

LATVIA

Country at a glance

- Population: 2.25 million (2010) [1]
- Total area: 64,589 sq. km [2]
- Carbon emissions per capita: 3.59 metric tons (2010) [3]
- Energy consumption per capita: 22.8 MWh (2010) [4]
- Percentage of global carbon emissions: 0.03% (2010) [3]



Pļaviņas Hydro Power Plant by Gunars. Permission; see: commons.wikimedia.org/wiki/File:Plavinu_HES.JPG

Hydroelectric generation in Latvia

Latvia has one of the highest shares of renewable energy in the EU, due mainly to the significant role of hydropower resources and the large amount of biomass used in the residential sector.

Table 1 Breakdown of energy use, electricity and heat generation, 2010

| | Primary energy sourced within country | | Energy imports minus exports | Primary energy used within the country ^(a) | | Electricity Generation ^(b) | | Heat Generation ^(c) | | | |
|-----------------------------------|---------------------------------------|--------------|------------------------------|---|--------------|---------------------------------------|------------|--------------------------------|------------|--------------|----------|
| | unit | ktoe | | % | ktoe | GWh | % | GWh | % | | |
| Coal, including brown coal & peat | | 2 | 0 | 112 | 109 | 1,267 | 2 | 2 | 0 | 108 | 0 |
| Oil fuels | | 0 | 0 | 1,442 | 1,170 | 13,605 | 27 | 2 | 0 | 178 | 0 |
| Natural gas | | 0 | 0 | 903 | 1,461 | 16,997 | 33 | 2,988 | 45 | 6,480 | 0 |
| Nuclear | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hydroelectric | | 303 | 14 | 0 | 303 | 3,521 | 7 | 3,520 | 53 | 0 | 0 |
| Biofuels and waste | | 1,804 | 85 | -541 | 1,292 | 15,021 | 29 | 66 | 1 | 1,192 | 0 |
| Solar photovoltaics | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Solar thermal | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tide, wave and ocean | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wind | | 4 | 0 | 0 | 4 | 49 | 0 | 49 | 1 | 0 | 0 |
| Geothermal | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Electricity (imported) | | 0 | 0 | 75 | 75 | 873 | 2 | 0 | 0 | 0 | 0 |
| Sub total Renewables | | 2,111 | 100 | -541 | 1,598 | 18,591 | 36 | 3,635 | 55 | 1,192 | 0 |
| Totals | | 2,113 | 100 | 1,991 | 4,414 | 51,332 | 100 | 6,627 | 100 | 7,958 | 0 |

Source: Based on World Energy Statistics and Balances Database 2012, "World Energy Balances." © OECD/IEA, 2012.

Notes:

Standard conversion used is 1 ktoe = 11.63 GWh

(a) Sum of energy sourced within country, energy imports minus exports, international marine and aviation bunkers and stock change flows.

(b) Includes all electricity generation, including any exported.

(c) Does not include electrical heating. Includes waste heat recovery from electricity generation plants.

Table 2 Breakdown of transport fuel use, 2010

| (in ktoe) | Total transport mix | % | Domestic aviation | Road | % | Rail | Pipeline transport | Domestic navigation | Non-specified (transport) |
|--------------------|---------------------|------------|-------------------|------------|------------|-----------|--------------------|---------------------|---------------------------|
| Oil products | 1,046 | 97 | 0 | 972 | 97 | 67 | 0 | 7 | 0 |
| Natural gas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Biofuels and waste | 27 | 2 | 0 | 27 | 3 | 0 | 0 | 0 | 0 |
| Electricity | 11 | 1 | 0 | 0 | 0 | 3 | 2 | 0 | 6 |
| Sub total | 27 | 2 | 0 | 27 | 3 | 0 | 0 | 0 | 0 |
| Renewables | | | | | | | | | |
| Total | 1,083 | 100 | 0 | 999 | 100 | 70 | 2 | 7 | 6 |

Source: Based on World Energy Statistics and Balances Database 2012, "World Energy Balances." © OECD/IEA, 2012.

Stand on climate change

Latvia participates in the global climate change mitigation process and signed the United Nations Framework Convention on Climate Change (hereinafter, the Convention) in Rio de Janeiro UN Conference on Environment and Development in June 1992. It entered into force on 21 March 1994 [5]. The Parliament of the Republic of Latvia ratified the Convention on 23 February 1995.

