

Promoting and Selling District Heat



**Biomass Week – Arctic Energy
Alliance**

Feb 2, 2023~~4~~

David Dubois, Manager of Business
Development

Fink Machine Inc

FINK
MACHINE INC.

*State of the Art Bio Energy Heating Systems
Revolutionary Wood Heating Technology
Highly Economical for Commercial, Industrial Buildings*

About Fink Machine Inc.

- 540 kW District Heating System
- Wood Chip Fueled
- Walking floor w storage for 3 truck loads
- Propane Back-Up
- 12 clients incl commercial, light industrial, outdoor pool, health care, Tim Hortons, Indigenous Cultural Centre
- Over 1.6 km of trenches
- Startup 2012



District Heating (Energy)



- Central plant distributing energy to one or more clients
 - Allows for easy switching of heating source
- Typically network cross property lines
- Infrastructure is owned by DH utility
- More Common in Europe
- Some in Canada mostly fueled by Natural Gas
- Typically 10-20 year terms



Energy Services Company (ESCO)

- Broad ranges of solutions for energy savings projects, retrofitting, energy conservation, etc.
- Single Client getting energy – building, campus, hospital, etc
- Financing Mechanism
- Typically, does not include fuel supply
- Large Energy Consumers \$500,000+
- Contract term negotiated based on payback of the capital



Heat Contracting

- Hybrid of ESCO and DH
- Sell heat to one or more clients
- Typically includes fuel supply and O&M
 - Pellet boilers in NWT
- Used to de-risk technology
 - Pellet boilers in NWT
- Equipment can be owned by contractor or client
- O&M term can be short or long but typically 5-10 years



MACHINE INC.



Contract Terms

- Amount of energy consumed
 - May include max. or min amounts
 - Based on displacement of current fuel
- Connection Size
 - Equivalent to 100 Amp, 200 ,amp etc. for electrical service
- Flat Fees
- Contract length is ideally 10+ years
- Provision for fuel surcharges, inflation etc.
- Penalties for not delivering heat – heat contracting
- Depending on Jurisdiction may be regulated



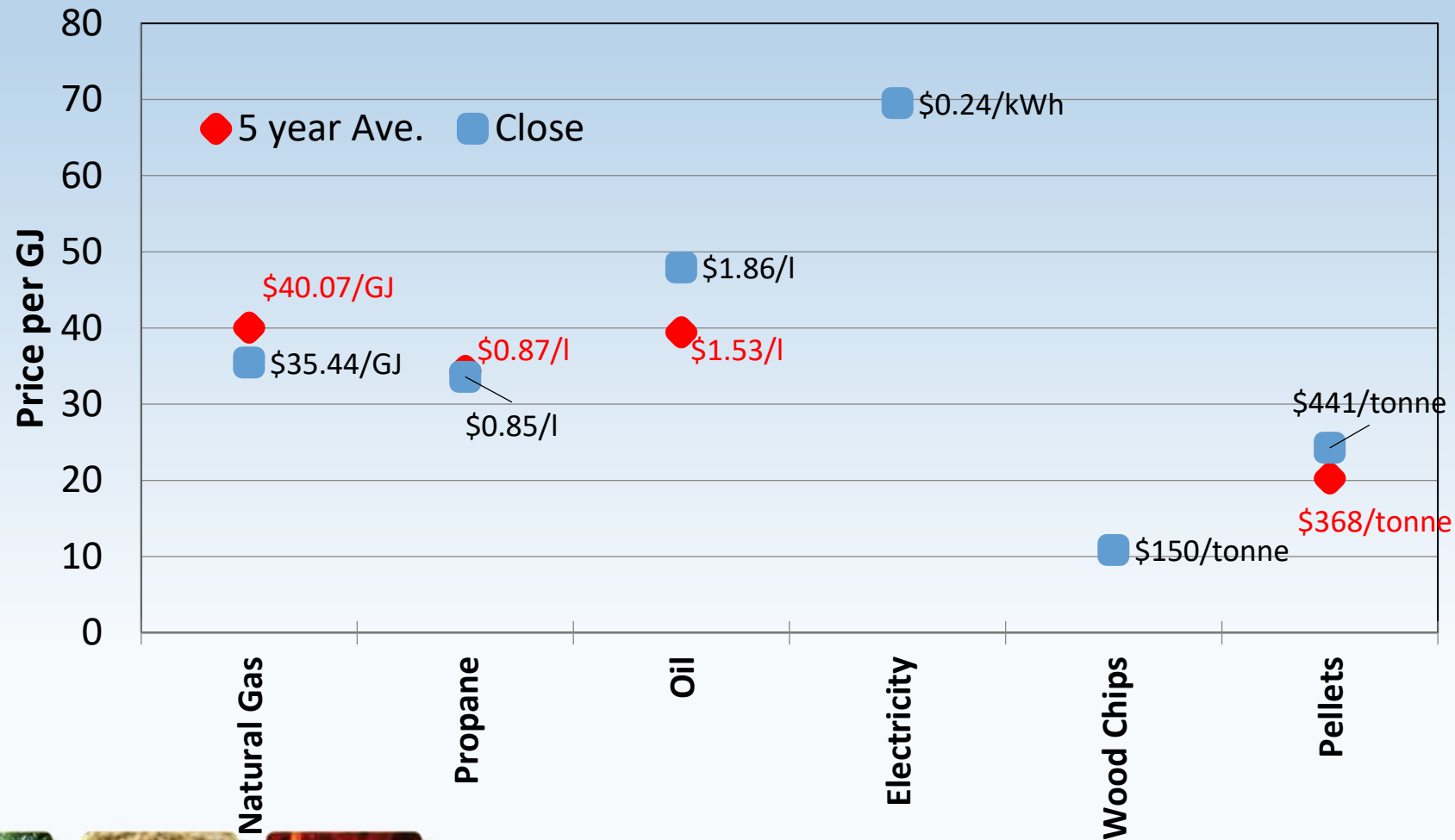
Why should I put in district heating?

