



# Resiliency Community Accounts of Innovation

ARCTIC DEVELOPMENT EXPO

~

Inuvik  
June 10-13, 2019



# INTRODUCTION

## A PATH TO ENERGY SUSTAINABILITY

- NWT Overview
- NWT Energy & Climate Change Policy
- Infrastructure Corridors
- Innovative Community Pilot Projects
- Action Plan Investments
- Taltson Hydro Expansion



# NWT Overview



- 44,000 residents
- 33 communities
- Few roads, transmission lines
- Resource driven economy
- 8 hydro power communities
- 25 off-grid (diesel) communities
- Heating from fossil fuels / biomass (wood pellets / cord wood)

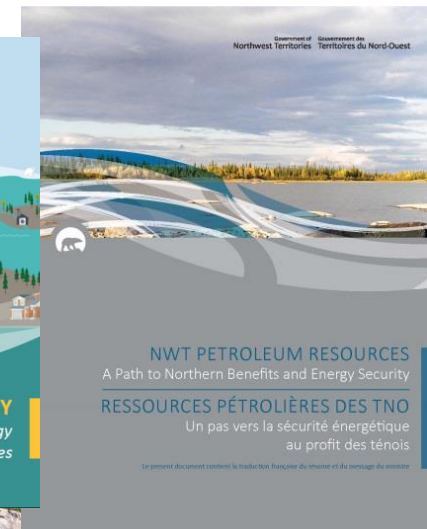
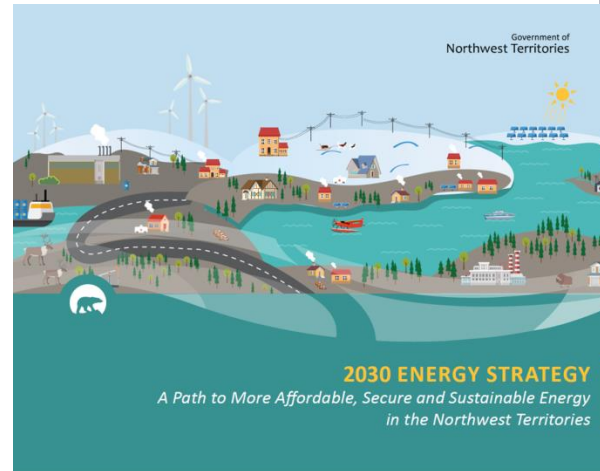
# NWT Energy and Climate Change Policy

## 8 Guiding Principles:

- Secure, Affordable and sustainable
- Indigenous and Community Engagement
- Transparent , accountable

## 6 Strategic Objectives

- Working together to find solutions, engagement
- Electricity (25%)
- Transportation (10%)
- Heating (40%)
- Energy Efficiency (15%)
- Long Term Vision



2030 NWT CLIMATE CHANGE STRATEGIC FRAMEWORK  
CADRE STRATÉGIQUE SUR LE CHANGEMENT CLIMATIQUE DES TNO 2030

# Infrastructure Corridors

## Roads

- Mackenzie Valley Hwy
- Tlicho All Season Road to Whati
- Slave Geological Province

## Energy

- Remote Diesel Solutions
- Taltson Hydro Expansion



# Innovative Community Pilot Projects

**25 kW  
Hydrokinetic  
Turbine  
Fort Simpson  
(2012)**



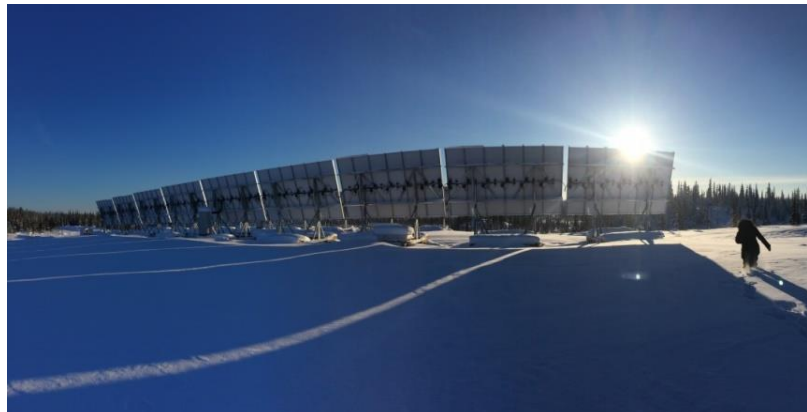
**25 kW Biomass  
Combined Heat and  
Power  
Fort Simpson  
(2017)**



