Agenda

- Global pellet production
- NA and Canadian exports
- European market situation
- Price trends
- Policy and support schemes
- Projects on horizon
- What’s going on in Canada?
Global Wood Pellet Production

Source: REN21
North American Pellet Exports to EU

Source: Argus Media
Imports by selected countries 2012

Thousands of tonnes

<table>
<thead>
<tr>
<th>Country</th>
<th>US</th>
<th>Canada</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>475</td>
<td>855</td>
<td>0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>602</td>
<td>181</td>
<td>20</td>
</tr>
<tr>
<td>Belgium</td>
<td>572</td>
<td>205</td>
<td>3</td>
</tr>
<tr>
<td>Denmark</td>
<td>342</td>
<td>43</td>
<td>5</td>
</tr>
<tr>
<td>Italy</td>
<td>31</td>
<td>82</td>
<td>7</td>
</tr>
<tr>
<td>Sweden</td>
<td>205</td>
<td>40</td>
<td>0</td>
</tr>
</tbody>
</table>

Wood Pellet Association of Canada
Canadian Pellet Exports 2012

Thousands of Tonnes

Source: Statistics Canada

Wood Pellet Association of Canada
Price Trends

Data source: Hawkins Wright
Conversions: 1 USD = 0.75 euro
1 metric tonne = 1.1 short tonnes

Wood Pellet Association of Canada
Large European Utilities Using Wood Pellets for Power Generation

Wood Pellet Association of Canada
EU Policy Uncertainty (1)

- Passage of new UK energy act – expected by end of 2013
- UK conversion of ROC to CfD support scheme
- European Commission and EU – biomass sustainability criteria
Netherlands – changing MEP to SDE+ support system

Denmark – consolidation into law of Heat Supply Act
Negative Market Developments

- Closure of Tilbury – July 2013
- EON Ironbridge – logistics issues delaying ramp up, limited hours under LPCD
- Dong Energy Studstrup biomass conversion – delayed until passage of Danish Heat Act
UK Drax Power – two more 550 mw units for 1.6 mn tonnes
UK Eggborough Power – 2000 mw, 4 mn tonnes
Belgium EON Langerlo – 556 mw – 1.6 mn tonnes
Netherlands – Delta 400 mw
**Support Schemes (1)**

- UK – transition to CfD

<table>
<thead>
<tr>
<th>Energy Type</th>
<th>Strike Price £/MWh</th>
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</thead>
<tbody>
<tr>
<td>Biomass conversion</td>
<td>105</td>
</tr>
<tr>
<td>Offshore wind</td>
<td>155</td>
</tr>
<tr>
<td>Onshore wind</td>
<td>100</td>
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<tr>
<td>Solar</td>
<td>125</td>
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<tr>
<td>Tidal</td>
<td>305</td>
</tr>
<tr>
<td>Anaerobic digestion</td>
<td>145</td>
</tr>
</tbody>
</table>
Support Schemes (2)

- Netherlands – SDE+ subsidizes difference between cost and market price with low cost energy systems given highest priority
- Belgium – green certificates, €90 MWh. Dedicated – 100%, Co-firing 50%
- Denmark – tax exemptions and binding targets
- Heat market – no support required, 30% cost advantage!
Asia

- Korea – 5 mn tonnes by 2020
- Japan – 8 mn tonnes by 2020
- China – sleeping giant
Canadian Production

- No new construction in 2012-13
- Start-up of Scotia Atlantic (formerly Enligna) near Halifax in July
- Rentech – 2 plants announced in Ontario, to ship through Quebec
- Eastern Canadian logistics
Conclusions

- NA exports growing rapidly (50% from 2011 to 2012)
- EU industrial market temporarily oversupplied
- EU policy certainty is needed
- EU heat market growing strongly + 15% annually
- Heat market = higher values, no subsidies, but can be complicated
- Asia – eternal potential
Thank you!

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WPAC AGM 2013
**EXPORT EXPLOSION**

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