Biomass market opportunities

Latvia

1. General country information
2. Economic indicators
3. Biomass availability
4. Energy profile
5. Energy & biomass policies
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Contact person: Emiel Hanekamp

Although this report has been put together with the greatest possible care, NL Enterprise Agency does not accept liability for possible errors.

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This document

This document is part of a series of 16, providing information on biomass markets in:

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>Germany, France, United Kingdom, Spain and Finland</td>
</tr>
<tr>
<td>EU/Asia</td>
<td>Russia and Latvia</td>
</tr>
<tr>
<td>Asia</td>
<td>China, India and Thailand</td>
</tr>
<tr>
<td>North- and South-America</td>
<td>United States of America, Canada and Brazil</td>
</tr>
<tr>
<td>Africa</td>
<td>South-Africa and Ghana</td>
</tr>
<tr>
<td>Australia</td>
<td>Australia</td>
</tr>
</tbody>
</table>

The selection of countries is done in close cooperation with NL Enterprise Agency. The objectives of the country documents are:

- To provide companies a first impression of doing businesses in a country;
- To provide sources and contacts for more detailed information;
- To sketch opportunities how companies can be further supported when doing business in a country.
Within the EU, Latvia has the largest share (1/3) of renewable energy in its energy mix. Wood and water are the most widely used renewable energy resources: wood as fuel is used for district heating, both centralised and local, and for heating individual buildings. However, energy import dependency in Latvia is above the EU-27 average with oil and natural gas imported mainly from Russia. Latvia announced an increase of bioenergy use in the form of 50 biogas and 50 biomass projects.

Source: EREC 2009

### 1. GENERAL COUNTRY INFORMATION

- Import and export figures can be found at the International Trade Centre Databank: [http://www.rvo.nl/onderwerpen/internationaal-ondernemen/landenoverzicht/marktvergelijkingen/trademap](http://www.rvo.nl/onderwerpen/internationaal-ondernemen/landenoverzicht/marktvergelijkingen/trademap)

### 2. ECONOMIC INDICATORS

<table>
<thead>
<tr>
<th>Latvia</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (current billion US$)</td>
<td>25,875.78</td>
<td>24,009.68</td>
<td>28,480.34</td>
<td>28,372.58</td>
</tr>
<tr>
<td>GDP growth (annual %)</td>
<td>-18.0</td>
<td>-0.3</td>
<td>5.3</td>
<td>5.0</td>
</tr>
<tr>
<td>GDP per capita (current US$)</td>
<td>11,475.7</td>
<td>10,723.4</td>
<td>13,837.6</td>
<td>14,007.9</td>
</tr>
<tr>
<td>Population (Total, million)</td>
<td>2.25</td>
<td>2.24</td>
<td>2.06</td>
<td>2.03</td>
</tr>
</tbody>
</table>


The European Union includes Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

3. BIOMASS AVAILABILITY

Land Use Parameters

<table>
<thead>
<tr>
<th>Country</th>
<th>Land area (km²)</th>
<th>Agricultural area (km²)</th>
<th>Arable land (km²)</th>
<th>Permanent crops (km²)</th>
<th>Forestry area (km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latvia</td>
<td>62,200.00</td>
<td>18,162.40</td>
<td>11,569.20</td>
<td>62.20</td>
<td>33,650.20</td>
</tr>
<tr>
<td>per 1000 capita</td>
<td>30.71</td>
<td>8.97</td>
<td>5.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.03</td>
<td>16.61</td>
<td></td>
</tr>
</tbody>
</table>


Agricultural and Forest Production

<table>
<thead>
<tr>
<th>Country</th>
<th>Forest production (m³) 2012</th>
<th>Agricultural production (1000 kg) 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latvia</td>
<td>16,142,593</td>
<td>2,968,100</td>
</tr>
</tbody>
</table>

Biomass Resources

Information on commodities: firewood, wood wastes, wood pellets, biodiesel, straw, grain, manure, peat, maize: [http://www.indexmundi.com/agriculture/?country=lv](http://www.indexmundi.com/agriculture/?country=lv)

Share of selected RES in total RES consumption in Latvia; 2011 (per cent)

Total RES production was 60 gigajoules in 2011. In 2020 this is aimed to be 40% of total final energy consumption.

