

BACK RIVER PROJECT

Project Overview



- ◆ Project Certificate Issued by the Nunavut Impact Review Board December 2017
- ◆ Framework Agreement for the Back River Project signed with KIA April 2018
- ◆ Established large high-grade reserves and resources
- ◆ Set to produce ~300k oz Au per year over 15 years via open pit and underground operations
- ◆ Anticipated operations workforce of ~500 persons for life of mine
- ◆ Kitikmeot Qualified Business Registry key to procurement practices and activities
- ◆ Industry leading, and award-winning community engagement and Caribou mitigations in place



WHAT WE HAVE STUDIED AND ADDRESSED



Atmospheric Environment

- ◆ Air quality
- ◆ Climate and meteorology
- ◆ Noise and vibration

Freshwater Environment

- ◆ Freshwater fish and aquatic habitat
- ◆ Freshwater fish community
- ◆ Freshwater sediment quality
- ◆ Freshwater water quality
- ◆ Groundwater
- ◆ Hydrology
- ◆ Limnology and bathymetry

Human Environment

- ◆ Archaeological sites

- ◆ Business opportunities
- ◆ Country foods
- ◆ Economic development
- ◆ Education and training
- ◆ Employment
- ◆ Health and community well-being
- ◆ Human health and environmental risk assessment
- ◆ Non-traditional land and resource use
- ◆ Paleontological sites
- ◆ Subsistence economy and land use

Marine Environment

- ◆ Marine fish and aquatic habitat
- ◆ Marine fish community
- ◆ Marine sediment quality

- ◆ Marine water quality
- ◆ Physical processes
- ◆ Ringed seals
- ◆ Seabirds and sea ducks

Terrestrial Environment

- ◆ Caribou
- ◆ Geology
- ◆ Grizzly bear
- ◆ Landforms and soils
- ◆ Migratory birds
- ◆ Muskox
- ◆ Permafrost
- ◆ Raptors
- ◆ Vegetation and special landscape features
- ◆ Wolverine and furbearers

PROJECT SCHEDULE



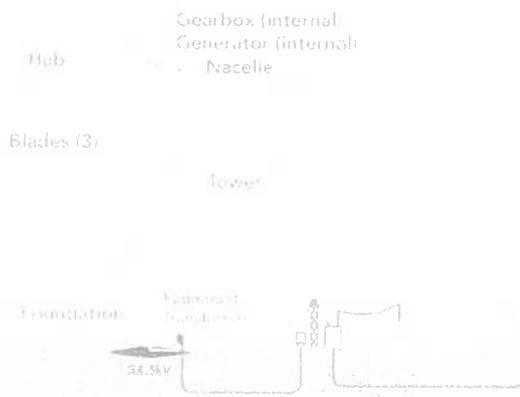
- ◆ Year -1
 - > Components shipped to the Marine Laydown Area
 - > Roads and pads constructed at Goose Mine
- ◆ Year 1
 - > Components travel down the Winter Ice Road
 - > Turbines and Battery system are installed and commissioned
- ◆ Years 1 - 15+
 - > Operation of the Energy System
- ◆ Year 16 - 22
 - > Eventual removal of the Energy System

Back River Project Activities	Duration	Wind Turbine Activities	Anticipated Project Year
Mobilization and Construction	3 years (Year -3 to -1)	Components Shipped to MLA	-1
Operation	15 years (Year 1 to 15)	Installation	1
		Operation	1 to 15
Reclamation and Closure	6 years (Year 16 to 22)	Phased Decommissioning	Between 16 and 22
Post-closure Monitoring	(Year 23 +)	Not applicable	

HOW DO WIND TURBINES GENERATE ELECTRICITY?

