

Environment and Renewable Energy

Industry in LATVIA



Latvijas Investīciju un attīstības aģentūra
Investment and Development Agency of Latvia  **LIAA**

Latvia in Facts

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|------------------------------------|--|
| International memberships: | EU and NATO since 2004, WTO since 1998 |
| Capital: | Rīga |
| Other major cities: | Daugavpils, Liepāja, Jelgava, Jūrmala, Ventspils |
| Population (2008): | 2.3 million |
| Area: | 64 559 km ² |
| Language: | Latvian (official), Russian, English and German are also widely spoken |
| Currency: | 1'Lats'(LVL) = 100'santims' |
| Exchange rate: | 1 LVL= 1.42 EUR (fixed rate as of January 1, 2005) 1 LVL = 1.98 USD (average in 2009) |
| GDP growth (2008): | -4.6% |
| GDP in current prices (2008): | EUR 23.157 billion |
| GDP per capita (2008): | EUR 10 219 |
| Accumulated FDI (2008): | EUR 8.126 billion |
| Accumulated FDI per capita (2008): | EUR 3 594 |

Source: Central Statistical Bureau of Latvia, Bank of Latvia

A photograph of a waterfall with white, frothy water cascading over dark, mossy rocks. The water is captured in motion, creating a sense of energy and natural beauty.

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In recognition of waste management as a priority for environmental policy, various strategies and plans have been elaborated with the aim of developing an efficient waste management system in compliance with the European Community's and other relevant international waste management policy principles and requirements. To achieve greater economic and energy independence for Latvia, more and more local renewable energy resources are now in use in energy production, comprising one-third of Latvia's primary energy resources.

Latvian environmental and renewable-resources specialists will continue working to foster an increase in the standard of living of the population and sustainable development of the state.

Introducing the new "Environment and Renewable Energy Industry in Latvia" catalogue, I would like to thank those enthusiasts, academics, investors and businesspeople who keep on helping to develop this sector, as well as to wish them success in continuing their business and research. On behalf of LIAA I would like to confirm that we will do our utmost to facilitate the growth and development of the environmental and renewable resources sector in Latvia.

A handwritten signature in black ink, appearing to read 'A. Ozols'.

Andris Ozols
Director

Investment and Development Agency of Latvia

Environment Sector

HISTORICAL OVERVIEW – GENERAL FACTS

We can definitely assert that everyone who has visited Latvia will never forget it - not ancient Riga, which has stood on the banks of the Daugava River for 800 years; not the white, sandy beaches; not the green forests; and not the many rivers and lakes, hardly touched by civilisation. Latvia is a beautiful, green land with clean air, water, and soil; many tourists from abroad and many environmental experts say that the entire country is one huge nature park.

SOME FACTS:

- Since 1990 the amount of pollution from stationary sources (factories, boiler houses) has decreased by 46%.
- Since 1990 the amount of wastewater has decreased by 44%.
- Latvia has 477 mechanical, 956 biological and 6 chemical wastewater treatment plants. The state program "Water Supply and Water Treatment in Latvia's Provincial Towns" has been implemented since 1995.
- There are no atomic power plants in Latvia.
- Currently, approximately 200 farms, occupying 2,750 ha, are engaged in organic farming (i.e. using no artificial fertilisers or pesticides).

The majority of funds earmarked for the environment are devoted to the development of water and sewage treatment, protection of the environment, protection from radiation, energy conservation, and regional development.

Considerable attention is still being devoted to nature conservancy, and that, combined with fortuitous circumstances, has yielded good results - Latvia is internationally acknowledged as a land with more biological diversity than most other European countries.

Financial resources that are allocated for the environment include funds from the state budget and from local governments, as well as donations from various organisations and private individuals. Supporters of Latvia's environmental projects include institutions such as the World Bank, North European Environment Financial Corporation, North European Investment Bank, European Investment Bank, European Bank for Reconstruction and Development, EU PHARE program, as well as countries - Denmark, Sweden, Finland, Norway, Germany, the United States, the Netherlands, Belgium, and Switzerland.

A report on environmental indicators is prepared every four years, and in spite of limited resources, the environment is constantly undergoing comprehensive evaluation, thus improving its quality. According to some environmental indicators, Latvia is even among the top 10 European countries, alongside Denmark and Sweden.