4. ENERGY PROFILE

National Energy Profile
- Total Primary Energy Supply: 173.1 PJ - Of which renewables: 60.1 PJ (34.7%)
- Energy self-sufficiency: 50.4%
- Fuel imports: 2.6 billion USD (15.9% of total imports)
- Electricity generation: 6.1 TWh - Of which renewables: 3,078 GWh (50.5%)
- Electricity use per capita: 3,267 kWh
- Electrical capacity: 2,576 MW - Of which renewables: 1,642 GW (63.7%)
- Electricity access rate: 99.9%
- Share of population using solid fuels (2010): 5%

Biomass Related Projects

BNEF-Database
- 52 MW of biogas capacity addition announced (50 projects)
- 102 MW of biomass capacity addition announced (50 projects)

Other Projects
- Illustration of implementation of Wood-energy projects in Latvia http://www.lsta.lt/files/events/i_strele.ppt
Energy Sources and Forecast

**Latvia - Primary Energy Supply**

This graph shows a change in primary energy supply, following the 2050 vision of the Latvian INFORSE member Latvian Green Movement. The decrease after 2020 is because assumptions of a less material growth than today and strong emphasis on energy efficiency.

**Renewable Energy Supply (PJ)**

This graph shows an increase in renewable energy supply, according to the same 2050 vision. The reduction after 2020 is because of reducing primary energy demands after 2020 with increase of energy efficiency and with use of ambient heat via heat pumps. Ambient heat is not included in graph.

5. ENERGY & BIOMASS POLICIES

Targets

- 40% of final energy from renewables by 2020
- At least 10% of transport energy from renewables by 2020


Feed-in Tariff

<table>
<thead>
<tr>
<th>Resource Technology</th>
<th>Support level (€ cents / kWh)</th>
<th>Starting year</th>
<th>Duration (years that an investor is entitled to support)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass Power Plants (PP) with electric capacity not over 4MW</td>
<td>For the first 10 years from the beginning of PP operation: ( C = \frac{T_g \times k}{9.2} \times 4.5 )</td>
<td>2007</td>
<td>10 years</td>
</tr>
<tr>
<td>Biomass PP with electric capacity not over 4MW</td>
<td>After 10 years from the beginning of PP operation: ( C = \frac{T_g \times k}{9.2} \times 3.4 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biogas PP without any capacity limitations</td>
<td>For the first 10 years from the beginning of PP operation: ( C = \frac{T_g \times k}{9.2} \times 4.5 )</td>
<td>2007</td>
<td>10 years</td>
</tr>
<tr>
<td>Biogas PP without any capacity limitations</td>
<td>After 10 years from the beginning of PP operation: ( C = \frac{T_g \times k}{9.2} \times 3.4 )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( C = \text{price of electricity without VAT} \)

\( T_g = \text{natural gas tariff approved by the Regulatory Authority (without VAT)} \)

\( k = \text{factor used for price differentiation depending on the installed capacity of the power plant (varies in the range from 1,240 to 0,965)} \)

Source: EREC Renewable Energy Policy View Latvia
Renewable Energy Policy

The Energy Development Guidelines for 2007-2016 have determined that the proportion of biofuel in transport must reach 10% in 2016 and 15% - in 2020, and the share of electricity produced in highly efficient CHP using biomass should reach 8 % by 2016. Guidelines for Energy Sector Development 2007-2016 developed by the Ministry of Economics are the main mid-term energy policy planning document. It is in particular the principal policy document driving increases in efficient use of RES.

Cabinet Regulations No 503 were adopted in order to transpose the requirements of Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources. They aim at increasing the proportion of RES used in the country to targets set.


Latvia 2020 Renewable Energy Targets

- **Overall target**: 40% of share of energy generated from renewable sources in gross final energy consumption;
- **Heating and cooling**: 53% of heat consumption met by renewable sources;
- **Electricity**: 60% of electricity demand met by electricity generated from renewable energy sources;
- **Transport**: 10% of energy demand met by renewable energy sources.

