1.5Mtpa
- Contributes to EAF production, lowest possible GHG footprint for steelmaking, reduction of over 40%
- Provides tremendous benefits for local and provincial economies

**Proven Technology**
- FINEX technology developed by POSCO and Primetals, +20-year operating history
- Three plants constructed in Korea, operating at a 96% utilization
- Ability to use low-cost raw materials including iron ore fines and non-coking coals

**In-Place Infrastructure**
- Local jobs will enhance the economy
- Help secure an extended life of generating station
- Located at an underutilized, all-season deep-water port

**In Demand Product**
- Pig Iron is a key feedstock for electric arc furnace (recycling) steelmaking
- No significant merchant pig iron producers in North America
- Opportunity to upgrade Canadian ore in Canada

**Sustainable Ironmaking**

**Proven Technology**

**In-Place Infrastructure**

**In Demand Product**
Why Belledune & New Brunswick?

**In-Place Infrastructure**
- Hosts an underutilized, all-season, deep-water port
- Nearby Canada’s major iron ore exporting ports
- Straightforward logistical access to all major customers

**Ideal Location**
- Over US$1 billion of in-place support infrastructure
- On NB Power’s industrially-designated land adjacent to the Belledune 490 MW dual-fired generating station
- Locally available skilled and technical workforce

**Strong Partners**
- Cooperation Agreement in place for Project development with province of New Brunswick & New Brunswick Power
- Land and exclusivity agreement with the Port of Belledune
- Relationship with Communities including First Nations

*Jacquet River Gorge*
What We Are Doing: Input to Steel Production Processes

**Integrated Steelmaking**

- Iron Ore Lump
- Met Coal
- Pellets
- Coke
- Limestone

**FINEX Ironmaking Process**

- Iron Ore Fines
- Limestone / Dolomite
- Coal Blend

**EAF Steelmaking**

- Scrap Steel
- Pig Iron
- Electric Arc Furnace
- Casting / Rolling
- Finishing

- No coking or sintering required with the FINEX process

EAF steel production emits over 40% fewer GHGs than steel produced in the Integrated Steelmaking vertical.
FINEX Production 101

- **Heavy** ORE
- **Oxygen**
- **Coal**

Gas to EAF Steelmakers

Oxygen to Generate Power

**Aggregate** to Cement Plants

**Pig Iron** to EAF Steelmakers
What We Are NOT

- We are not a mine or mining company
- We are not a chemical processing facility
- We do not produce hazardous materials, i.e. no tailings, no coal ash
- We do not produce steel, we produce pig iron for the recycle steel making industry
- No blast furnace or electric arc furnace
- We do not have a coking oven or sintering facilities
Project Location – Belledune, NB

- Industrially-designated land adjacent to the NB Power generating station
- Extension of the NB Power conveyor system for raw material feed
- Covered stockpile will be placed on part of the NB Power stockpile area
- Compact project footprint design
- Oxygen and Nitrogen plant
- Access to the site will be via Ash Haul Road
FINEX By-product Gas Extends Life of NB Power Generating Station

An Environmentally Responsible Solution

Issue
New federal regulations mandate the phase-out of coal power generation by 2030 unless the facility can operate under a GHG emission level 420 t/GWhr (currently at +800 t/GWhr)

Solution
The FINEX process produces a by-product gas which will be utilized for power generation by NB Power and allow it to operate below the threshold emission level

Result
- Reduced Coal Usage for Power Plant: ~800 ktpa
- Integrated Operations Reduce Emissions: 1.5 Mtpa
- Life of Power Plant Extended
Integrated Steelmaking

Iron Ore Lumps

Iron Ore Mining

Blast Furnace/ Basic Oxygen Furnace Steelmaking

Steel to Consumers

Electric Arc Furnace (EAF) Steelmaking

70% Recycled steel

Electricity Production at NB Power Generating Station (Reduces 0.4t GHGs /t steel)

Result: ~ 40% fewer global GHGs

FINEX Ironmaking / EAF Steelmaking

Iron Ore Fines

Cement Making (Displaces 0.8t GHGs /t aggregate)