The Ministry of the Environment is the central executive institution in the area of environmental protection, which includes protection of the environment and nature, maintaining and rational utilization of natural resources, as well as the sub-sectors of hydrometeorology and utilisation of subsoil. The Ministry works out a national policy of environmental protection and oversees and coordinates implementation of this environment policy. The list of traditional spheres subject to legal protection, such as water, air, and the subsurface, was extended in 2004 to include noise regulations.

AIR PROTECTION

Improving air quality is one of the main priorities of the Environmental policy in Latvia. Latvia has joined the UN/ECE "Convention on Long-range Transboundary Air Pollution" and all protocols to this Convention.

The law "On Pollution" (2001) and the Cabinet Regulations on air quality (2003) regulate air quality requirements and measures that should be implemented to provide for air quality in Latvia.

The law "On Pollution" regulates general measures for air quality norms and measures that provide for air quality, as well as terms (limit values, target values, emission limit values and limits) and general regulations for reduction and control of air-polluting emissions.

In the Cabinet Regulations on air quality, air quality standards have been established for 22 substances. Also, the terms for achieving these air quality standards are specified. Every three years the Latvian Environment, Geology and Meteorology Centre (LVGMC) performs an air quality assessment on substances that pollute the air and monitoring thereof.

Not rarer than once in three years the LVGMC collects and prepares information assessing air quality in Latvia. Furthermore, annually it prepares an overall air quality assessment and with regard to areas in which air pollution exceeds air quality standards.

Effective 2010, with regard to sulphur dioxide, nitric oxide, volatile organic compounds and ammonium, maximum permissible emissions into the atmosphere have been established. These shall be regulated by the Cabinet Regulations.

WATER PROTECTION

Latvia is rich in water resources, which fully satisfy the needs of the country. More than 12 400 rivers and around 4000 lakes and watercourses cover altogether 3.7% of the country's territory.

In both urban and rural areas of Latvia, the water supply is mainly supplied by underground water from drill-holes, wells and springs. The quality of drinking water at water sources is in line with EU standards, except for iron content. However, the out-of-date water distribution networks affect the microbiological and chemical quality of drinking water. Water consumption has decreased over the period of the past 10 years. This can be explained by a decrease in the capacity of industrial and agricultural production as well as the introduction of water-consumption registration that has contributed to sustainable utilisation of water.

Good results have been achieved in the sphere of water protection, which is among the main priorities of Latvia's environmental protection policy. Investment arrangements are being implemented successfully, and the situation in wastewater treatment has improved significantly. Implementation of better controls and environmentally friendly technologies resulted in a twofold decrease in the total quantity of wastewaters in the country. The proportion of wastewaters has decreased to 5% of the total volume, whereas pollution caused by the public has decreased by more than half.

CLIMATE CHANGE AND PROTECTION OF THE OZONE LAYER

In Latvia, emissions of greenhouse gases are among the lowest in Europe (emissions per capita are small). The main task in this respect should be to ensure that the emissions of greenhouse effect gases are limited in the course of economic development of the country.

Latvia ratified the Vienna Convention "On the Protection of the Ozone Layer" and the Montreal Protocol "On Substances Depleting the Ozone Layer" in 1995. Latvia has furthermore accepted the 1990 London, 1992 Copenhagen and 1998 Montreal Amendments to the Montreal Protocol. Owing to the technical assistance rendered by the Global Environment Facility and the UN Environmental Programme, Latvia is fulfilling entirely the commitments made under the Montreal Protocol.

The use of substances depleting the ozone layer has sharply decreased in Latvia since 1997. By 2030 it is anticipated that the substances depleting the ozone layer will be substituted with substances less hazardous to the environment.

USE OF NATURAL RESOURCES

Prudent utilisation of natural resources is the basis for sustainable development of the country's economy. Latvia is not rich in minerals or fuel resources; it shall always be dependent upon the resources of other countries, particularly the import of oil, natural gas, coal, metal and mineral resources.

Many sectors of the economy are based on the use of non-renewable and partially renewable resources; therefore, they are fully dependent upon the reserves and quality of such resources.

INDUSTRIAL POLLUTION

The territory of Latvia covers more than 6.4 million ha. Forests dominate land use (44%), followed by agricultural land (39%) and urban areas and infrastructure (10%).

