

Wood fuel supply in Ontario

Vince Rutter



RENEWABLE ENERGY SYSTEMS



Vince and Biothermic...



Wood fuel supply in Ontario

Rentech – Wawa. Capacity of 450,000 tonnes per year
-Currently all production shipped to Drax UK

Rentech – Atikokan. Capacity of 100,000 tonnes per year
-45,000 tonnes to Opg Atikokan, remainder to Drax in UK

Resolute FP – Thunder Bay. Capacity of 50,000 tonnes per year
-45,000 tonnes to OPG Atikokan,

KD Quality Pellets – New Liskeard. Capacity of XXX tonnes per year
-Currently high ash content pellets for overseas.

Wood pellet mills in Ontario – Large Mills

Lacwood Pellets – Hearst. Capacity of 15,000 tonnes per year
- 70% of production in 40lb bags to surrounding area
- Remainder shipped in 40lb bags to farther markets including Europe

Gilldale Farms – St. Mary's. Capacity of 10,000 tonnes per year
- All product sold to Western and Central Ontario
- Two grades of pellets produced

Crosswood Wood Pellets – Wellesley. Capacity of approx 5,000 tonnes per year

Restarted Mill near Woodstock - ???

Direct Pellets – Haliburton. Closed 2014 and recently sold to unknown buyer

Whitesand First Nation – Armstrong. 60,000 tonnes per year

Wood pellet mills in Ontario – Small Mills



No Ontario producers are able to qualify their products under any of these banners so far.



Fuel pellet quality

- Highly available
- Shipped from BC, QC, USA(but not now.....)
- Price ranges from \$6-\$7 per 40 pound bag
- Colder season will cause spikes in prices and lack of availability



Bagged Pellets

-Currently offered from Lacwood in Hearst, Gilldale farms in St. Mary's and from KD in New Liskeard.

-Biothermic has just placed a bulk delivery truck (15 tonnes) in service in Port Carling (Muskoka).