Aggregate

MII Process

By-product Gas

Electric Arc Furnace (EAF) Steelmaking

30% Pig Iron

Pig Iron

Circular Economy

30% Pig Iron

Iron Ore Lumps

Iron Ore Mining

Iron Ore Fines

Cement Making (Displaces 0.8t GHGs /t aggregate)

Aggregate
Transportation

Transportation Overview

- Will access existing iron ore shipments along the St. Lawrence Seaway and going by Chaleur Bay
- NB Power shipments of coal will be reduced
- Net new shipments per year: ~67 ships

Inbound Shipments

- Maritime Iron will require shipments of raw materials (iron ore, coal, limestone, dolomite) to make pig iron at the proposed Belledune Iron Processing Facility
  - Iron ore: ~1 ship every 9 days
  - Coal: ~1 ship every 11 days
  - Limestone/Dolomite: ~1 ship every 22 days

Outbound Shipments

- Maritime Iron will supply the steel mills with pig iron and slag will be shipped to cement makers
  - Solid Iron Ingots: ~1 ship every 2 weeks
  - Aggregate (slag): ~1 ship every 6 weeks
Employment & Economic Benefits

Showcases Province as Attractive Investment Jurisdiction

- Employment opportunities over 30+ years of project:
  - During construction, approximately **3300 jobs** created in NB (2020-22)
    - Direct Jobs (on-site): 1300 peak annual jobs
    - Indirect Jobs: 860
    - Induced Jobs: 1140
  
  - During operations, approximately **400 jobs** created in NB, plus 120 jobs saved at Belledune Generating Station
    - Direct Jobs (on-site): 185 annual jobs
    - Indirect Jobs: 105
    - Induced Jobs: 125

- High demand and export potential resulting in significant GDP impact
  - **$14.4 Billion added to Canadian GDP** over 30 years of Maritime Iron Project, generating:
    - $2.5 Billion in incomes + $0.4 Billion for NB Power’s Generating Station
      - NB will receive almost $1.4B in labour incomes and profits, including $750M in direct income
    - $1.5 Billion in New Brunswick taxes
Benefits

- Brings POSCO’s steelmaking technology to Canada
- New technology results in 41% fewer GHGs than steel produced using traditional methods
- Upgrades Canadian iron ores to a higher value product
- C$14.4 Billion contribution to Canadian GDP over 30 years

- Environmentally responsible development
- Power plant integration to optimize use of FINEX by-product gas
- NB DELG will manage Environmental Impact Assessment process

- ~600 to 1,300 jobs during construction
- ~200 annual long-term operational jobs
- Sustainable development with modern ironmaking technology
- Net greenhouse gas reductions through integration with NB Power
- Showcases the Province as an attractive investment jurisdiction
Benefits

- Integration will extend the life of the Belledune Generating Station and maintain 120 jobs beyond 2029
- Over 50% reduction in coal use, thus producing cleaner energy
- Helps maintain power rates at reasonable levels
- Adds a new high volume user
- Increases shipping tonnage
- New investment to enhance in port infrastructure
- Improves marketability
- Potential partner to provide training programs
- Industrial employer for graduates
- Secondment and co-op opportunities

Maritime Iron
Benefits

Local & Regional Economy

- New large industrial employer
- Provides opportunities for local businesses and labour
- Spin-off jobs created via local procurement
- Attract workers back to the Province
- Maritime’s development will attract additional services during construction & operation:
  - Environmental, health and safety
  - Hospitality, accommodations and catering opportunities
  - Automotive / machinery, repair services
  - General and specialized maintenance
  - Chemical & testing labs
  - Professional services

Maritime Iron

- Early engagement by Company
- Long-term job opportunities
- Project participation for local companies
- Regional development opportunities

First Nations
Stakeholder Engagement & Support

Commitment to Partnership Approach with First Nations and Municipalities

- Strong support from Province of New Brunswick
  - Cooperation agreement in place for project development with Province & NB Power

- Significant interest from local and regional municipalities
  - Positive feedback from Mayors, business leaders, community groups, and public open houses

- Ongoing engagement and relationship-building with potentially affected Indigenous communities
  - On July 17, 2019 agreement signed with 8 First Nations for *Relationship, Capacity and Indigenous Knowledge Study*