Agriculture is still responsible for high nitrogen and phosphorus levels in water bodies and the Baltic Sea. Soil degradation processes are increasing, the reasons for which are high acidity, low levels of organic matter and plant nutrients, and a lack of manure and homogeneous crop rotation. It is also characteristic that many agricultural lands have been abandoned, which also facilitates the above-mentioned problems. However, the negative agricultural impact on the environment is still low as compared to most of Europe.

To promote the development of agriculture while taking into consideration environmental protection issues, the Latvian government has drafted and approved various National Programs.

To decrease the negative influence of farming on the environment and to prevent damage to and irrational use of the main natural resources - soil, water, plants, animals, and the landscape, Latvia has developed a *Code of Good Agricultural Practice (GAP)* (part I, part II). The Code of Good Agricultural Practice contains legislative obligations, recommendations and practical advice envisaged for farmers, horticulturists, individual growers, agriculture service employees and for everyone who is involved in agricultural production and preservation of the rural environment. Thus, development of the GAP Code is a part of the harmonization of Latvian legislation with both EU legislation and HELCOM recommendations.

MANAGEMENT AND REDUCTION OF WASTE

600 000 to 700 000 tons of household waste are generated in Latvia each year, and around one-half of this quantity is deemed biodegradable. Each inhabitant generates 200 kg of waste annually. Nearly 20% of waste is composed of packaging, the amount of which has been increasing in Latvia over the past years.

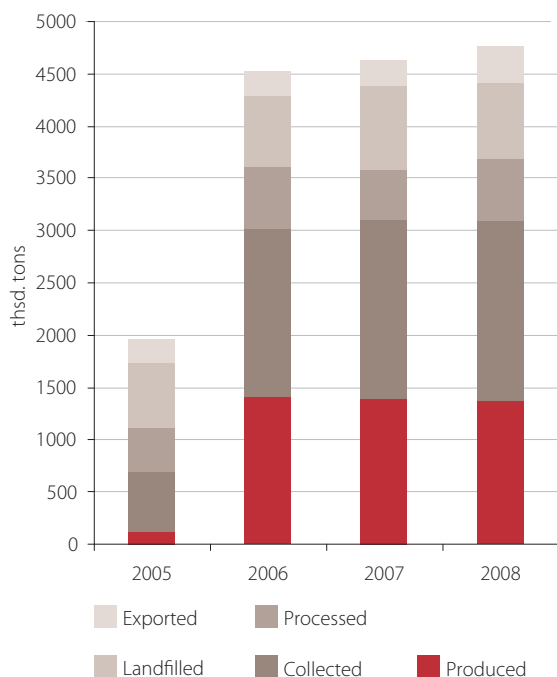
Municipalities are responsible for household waste management in each administrative territory. Collection and storage of household waste mainly is done by municipal enterprises in Latvia, whereas private companies serve nearly 50% of the inhabitants of Latvia.

Most household waste and other waste collected is dumped without prior processing. Around 40% of the waste collected is dumped in the Riga Region Getliņi Dump Site.

At present, hazardous waste is being temporarily stored with companies and specially equipped waste storage sites. There are three special sites for the storage of unusable pesticides. Companies report annually to the Regional Environmental Boards about waste generated and stored, whereas the Environmental Agency of Latvia summarises the information collected. Stored waste is required to be burned or stored at a hazardous waste polygon.

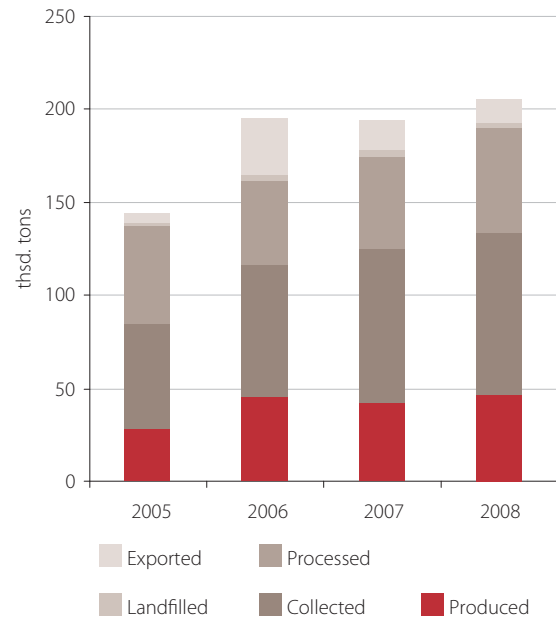
Tables 1 and 2 characterize household and dangerous waste management from 2005-2008.