*Photo 1: New Energy Box and Pellet Silo*



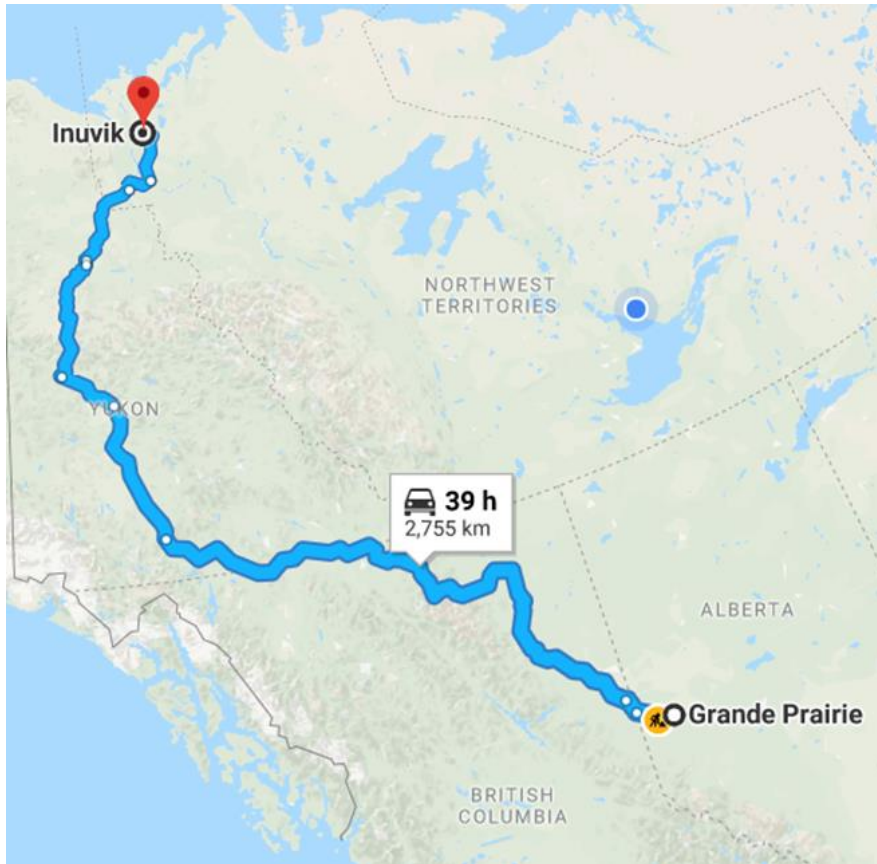
**600 kW Variable-Speed  
Generator - Aklavik (2018)**



**136 kW PV Solar and Battery Storage System  
Colville Lake (2015)**



# LNG for Road Connected Communities

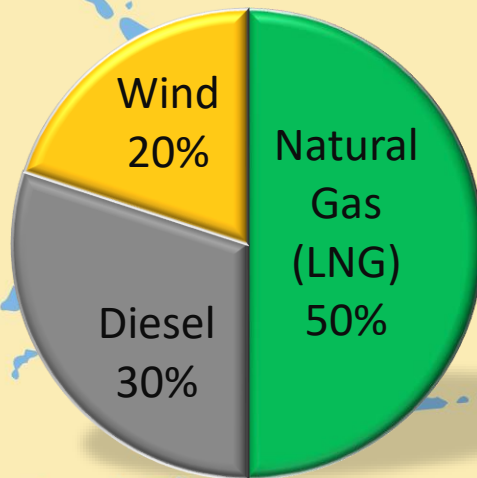


The NWT has the longest road based LNG supply run in the world.