Bulk Delivery

CANADIAN BIOMASS

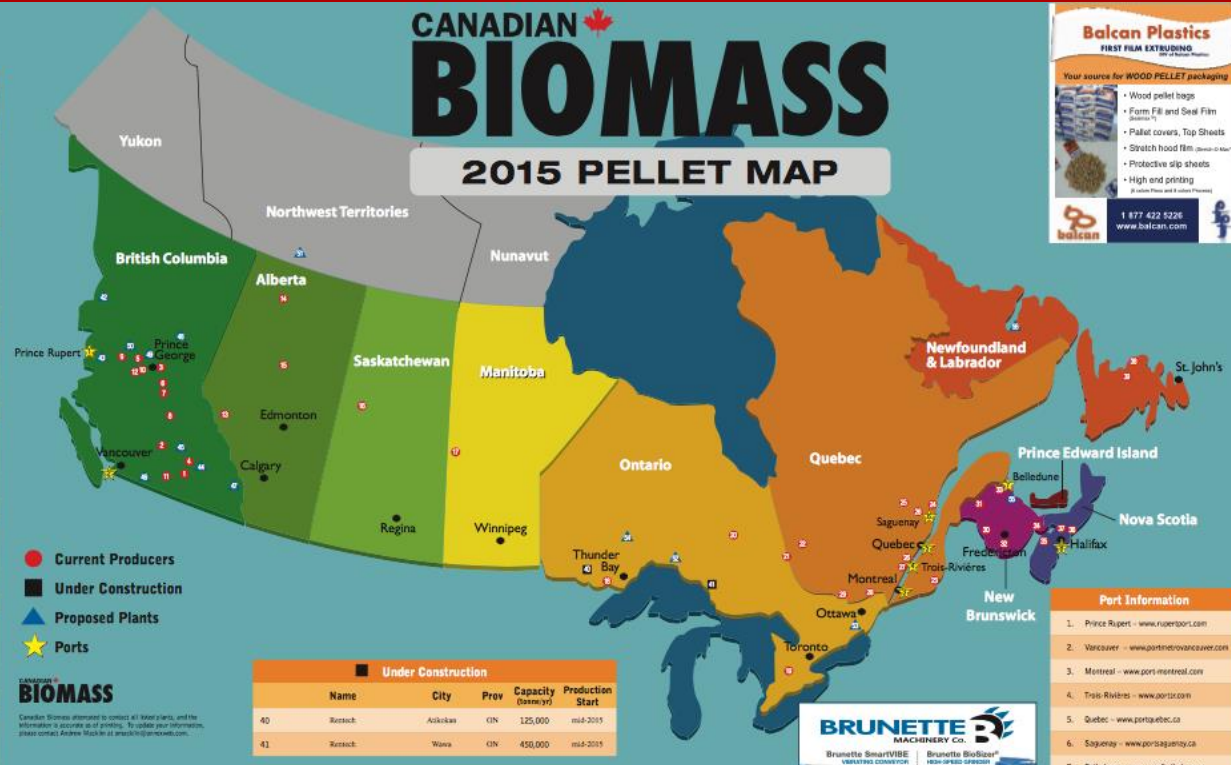
2015 PELLET MAP

Balkan Plastics
FIRST FILM EXTRUDING
BY Balkan Plastics

Your source for WOOD PELLET packaging

- Wood pellet bags
- Form Fill and Seal Film (patented)
- Pallet covers, Top Sheets
- Stretch hood film (patented)
- Protective slip sheets
- High end printing

1 877 422 5226
www.balkan.com



- Current Producers
- Under Construction
- ▲ Proposed Plants
- ★ Ports

CANADIAN BIOMASS
Canadian Biomass attempted to contact all wood plants, and the information is accurate as of printing. To update your information, please contact Andrew MacNeil at amacneil@canbiomag.com.

Under Construction				
Name	City	Prov	Capacity (t/year)	Production Start
40	Rensick	Atlantic	125,000	mid-2015
41	Rensick	Wana	450,000	mid-2015

Proposed Plants									
Name	City	Prov	Capacity (t/year)	Construction Start	Name	City	Prov	Capacity (t/year)	Construction Start
42	General Biofuel	BC			50	Glasco Bioenergy	Comox	BC	200,000
43	Coast Timberline Resources	Terrace	BC		51	Aspenia Wood Pellets	Enniscorthy	NT	
44	Telus/Pinnacle	Lanigan	BC		52	Sandpoint Fine Nalcor	Beaumont	ON	
45	Pinnacle	Chase	BC		53	Proforest Biomass	Prescott	ON	
46	SMD Asset Canada	Mission	BC		54	Whiteland First Nations	Armstrong	ON	
47	Reveloak pellet plant	Reveloak	BC		55	Miramichi Precision Pellet	Miramichi	NB	
48	Castle Energy North	Cheroya	BC	100,000	56	Atlantic Fiber Resources	Goose Bay	NL	
49	Castle	Fort St. James	BC	75,000					

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Port Information

1. Prince Rupert - www.rupertport.com
2. Vancouver - www.portmetrovancouver.com
3. Montreal - www.portmontreal.com
4. Trois-Rivières - www.porttr.com
5. Quebec - www.portquebec.ca
6. Saguenay - www.portsaguenay.ca
7. Belledune - www.portsbelledune.ca
8. Halifax - www.portshalifax.ca

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Canadian Biomass Magazine's map



Wood chips

- Ontario is vast has equally vast and productive forests
- Wood chips and “biomass” are readily available
- Small scale wood chip boilers (<1mw) require fuel to meet manufacture’s spec. for particle size and moisture content
 - P45, P31, P16
 - G50, G30
 - Moisture content <35%!

Biomass fuel is highly variable!!



Wood chip supply in Ontario

- Sawmills
 - Chipped slabs, edges and ends
 - Sawdust
 - Bark
- Land clearing operations
 - Mostly ground wood
 - High level of soil and rock contaminants possible
- Logging residues
 - Limbs and tops, slash piles
 - Un-merchantable trees
- Heritage bark piles from sawmills
 - High moisture, decomposition
 - Rock and sand contamination



Sources of wet biomass fuel

- Construction waste (see image)
 - Wood pallet recycling
 - Demolition reclamation
- Sawmills
 - Slabs downpiled outdoors (not chipped as part of sawmill line)
 - Of course these must still be chipped!
- Planer mills
 - Post kiln edging and planing (<20% MC)
- Some unique businesses
 - Heizomat Canada in Breslau
 - Biothermic RES in Thunder Bay
 - Muskoka Timber Mills in Bracebridge



Sources of dry biomass fuel



Sturmbberger of Austria
Central depot with screening and
chipping capacity

European models



- Drum chippers with screens to eliminate long pieces
- Additional mechanism to throw chips through chute
- Typically logs/brush are piled and air dried for several months to attain MC <35%
- These machines along with seasoning before chipping eliminate the need for screening or additional drying
- No Domestic manufactures (Brush Bandit tried.....)



European Wood chipping – missing equipment in Canada

- Remains extremely challenging
 - Assumptions of readily available fuel are dangerous
 - Moisture content cannot be overlooked
 - Source must be close to combustion site otherwise transportation costs too high, must use pellets instead.
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- Please approach me with any additional questions.
 - More info to be provided at the first stop of the tour tomorrow.



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Ontario wood chip supply summary
