International Pellet Markets and Canadian Pellet Industry Update

International Bioenergy Conference and Exhibition
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Gordon Murray, Executive Director, WPAC
Topics

- Global pellet consumption
- Global market forecast
- Canadian exports
- World regional production and consumption
- European market analysis
- Asian market analysis
- Canadian pellet consumption
- New SBP sustainability certification
Wood Pellet Global Production

Millions of Tonnes

Sources: Hawkins Wright, REN 21
In our central scenario we expect the market will more than double by 2025 with demand for industrial pellets being the main driver. The level of uncertainty is relatively high and we will certainly see a few surprises along the way.

Source: Silvio Mergner, Poyry
Canadian Export Destinations 2013

- United States: 9%
- Italy: 13%
- Japan: 5%
- Korea, South: 7%
- Rest of World: 3%
- United Kingdom: 63%

Sources: NRCAN/Stats Can, Crosstalk

- Total “guess” ~ 2.1 mn tonnes exported
- Note: 600,000 tonne discrepancy between Stats Can and Eurostat
Top European Producers:
- Germany
- Sweden
- Latvia
- Portugal

World Regional Pellet Production - 2013

- Europe (EU 27), 12.0
- US & Canada, 6.0
- China, 2.0
- Russia, 2.0
- Rest of Asia, 1.0
- Rest of World, 0.6

Millions of Tonnes

Sources: REN21 Global Status Report 2014, Argus Media

Wood Pellet Association of Canada
World Regional Pellet Consumption - 2013

- Europe continues to dominate
- Europe’s heat sector exceeds industrial sector

Sources: Argus Media, Ekman

Wood Pellet Association of Canada
European Consumption – 2013 (tonnes)

Source: Gilles Gauthier, European Pellet Council

Totals: 9 mn industrial, 10 mn domestic heat

Wood Pellet Association of Canada
EU Imports of Wood Pellets from Non-EU Countries - 2013

Total non-EU imports: 6.1 mn tonnes

- USA, 2,800
- Russia, 701
- Canada, 1,921
- Ukraine, 164
- Croatia, 146
- Belarus, 116
- Bosnia-Herzegovina, 170
- Other, 127

Source: Crosstrade (German Timber Network)
UK and Benelux power projects under construction or planning

- **UK** – Drax Power, 3-650 MW units each 2.4 mn tonnes of pellets. 2 units completed, 3rd planned for 2015. 4th unit under study.
- **UK** – Lynemouth Power, 420 MW, received FID contract, 1.5 mn tonnes pellets.
- **Belgium** – EON Langerlo, 500 MW, 1.6 mn tonnes, construction 2015
- **Netherlands** – 25 PJ, 3.5 mn tonnes, 2014
Evolution of EU wood pellet consumption for heating [in tonnes]

Source: EPC

Fast growing sector
Need high quality products

Source: Gilles Gauthier, European Pellet Council
European Growth of Enplus Certification (tonnes)

40% of all heating pellets are now ENplus certified

Source: Gilles Gauthier, European Pellet Council
Developments in Asia-Pacific

- Demand in Japan and Korea is growing
- Policy uncertainty is high.
- Asia-Pacific and Russian pellet producers have transportation advantage over NA.
- European utilities now trading to Korea
Canadian Pellet Shipping Routes
Japanese Wood Pellet Market

- Preference for local biomass chips
- Wood pellet imports still modest
- 2013 demand ~ 170,000 tonnes
- 65kt in heat sector; 110 kt in industrial sector
- Pellet imports will grow

Source: Hawkins Wright, ‘The Outlook for Wood Pellets’, April 2014
South Korean Pellet Imports - 2013

Thousand Tonnes

Vietnam: 157
Canada: 80
Malaysia: 78
Russia: 76
Indonesia: 34
USA: 32
China: 10
Thailand: 9
Japan: 5
Other: 3

Total: 485,000 tonnes

Source: Hawkins Wright

Wood Pellet Association of Canada
**South Korean RPS**

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**Target now delayed five years**

Source: Jae Jung Huh, BC Investment Trade Office, Seoul Korea

Wood Pellet Association of Canada
# Korean Invitations to Bid for Wood Pellet Supply

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<tr>
<th>Company</th>
<th>Co-firing Station</th>
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<th>Delivery Time Scale</th>
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<td>KOSPO</td>
<td>Hadong</td>
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<td>EWP</td>
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<td>KOSEP</td>
<td>Samcheonpo, Yeonheung, Yeosu</td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>920,000</strong></td>
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Canadian Exports to Asia (tonnes)

- **2012**:
  - Japan: 105,640 tonnes
  - Korea: 2,084 tonnes

- **2013**:
  - Japan: 76,018 tonnes
  - Korea: 113,077 tonnes

Source: Statistics Canada
1. Calculated using data from Stats Canada & HPBA Canada
2. 176,500 tonnes for all of Canada annually
Sustainable Biomass Partnership

Partners

DONG Energy
Drax
E.ON
GDF Suez
VATTENFALL
RWE

“Participating Observers”
EIPS, USIPA, & WPAC

Wood Pellet Association of Canada
Flow chart of the Supply Base Evaluation process

2.4 The scope of the Supply Base Evaluation

The SBE does not need to be undertaken for the following sources of feedstock:

1. Feedstock received with a certification claim under FSC or PEFC approved schemes, including SFI.
2. Feedstock from recycled sources.

For the following sources of feedstock the SBE must be undertaken but only against the indicators under some of the SFS criteria. This sub-set of criteria is listed in Table 1 of the SFS standard.

1. Primary feedstock that is classified as Controlled in the pellet mill's inputs but is not received with an FSC or PEFC claim. The Controlled concept is discussed in more detail in the next section. Primary means feedstock that has not been processed and would include round timber.
2. Secondary feedstock which is a by-product of a production process and which is not received with an FSC or PEFC claim. In this case the origin of the material supplied to the sawmill needs to be included in the SBE. Secondary feedstock comes from a processor such as a sawmill and includes sawdust.
How different feedstock inputs fall inside and outside of the Supply Base Evaluation

2.5 Inputs into SBP compliant pellets

The standard requires that at least 70% of the feedstock used in the production of SBP pellets is SBP compliant feedstock. Up to 30% may come from controlled sources, in line with FSC Mixed and PEFC Mixed Sources concepts. Other feedstock cannot be used in the production of SBP pellets.

Example of the maximum permitted mix of controlled feedstock with SBP compliant feedstock in order to be able to make an SBP claim.

The following are the feedstock product groups and how they are characterized as either SBP compliant feedstock or controlled sources.

- **SBP Compliant Feedstock**
  - SBP compliant Primary Feedstock. This material must either be supplied with a full FSC or PEFC approved claim. FSC controlled wood and PEFC controlled sources are excluded. SFI fibre sourcing is also excluded.
  - PEFC or FSC chain of custody certification required
  - GHG calculation required
  - Process is audited and certified by a registered certification body

- **Controlled Feedstock**
  - Up to 30%
Implementation

- Pilot audits complete
- Full-scale audits begin in July 2014
- Each generator decides how to implement with their pellet suppliers
- Dependent on existing long-term contracts
Conclusions

- The general market outlook is positive
- Europe will continue to dominate with heat and power sectors growing at similar rates
- Asia is showing promise after a slow start
- North America will grow slowly
- SBP certification will be initially confusing, but is designed to greatly reduce workload
Thank you!

For more information:
Contact Gordon Murray
gord@pellet.org
(250) 837-8821

November 17-19
Vancouver Marriott Pinnacle Hotel
Vancouver BC