

WPAC Conference

A GROWING SOLUTION DOMESTICALLY



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September 19, 2023

Fueling a Greener Tomorrow!
La solution de chauffage écologique!
bsbheating.com

CANADIAN PELLETS HAVE GLOBAL RESPECT

- Biomass: ~3/4 of the world's renewable energy.
- Bioenergy accounts for:
 - ~10% of total final energy consumption.
 - 2% of global electricity generation.
- Almost 60% of all renewable energy in US and EU is bioenergy.
- Over 90% of Canada's wood pellet production is exported, due to little local demand and lagging public policy.



ALTERNATIVE FOR REMOTE COMMUNITIES

- Remote communities still use diesel-fired generation:
 - Newfoundland/Labrador.
 - North.
 - Across Canada.
- Biomass plays an important role in
 - Local climate goal targets.
 - Better economic opportunities & jobs for residence.



*Photo Credit: Newfoundland Labrador Hydro
Charlottetown, Labrador*

ELECTRICITY IS A PRECIOUS RESOURCE

- Electricity is precious—using it for heat doesn't make sense.
- Bioheat is a viable option.
- Hydro-rich provinces know hydro is insufficient to meet peak and future loads. They are already feeling “the pinch”.
- In British Columbia:
 - BC Hydro projected increased demand for electric vehicles, heat pumps, population growth, industrial development, and post-pandemic economic recovery.
 - BC will require additional 3,000 GW hours of electricity by 2028, in addition to the output of Site C which is currently being constructed.



INDUSTRIAL PROCESS HEAT

- Industrial heat is 44% of energy demand in Canada.
- Large % use steam—can't use heat pumps. Electricity very high cost.
- Demand stable with high-capacity factor.
- Biomass proven low-carbon option—deployable, low-risk & affordable.
- Atlantic Canada: pulp, potatoes, tires, lime, cement, gypsum board, forest products, refining.

Companies with biomass heat plants:



WHAT IS DISTRICT ENERGY?

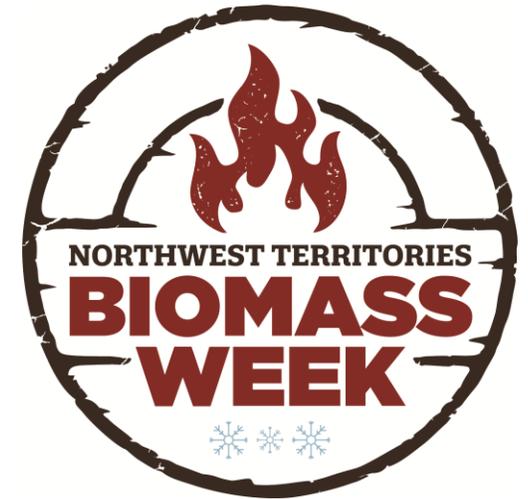
- Central energy plant producing heat and/or cooling and sometimes electricity.
- Fueled by biomass/wood, natural gas, municipal waste, waste heat (pumps), deep water cooling.
- Connect buildings using hot water pipes.
- Energy transfer to buildings using heat exchangers, space heat & hot water.
- Buildings do not have separate furnaces/boilers.
- Municipal-owned, P3, private, co-operative ownership models.

~180 district energy sources in Canada, incl:

- Charlottetown
- Toronto (Enwave)
- Ottawa (PSPC)
- London
- Markham
- Surrey
- University
- DND bases
- Hospitals

SOLUTIONS IN CANADA'S NORTH

- Northwest Territories 2030 Energy Strategy targets include:
 - 25% reduction in GHG emissions from electricity generation in diesel-powered communities.
 - 40% share increase of space heating using renewable energy.
- 33% of territorial government buildings in Yellowknife are heated with wood pellets.



Arctic Energy
Alliance

SAVEENERGY NB REBATE PROGRAMS

- NB Power rebate programs for home and business.
- Wood pellet heating now included in several programs.
- WPAC and NB Power working together on strategic marketing efforts to profile pellet heating.



For Your Home

Making your home more energy efficient is easier than ever. Get comfort and savings with our efficiency incentives.

[Learn More](#)



For Your Business

Energy efficiency upgrades create long-term savings for your business. Let us help with incentives and rebates.

[Learn More](#)



SaveEnergyNB Programs are proudly delivered to all New Brunswickers by NB Power with funding support from the Government of Canada and the Province of New Brunswick.

Wood Pellet Stoves and Fireplace Inserts

Save Money & Improve Heating

To start saving visit www.pellet.org/...



Make the switch today to a wood pellet stove or fireplace insert and see immediate benefits to your pocketbook and your home heating needs. Discover why wood pellet stoves are quickly replacing oil and electric baseboard heat. It's why Canadian wood pellets are in demand around the world. The good news is that they are made right here in New Brunswick!

Reduce Home Heating Bills

Depending on the size of your home and the model you choose, a pellet stove can be purchased and installed for around \$4,000-\$8,000; about the same as a mini split heat pump. Running a wood pellet stove can save you up to \$700/year or 30% compared to electric baseboard heat and up to \$3,800/year or 70% compared to oil.

Take Advantage of Rebates & Grants

There are a number of government rebates and grants available when you switch from oil and electric baseboard heat to wood pellet stoves or fireplace inserts. Currently grants and rebates of **up to 50%** are available for equipment and installation:

- **up to \$4,000** for pellet stoves and fireplace inserts;
- **up to \$10,000** for boilers or forced air furnaces; and
- **100% funding** for pellet stoves in households earning less than \$70,000 annually.

| START SAVING NOW! | Typical BTU | Total Cost* | Rebate | Annual Savings* |
|---|------------------|-------------|----------|-----------------|
| Baseboard Electric to Pellet Stove | 30,000 – 60,000 | \$6,500 | \$3,250 | \$700 |
| Central Oil to Pellet Stove | 30,000 – 60,000 | \$6,500 | \$3,250 | \$2,280 |
| Forced Air Oil Conversion to Pellet Furnace | 68,000 – 95,000 | \$16,000 | \$8,000 | \$3,800 |
| Hot Water Oil Conversion to Pellet Boiler | 68,000 – 105,000 | \$28,000 | \$10,000 | \$3,800 |

*Total cost includes both equipment and installation cost.
*Annual savings at New Brunswick average pricing based on average household demand of 6000 kwh per year.

Five Reasons to Switch to Pellets

- 1 Affordable
- 2 Efficient
- 3 Easy to Use
- 4 Low Carbon, Renewable Energy
- 5 Locally Produced



Photos Courtesy of Heat & Home Technologies, Pelletie Programs & Stoves

SUCCESS STORY: UNIVERSITÉ DE MONCTON

- **3 oil steam boilers replaced with 1 pellet boiler system.**
- **6-7 years – payback.**
- **~548 t/yr pellets (30 t every 20 days).**
- **20% less fuel, larger footprint (+36,000 sq. ft. to 156,000 sq. ft.).**
- **85% emissions reduced (752 to 108 t CO₂).**
- **100% locally sourced wood biomass.**



SOLUTIONS FOR CHANGE

1. Develop a thermal energy (heat) strategy that includes wood pellets.
2. Provide consumer capital financial support/incentives to address costs associated with installing boilers or wood pellet stoves.
 - This support would be based on GHG outcomes, not only electricity-based solutions.
3. Accelerate bioheat public procurement as the PEI Government has done.
4. Introduce renewable heat incentives like highly successful programs in other countries.
5. Fund fuel switching feasibility studies for industry for switching from fossil fuels to electricity.
6. Fund district energy feasibility studies for municipalities.



WOOD PELLET

ASSOCIATION OF CANADA