- Also includes heat sales/energy services companies
- Revenue Generation
 - Non-tax Revenue for LG's
 - Operational funding
- Leverage Assets
- Utilise a fuel source (waste residue, waste heat, etc.)
- Other



Energy Prices in Yellowknife – Dec. 2023

Why would I not???

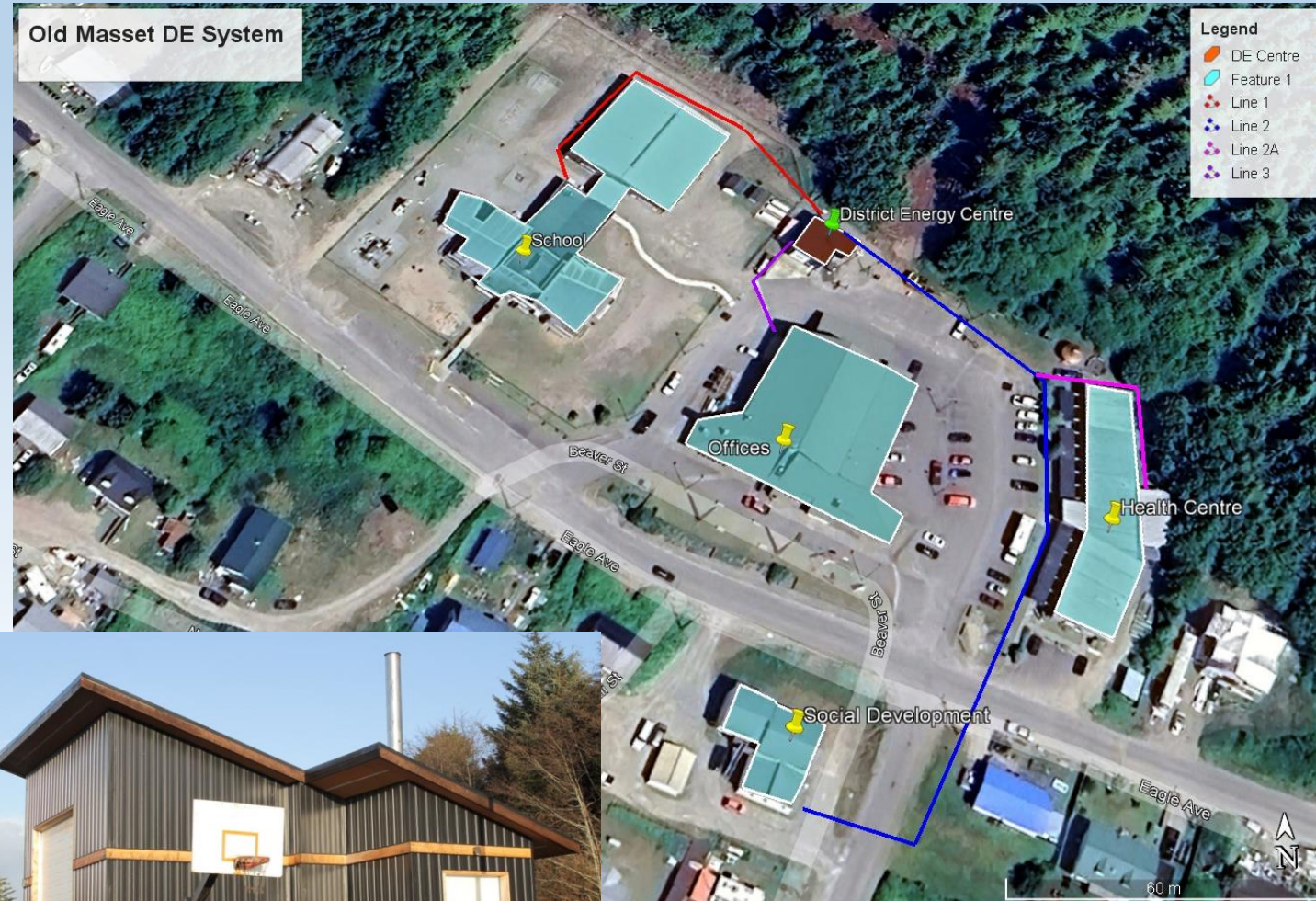


- Not just about price of fuel
- Fixed costs
 - Labour
 - Insurance
- Variable costs
 - Fuel
 - Electricity