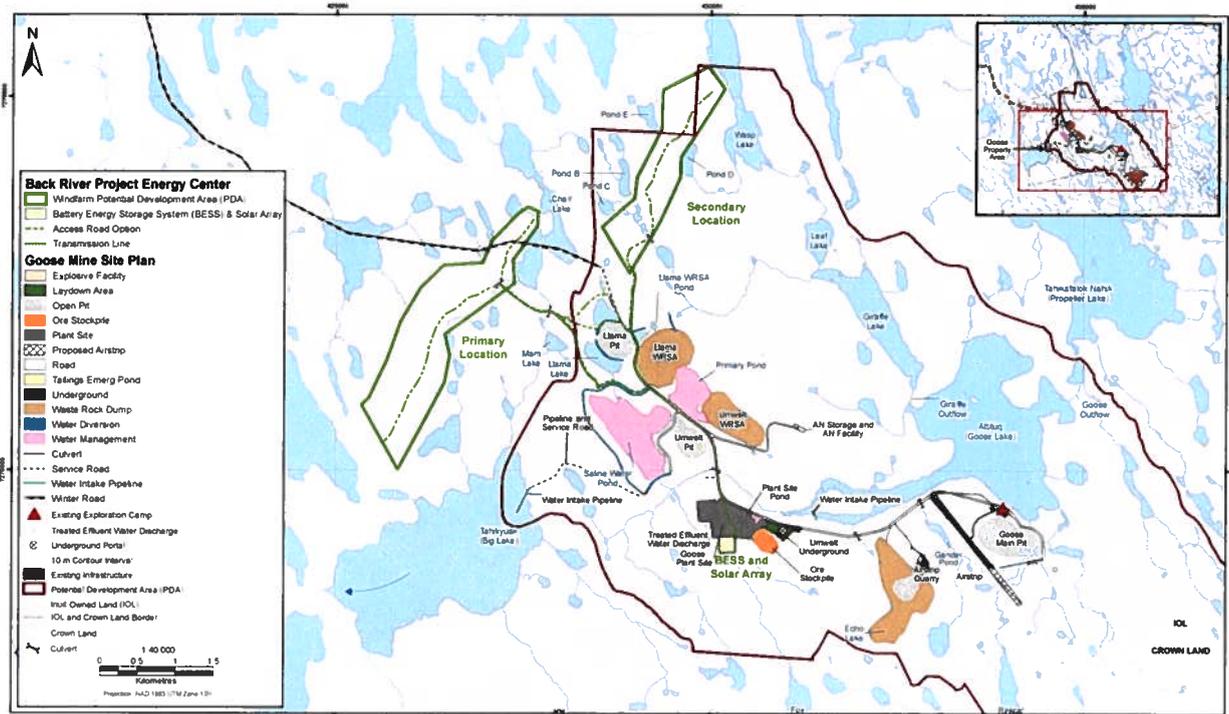


Drawing not to scale



- ◆ Wind turbines capture kinetic energy in surface winds and convert it into electrical energy using large blades mounted on tall towers
- ◆ As wind moves over turbine blades, it causes 'lift' – The same effect used by airplane wings
- ◆ Lift makes the blades rotate, which turns a shaft
- ◆ The turning shaft creates electricity within a generator, which in turn creates electricity that can be sent to the Goose Mine

PROPOSED LAYOUT



BACK RIVER ENERGY CENTRE PROJECT

The Back River Project Energy Centre, a wind generation facility, solar panel array and Battery Energy Storage System, capable of supplying clean energy to the Back River Project Mine

Up to **13** planned Wind Turbine Generators

Between **4.0 and 4.5 MW** power capacity per wind turbine giving the system a generation capacity of approximately 55 MW of electricity, which is sufficient to cleanly power the Back River Project Mine

Hub Height 111 m

Rotor Length 69 m

Rotor Diameter 138 m

Approximately **500 m** between wind turbines

Solar Array and Electrical Station will be located near the Diesel Power Plant

Electrical transmission lines will be laid directly on the tundra and/or laid directly adjacent to the access roads and covered with aggregate

Solar panels may also be added

Additional electricity generated by the wind turbines and solar array will be stored by the **Battery Energy Storage System**. The Battery Energy Storage System consists of lithium-ion batteries stored in a sea-can on an aggregate pad and will be capable of storing energy to be used at times when wind and solar energy is not available



HOW HAVE WE ADDRESSED COMMENTS ABOUT THE PROJECT?



COMMENTS

WHAT HAVE WE DONE ABOUT IT?

Impacts to caribou and terrestrial wildlife

The proposed wind turbine area is located within or directly adjacent to the existing Goose mine development area; the area has not been identified as a key destination for land users and/or harvesting through TK and community engagement. To limit disturbance to caribou movement our existing wildlife monitoring and mitigation measures will be applied to the wind turbines: regional camera monitoring, collar monitoring, behavior monitoring, CTAG discussions with KIA and GN, and temporary shut-downs.

Impacts to birds

B2Gold will develop a detailed Migratory Birds Protection Plan that specifies measures designed for the protection of birds from operation of wind turbines, with additional protective measures to be implemented during periods of poor visibility within peak bird migration periods.



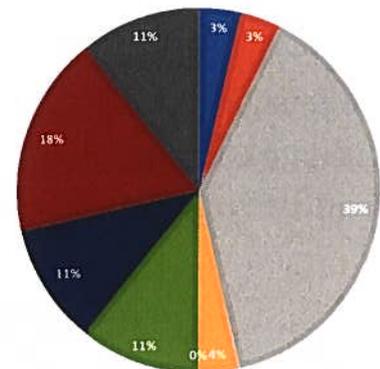
Community Engagement



Information Requests & Technical Comments

INFORMATION REQUESTS

- ◆ 1 - Kitikmeot Inuit Association
- ◆ 1 - Crown Indigenous Relations & Northern Affairs Canada
- ◆ 11 - Government of Nunavut
- ◆ 1 - Environment & Climate Change Canada
- ◆ 0 - Department of Fisheries & Oceans
- ◆ 3 - Transport Canada
- ◆ 3 - Health Canada
- ◆ 5 - Athabasca Denesuline Né Né Land Corporation
- ◆ 3 - Nunavut Impact Review Board
- ◆ Total of 28 Information Requests



TECHICAL COMMENTS – STATUS



- ◆ **Birds & Bird Habitat Comments: 12**
 - > Resolved: 12
 - > Resolved with Commitments: 4
 - > Unresolved: 0
- ◆ **Caribou & Terrestrial Wildlife Comments: 11**
 - > Resolved: 9
 - > Resolved with Commitments: 5
 - > Unresolved: 2
- ◆ **Description of Project Comments: 5**
 - > Resolved: 5
 - > Resolved with Commitments: 4
 - > Unresolved: 0

TECHICAL COMMENTS – STATUS



- ◆ **Water, Fish & Fish Habitat Comments: 4**
 - > Resolved: 4
 - > Resolved with Commitments: 2
 - > Unresolved: 0
- ◆ **Atmospheric & Noise Comments: 3**
 - > Resolved: 3
 - > Resolved with Commitments: 0
 - > Unresolved: 0
- ◆ **Geotechnical Comments: 3**
 - > Resolved: 2
 - > Resolved with Commitments: 1
 - > Unresolved: 0