Since 1990, with the restructuring of Latvia's economy and improvements in energy efficiency, and implementation of EU environmental requirements, the main commitments under the Convention have been fulfilled. It is foreseen that Latvia will also fulfil the requirements of the Kyoto Protocol – in 2003, the so-called distance-to-target for Latvia was minus 53.3% to fulfil emission reduction commitments stated in the Kyoto Protocol.

In 2003, the share of renewable energy sources in the primary energy balance in Latvia was 34.2%.

National climate change programmes

Climate change mitigation policy in Latvia is gaining higher priority in line with the global and EU concerns about climate change. The latest document on the climate change mitigation policy is the "Climate Change Mitigation Programme for 2005 – 2010". The primary goal of this programme – to ensure that starting from 2008, total GHG emissions do not exceed 92% of the 1990 level. This is to be achieved by [5]:

- Increasing the share of renewable energy sources in the energy balance
- Increasing efficient and rational use of energy resources
- Developing an environmentally friendly transport system
- Promoting the implementation of the best available techniques, environmentally friendly technologies and cleaner production
- Promoting the implementation of environmentally sound agricultural methods that reduce direct GHG emissions
- Increasing CO2 removals in forestry
- Establishing an up-to-date municipal waste management system
- Participating in the EU emission allowance trading scheme and the Kyoto Protocol flexibility mechanisms
- Promoting the implementation of environmental management systems and the inclusion of environmental considerations in consumer decisions

Energy and Transportation

- Increasing the share of renewable energy sources in the primary energy balance
- Promoting the usage of biomass, biogas, biofuel and biofuel production
- Supporting for energy generation in small hydropower plants, wind power production, solar energy

Agriculture

- Improving and construction of manure storage facilities in order to reduce nitrate emissions from agricultural activities
- Developing environmentally friendly agriculture and promoting good agricultural practices.

Forestry

- Increasing forest land in Latvia to 48-58% within the next 20-25 years
- Increasing funding from the Forest Development Fund for scientific research and various activities to raise public awareness and educate forest owners

Industrial processes

- Promoting the implementation of the best available techniques, environmentally friendly technologies and cleaner production

Waste

- Establishing up-to-date municipal waste management system, ensuring collection of biogas in municipal waste landfills in accordance with the “National Plan for Waste Management for 2003-2012”.
- Restoring small municipal dumpsites to meet environmental requirements

Ministries involved in climate change/energy policy making [6]:

| Ministries involved | Web links |
|---|--|
| Ministry of Environment | www.varam.gov.lv/eng |
| RES Legal | www.res-legal.eu |
| Latvijas Republikas Ekonomikas Ministrija (EM) – Ministry of Economy | www.em.gov.lv/ |
| Sabiedrisko pakalpojumu regulēšanas komisija (SPRK) – Public Utilities Commission (PUC), regulatory authority | www.sprk.gov.lv/?setl=2 |
| Latvijas Siltumuzņēmumu Asociācija (LSUA) – Latvian District Heating Association | www.lsua.lv/index.php?lang=lv |
| Finanšu ministrija (FM) – Ministry of Finance | http://www.fm.gov.lv/ |

Education institutes involved in climate change/energy policy making [6]:

| Education Institutes involved | Web links |
|---|--|
| Institute of Physical Energetics (FEI) – Research Institute | www.innovation.lv/ino2/index2.php?kat=par_portalu |

References

- [1] “World Population Prospects: The 2010 Revision.” Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat.
- [2] “CIA - The World Factbook.” Available at: <https://www.cia.gov/library/publications/the-world-factbook/geos/th.html>. [Accessed: 12-Mar-2013].
- [3] CO₂ Emissions from Fuel Combustion Statistics database 2012, “Indicators for CO₂ emissions.” © OECD/IEA, 2012.
- [4] World Energy Statistics and Balances database 2012, “World Energy Balances.” © OECD/IEA, 2012.
- [5] “Fourth National Communication of the Republic of Latvia under United Nations Framework Convention on Climate Change.” Ministry of the Environment. Available at: <http://unfccc.int/resource/docs/natc/latnc4.pdf> [Accessed: 25 June 2013]
- [6] Legal Sources on Renewable Energy – RES Legal. Available at: <http://www.res-legal.eu/search-by-country/latvia/>