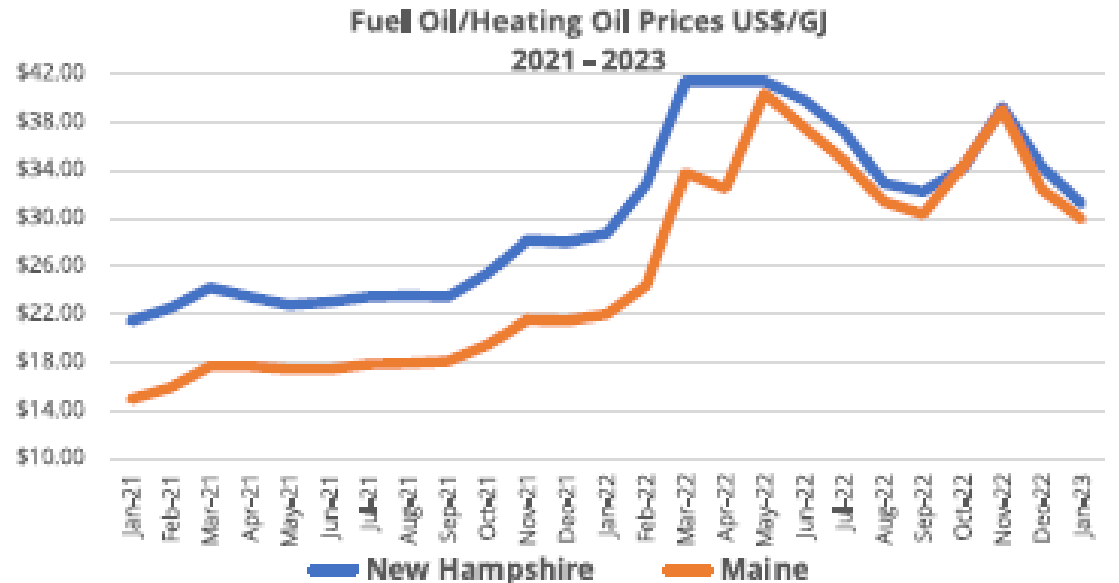
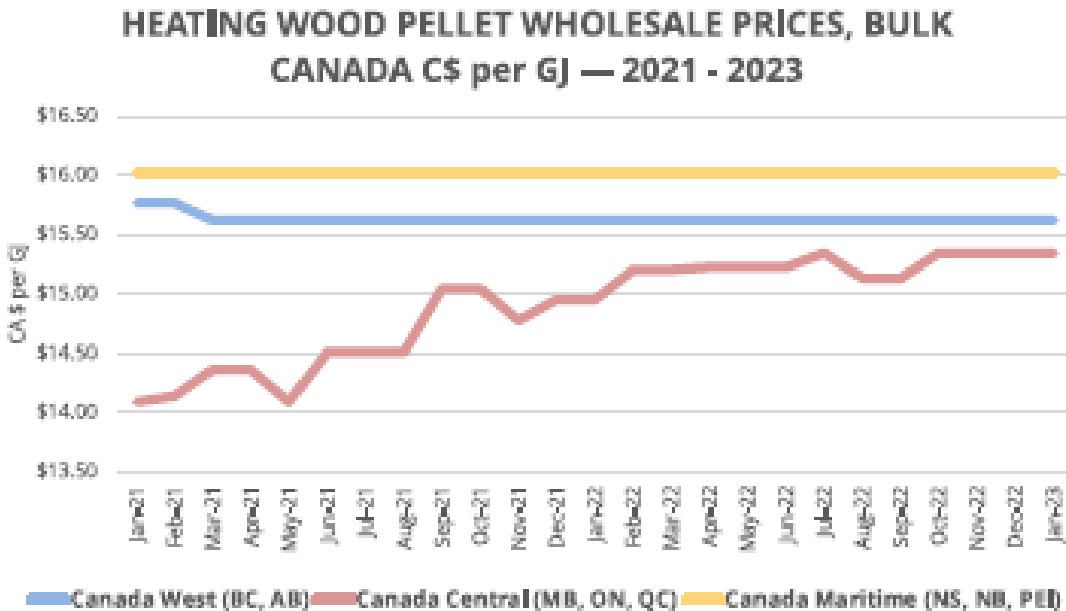
Why Should I Connect to District Heating

- Lower Energy Costs
 - Efficiency
 - Input energy/output Energy
- Lower GHG's
- Reduced capital cost
 - ETS vs boiler
- Lower operating cost
 - Maintenance
 - Operator time



Why Should I Connect to District Heating

- Simplicity
- Space Savings
- Price Stability
- Reliability



From Madsen Pellet Report Jan 2023



Selling Biomass Heat Internally

- Operator buy-in is critical
- Can make or break a project
- Goes beyond just training
- Engage early to DE-mystify and DE-risk
- Knowledge transfer/continuity



Questions?