In order to achieve above enlisted targets Latvia runs following incentive schemes:

- Creation of suitable cross-sector legislation framework supporting sustainable development of renewables with an aim to protect natural environment of Latvia;
- **The right to sell generated electricity through the mandatory purchase of electricity in terms of quantity**;
- **The right to receive guaranteed payment for the electrical capacity installed in a power plant**;
- **Reduction of excise duty for biofuel**;
- Measures increasing society’s knowledge on climate change and renewables;
- Measures supporting energy efficiency and energy savings in buildings (public administration, educational, private)
- Supporting deployment of renewables in all sectors;
- Reduction of GHG emissions.


6. FUNDING OPPORTUNITIES

Latvian Environmental Investment Fund:
[http://bioenergypromotion.org/bsr-register/db/organization.20130107Z125735.528364](http://bioenergypromotion.org/bsr-register/db/organization.20130107Z125735.528364)

7. BUSINESS CLIMATE

Overall Rating
World Bank Ease of Doing Business index 2013 (Ranking out of 189 countries). In comparison, the Netherlands is ranked 28 (2014) and 30 (2013). On this website information about necessary permits, administration time, specific laws et cetera is present.

<table>
<thead>
<tr>
<th>Topic</th>
<th>DOING BUSINESS 2014</th>
<th>DOING BUSINESS 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total rating</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Starting a Business</td>
<td>57</td>
<td>59</td>
</tr>
<tr>
<td>Dealing with Construction Permits</td>
<td>79</td>
<td>118</td>
</tr>
<tr>
<td>Getting Electricity</td>
<td>83</td>
<td>89</td>
</tr>
<tr>
<td>Registering Property</td>
<td>33</td>
<td>29</td>
</tr>
<tr>
<td>Getting Credit</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Protecting Investors</td>
<td>68</td>
<td>67</td>
</tr>
<tr>
<td>Paving Taxes</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>Trading Across Borders</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>Enforcing Contracts</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Resolving Insolvency</td>
<td>43</td>
<td>46</td>
</tr>
</tbody>
</table>

Source: [http://www.doingbusiness.org/data/exploreeconomies/latvia](http://www.doingbusiness.org/data/exploreeconomies/latvia)

Logistics and Infrastructure
Based on a worldwide survey of operators on the ground, such as global freight forwarders and express carriers, the Logistics Performance Index (LPI) measures the logistics "friendliness" of 155 countries. Ranking of Latvia is place 76, scored 56.9% of highest performer (Singapore).


Culture and Education
The UNDP Human Development Index (HDI) is a composite statistic of life expectancy, education, and income indices, used to rank countries into four tiers of human development: very high, high, medium and low. According to HDI, Latvia belongs to the group of “Very high human Development” and is ranked 44 out of 186.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>73.6</td>
<td>11.5</td>
<td>14.8</td>
</tr>
</tbody>
</table>

Source: Human Development Index [https://data.undp.org/dataset/Table-1-Human-Development-Index-and-its-components/wxub-qc5k](https://data.undp.org/dataset/Table-1-Human-Development-Index-and-its-components/wxub-qc5k)

8. IMPORTANT CONTACTS

Dutch Embassy + Consulates
- Embassy of the Kingdom of the Netherlands in Riga

Chamber of Commerce
Dutch-Latvian Chamber of Commerce. Can help in finding reliable and relevant partners.

Universities and Research Institutes
- University Federal of Minas Gerais (FMG)
- University of Latvia - [http://www.lu.lv/eng/](http://www.lu.lv/eng/)
- Latvian University of Agriculture - [http://eng.llu.lv/](http://eng.llu.lv/)
- Latvian State Forest Research Institute "Silava" (LSFRI Silava) - [http://www.silava.lv/sakums.aspx](http://www.silava.lv/sakums.aspx)
Organizations
GRANDEG Pellet boiler manufacturer
Eco-Project Biomass Developers
Latvian biomass association LATbio

http://grandeg.com/?item_id=36&l=2
http://www.biomass-woodchips.com/investors.html
http://www.latbio.lv/site/eng/

Existing Agreements
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