Rural and Remote Solutions



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Fink Machine Inc

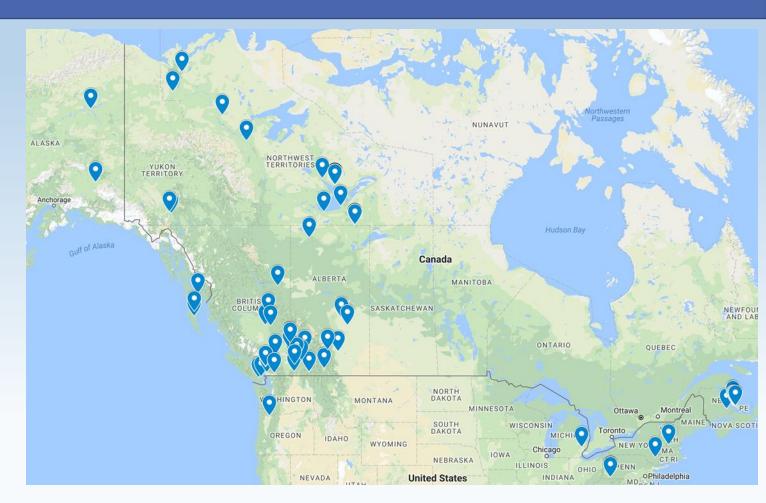


State of the Art Bio Energy Heating Systems Revolutionary Wood Heating Technology

Highly Economical for Commercial, Industrial Buildings

Who is Fink Machine Inc.?

- Based in Enderby, BC traditional territory Splatsin FN
- Canada's Largest Supplier of Commercial Scale Biomass Boiler Systems
- First install 2003
- Approx. 180 installations totaling over 58 MW







About Fink Machine Inc.



- Distributor Mawera and Schmid Boiler Systems
- We offer clients:
 - System design
 - Fabrication of equipment
 - Installation, commissioning services
 - Online and remote system monitoring
 - Training & On-site servicing
- Own/Operate ½ MW Private Utility District Energy System





What does Rural and Remote Mean

- Rural = Grid connected
 - Electricity
 - Likely natural gas in Western Canda
- Remote ≠ No Grid
 - Northern Canada
 - Exception for 2 or 3 larger communities (Whitehorse Yellowknife)







Electrification in the Rural Context



- Usually end of the line
- Higher insecurity
- Longer outages compared to Urban
- Lack of Capacity
- Reduce Energy Costs
- Utilization of local resource
 - Existing facility/enterprise





Electrification in the Remote Context

- Reduce cost compared to Diesel Generation
- Generate Revenue
- Utilization of Local resource
 - New enterprise







What is the Opportunity in Rural Communities

- Behind the Meter Utilization Net Metering
- Large heat demand ideally relatively consistent
- Stable low cost fuel source
 - Local industry
 - Wildfire mitigation
- Grid Connection to maximise utilization

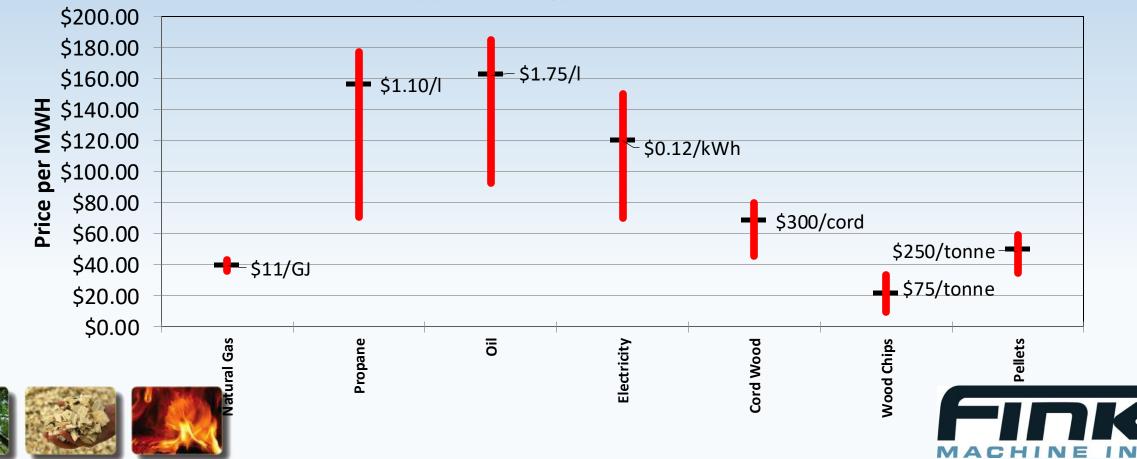






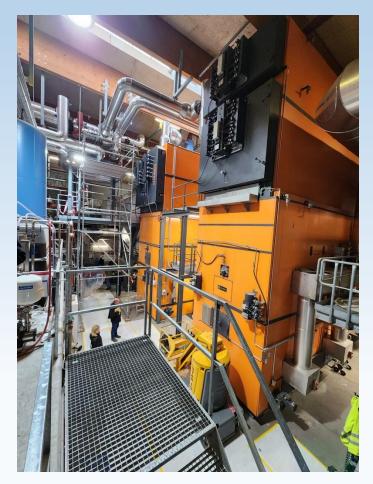
What is the Opportunity in Remote Communities

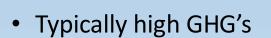
• Ultra-high Energy costs - \$600-740/kWh



Typical Energy Costs

What is the Opportunity in Remote Communities





- Diesel Generation
- Some localized hydro but requires peaking
- Fibre available
 - Local forests
 - Post consumer waste
 - Pallets
 - Urban wood waste/wildfire mitigation
 - Potentially cardboard
- Unfunded liabilities Oil Spills





What is the Challenge in Rural Communities

- High Capital Cost compared to current rates
 - Small Scale net metering
- Interconnectivity challenges
 - Availability
 - Cost





What is the Challenge in Remote Communities

- High Capital Cost compared Solar (minus battery storage)
- Plant size
- Interconnectivity challenges
 - Existing Generator infrastructure
 - Cost
 - Limits on renewables
- Operational Capacity
- LOGISTICS







Lessons I have Learned Working in Remote Communities

- Ask the tough questions
 - Do you have capacity staff, etc.
- Does it meet the true needs
- You are married now





Questions



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