Table 1
Household waste



The figures are approximate, because not all inhabitants are involved in the waste collection process.
Source: Latvian Environment, Geology and Meteorology Centre data, 2009

Table 2
Dangerous waste



Collected and processed amounts exceed those produced, because more waste is managed in Latvia than produced.

Source: Latvian Environment, Geology and Meteorology Centre, 2009

In 1998 Latvia developed and adopted the National Strategy for the Management of Municipal Waste for the 1998-2010 period, in which improvement of the waste management system was defined as one of the main priorities of the national environmental policy. Consistent with the adoption in the early 1990's of sustainable development as the new paradigm for global development, Latvia has based its national waste management strategies and legislation on the principle of sustainability. Recognizing waste management as a priority for environmental policy, various strategies and plans have been elaborated with the aim of developing an efficient waste management system complying with the European Community's and other relevant international waste management policy principles and requirements.

OVERVIEW OF THE SITUATION IN WASTE MANAGEMENT TODAY AND IN NEAR FUTURE

The most recent and most comprehensive strategic document at the national level is the National Waste Management Plan for 2006-2012. The plan is seen as a tool for achieving waste management policy targets and meeting requirements based on type, quantity and origin of waste to be recovered or disposed of in the country. One of the keys for effective implementation of the Waste Management Plan is to substantially increase the recycling and recovery of waste.

Establishment of 10-12 new regional landfill sites and the promotion of waste sorting, as well as closure and recultivation of existing landfill sites, is foreseen based on three levels of planning, as defined by the Waste Management Law:



Currently 90% of the total Latvian market is covered by the Latvian Association of Waste Management Companies (LASUA) with its 50 members. All members are professional companies engaged in management, collection, depositing, processing, handling, and burying of household and hazardous waste and removal of industrial waste, and also providing other services.

LASUA members manage more than 1 million m³ of waste per year.

The total annual turnover of LASUA members exceeds 29 million Euro.

The total number of employees with LASUA members is more than 2.5 thousand, with an average salary in 2009 of ~1000 Euro gross per month.

The total amount of tax paid by LASUA members to the state exceeds 5 million Euro, including nature resources tax of more than 300 thousand Euro.

R&D POTENTIAL AND EDUCATION

In Latvia environmental education is a relatively new branch of education, the roots of which are found in the natural sciences. Higher environmental education was initiated at the University of Latvia in the beginning of the 1990's, and later environmental education programs were developed in other institutions of higher education.

Currently, the following possibilities for higher education are available:

Riga Technical University – environmental science obligatory for all departments, environmental science (MS), environmental economics (MS).

Latvian University of Agriculture – environmental science obligatory for all departments, environmental studies (Professional, Bachelor's, MS)

Additionally, environmental programmes are taught in Rēzekne, Daugavpils, and Liepāja high schools.

R&D studies currently take place mostly in the University of Latvia:

- Laboratory for Mathematical Modelling www.modlab.lv
- Department of environmental management <http://vide.lu.lv/>

LANDFILL SITES

Up to mid-2009, the following landfill sites in Latvia had been put into operation:

| | |
|--|---|
| <p>"Pentulji" household waste refuse site</p> | <p>Managing body: Municipal Ltd. co. "Ventspils labiekārtošanas kombināts"</p> <p>Address: Vārves pagasts, Ventspils novads, Ventspils rajons, LV-3623</p> <p>Amount of deposited waste 2007 (tons): 16 263.89</p> <p>Potentially planning to have a biogas collection and utilization system put in place.</p> |
| <p>"Kīvītes" household waste refuse site</p> | <p>Managing body: "Liepājas RAS" Ltd.</p> <p>Address: Grobiņas pagasts, Grobiņas novads, Liepājas rajons, LV-3430</p> <p>Amount of deposited waste 2007 (tons): 77 379.790</p> <p>Total area of the site – 29.03 ha. The landfill uses energy cell technology for the management of biogas produced by waste (biogas production as energy cells).</p> |
| <p>"Daibe" Household waste refuse site in Cēsis region, (Northern Vidzeme region SAA project)</p> | <p>Managing body: "Ziemeļvidzemes atkritumu apsaimniekošanas organizācija" Ltd. (ZAAO)</p> <p>Address: Stalbes pagasts, Cēsu rajons, LV- 4151</p> <p>Amount of deposited waste 2007 (tons): 64 491.980</p> <p>Daibe Landfill is a household solid waste processing and storage site for Northern Vidzeme region (which includes 4 cities). Total storage area: ~ 12ha. Installation of biogas collection and utilization system planned.</p> |
| <p>"Križevniki 2" Household waste refuse site (Eastern Latgale SAA project)</p> | <p>Managing body: "Austrumlatgales atkritumu apsaimniekošanas sabiedrība" Ltd.</p> <p>Address: Ozolaines pagasts, Rēzeknes novads, Rēzeknes rajons, LV-4633</p> <p>Amount of deposited waste 2007 (tons): 17 656.580</p> |
| <p>"Šakališķi" Household waste refuse site (Southern Latgale SAA project)</p> | <p>Managing body: "Eko Latgale" Ltd.</p> <p>Address: Demene pagasts, Dunduru iela 13a, Daugavpils rajons, LV-5400</p> <p>Amount of deposited waste 2007 (tons): 47 803.960</p> |

