

Bioenergy in Canada's North

NWT LEADERSHIP, PROVEN PATHWAYS, GLOBAL EXPERIENCE



Fahimeh Yazdan Panah,
Associate Executive Director
Jan 27, 2026

THE NORTHERN ENERGY REALITY

Heat dominates.
Reliability decides.

- Extreme cold
- Long supply chains
- Heating=primary load



Photo : Government of Canada

NWT LEADERSHIP TODAY

- GNWT infrastructure planning leadership
- AEA community energy programs
- Municipal & Indigenous-driven projects
- Operational biomass and district heat systems



Stanton Territorial Hospital.
Photo: Chloe Williams/Cabin Radio

CANADIAN BIOENERGY PATHWAYS

- Institutional biomass heating
- Community-scale systems
- Indigenous-led projects
- District energy where scale makes sense

Stanton Legacy Building in Yellowknife, NT,
Photo: NWT Government Website



LESSON FROM THE NORTH: START WITH THE SYSTEM

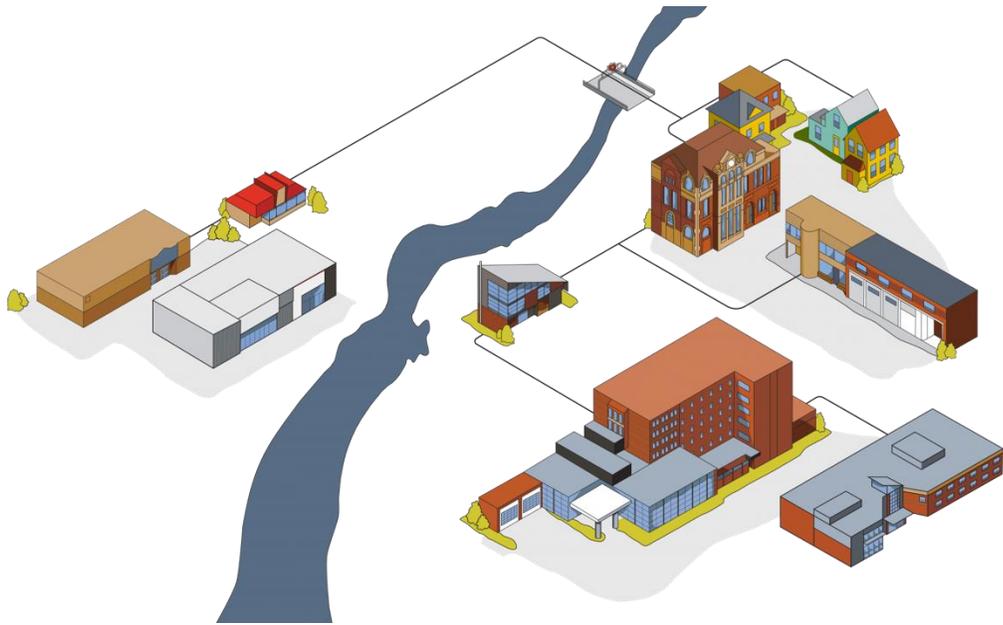


Photo: heatnewglasgow.ca

**Distribution first.
Fuel second.**

- Fuel-flexible
- Centralized operation
- Long-term adaptability

WHY BIOENERGY FITS NORTHERN SYSTEMS



The Woolgar District Heating System , Photo: CBC

**Dispatchable.
Storable.
Scalable.**

- Biomass heating
- CHP where appropriate
- District energy ready

GLOBAL VALIDATION

Cold regions converge on the same solutions.

- Greenland: District heating networks
- Svalbard: Longyearbyen district heat
- Alaska & Nordics: same system models



Joensuu, Finland District Heating System
Photo: Dr. Jam Videos

BENEFITS THAT MATTER IN THE NORTH

Beyond emissions.

- Diesel displacement & cost stability
- Predictable public facility budgets
- Local jobs & operations skills
- Energy security & community ownership

Photo: Arctic Energy Alliance



WHAT THIS MEANS FOR THE NORTH

Proven models.
Northern leadership.

- Technology is ready
- Systems are proven
- Leadership is local

Photo: Arctic Energy Alliance



**BIOENERGY IS
PROVEN
INFRASTRUCTURE
FOR NORTHERN
RESILIENCE**





WOOD PELLET

ASSOCIATION OF CANADA