Storage facility in Inuvik

# Inuvik NWT – Wind Feasibility



High Point



~ 4 km

potential transmission  
line and access corridor

All season road

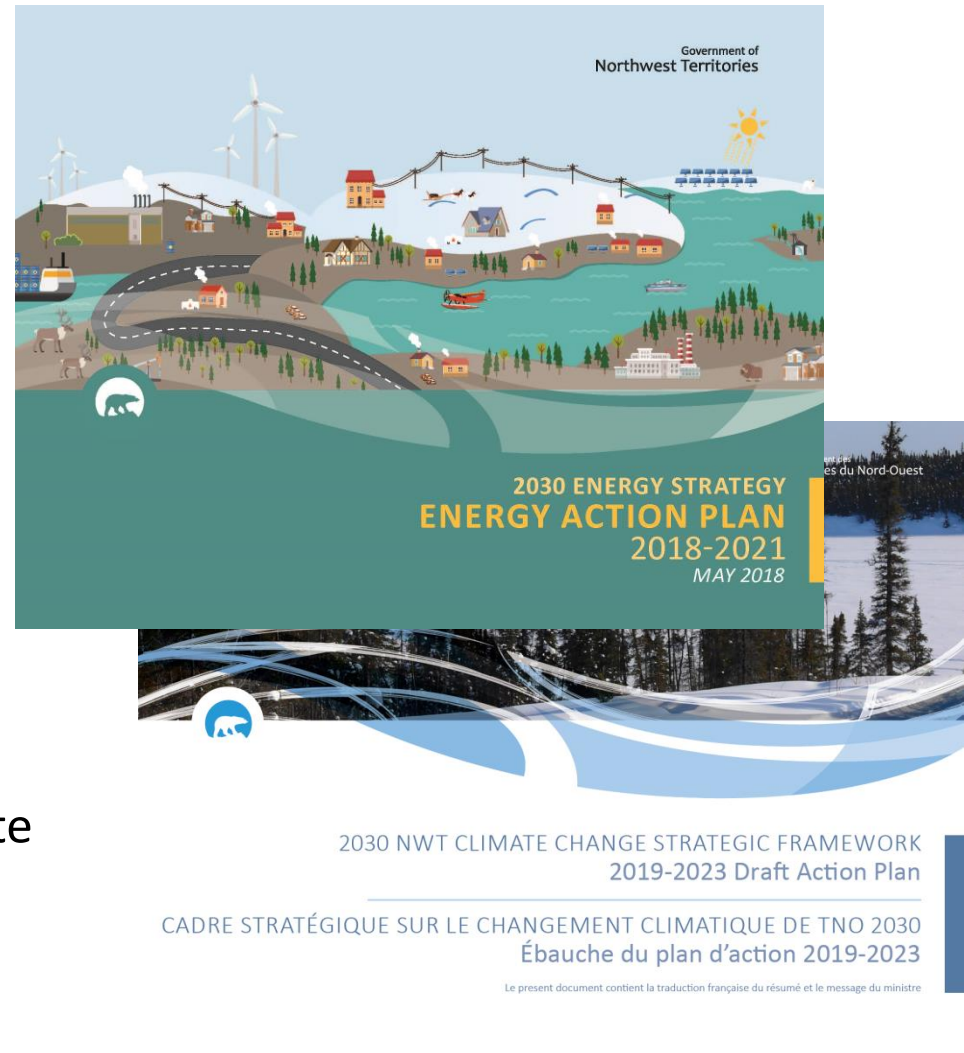
Airport

- NWT's Largest Thermal Community (3,500 people)
- Project submitted to GLWB
- 2-4MW wind project
- 4-5 km access road
- Transmission Line

# Energy and Climate Change Action Plans

\$180 Million - 3 Years

- Inuvik Wind Project
- Legacy Hydro System upgrades
- Community LNG
- Transmission Projects
- Community Wind/Diesel
- Community mini hydro
- Low Carbon Economy Fund - Rebate Programs
- Energy Retrofits - marine vessels



# Taltson Hydroelectric Expansion

1. Connect islanded hydro systems & add 60 MW Capacity
2. Slave Geological Province Energy and Transportation Corridor
3. Southern Intertie to rest of Canada