| | | |
|---|--|---|
| "Janvāri" household waste refuse site | Managing body: "Atkritumu apsaimniekošanas sabiedrība Piejūra" Ltd. | Address: Laidzes pagasts, Talsu novads, LV-3280 |
| "Brakšķi" household waste refuse site | Managing body: "Jelgavas komunālie pakalpojumi" Ltd. | Address: Līvberzes pagasts, Jelgavas novads, Jelgavas rajons, LV-3003 |
| "Grantiņi" household waste refuse site | Managing body: "Vides serviss" Ltd. | Address: Iecavas novads, Bauskas rajons |
| "Zebrene" dangerous waste site | Owner: State Environmental Service | Address: Zebrene, Dobeles rajons, LV - 3731 |
| "Kaudzītes" household waste refuse site (Maliēna SAA project) | Managing body:" ALBA 5" Ltd. | Address: Kaudzītes, Litenes pagasts, Gulbenes rajons, LV-4405 |
| "Getliņi" Reconstructed household waste refuse site | Managing body: BO "Getliņi EKO" Ltd. Amount of deposited waste 2007 (tons): 412 063.03 | Address: "Getliņi" CSA site, Rumbula, Stopiņu novads, Rīgas rajons, LV-2121 Web: www.getlini.lv |
| "Dūmiņi" Asbestos and asbestos- containing waste site | Managing body: State Ltd. co. "Vides projekti" | Address: Brocēnu novads, Saldus rajons |

CASE STUDY: THE LARGEST LANDFILL SITE IN LATVIA – GETLIŅI EKO

Getliņi site accepts waste from Riga and Riga district.

The 'Getliņi' refuse site has been in operation since the beginning of the 1970's. By the year 2000, approximately 30 million cubic metres of waste had been deposited there without the performance of any environmental protection measures. The goal of the new development project is to eradicate the causes of further pollution of the environment and to modernize the 'Getliņi' refuse site to the point where it conforms to internationally accepted standards for refuse sites. The financial resources attained from the production of electricity will ensure realization of the project.

More information at website <http://www.getlini.lv/eng>.

INVESTMENTS

Investments in the fields of water management, management of household and hazardous waste,

environmental protection, as well as sanitization of polluted sites and decreasing various environmental risks have been taking place for almost two decades. Co-financing of the EU Cohesion Fund, European Regional Development Fund, EU Transition Facility, LIFE+, INTERREG and Latvian Environmental Protection Fund was attracted in order to implement the environmental investment strategy.

Investments in environmental protection have significantly increased since 2005. During these years 694.58 million EUR have been invested in environmental protection, of these 548.58 million EUR or 80% of total investments in the development of water management and waste management infrastructure. Almost 50% of the investments were made by partners of bilateral cooperation and EU Funds and programmes, ~25% by the national budget and also ~25% by the project implementers.

In 2007 and 2008 the total amount of investments made in environmental protection was approximately 100 million lats annually.

In the period from 1995 to 2008 investments in the amount of 661 million EUR were made into the financially most-costly field of environmental protection – water management and waste management infrastructure projects. Of these, 548.58 million EUR were invested in water management development, 94.31 million EUR in household waste management infrastructure and 19.65 million EUR in hazardous waste management infrastructure. A significant increase in investments was observed after 2005, when the implementation of projects with the co-funding of Cohesion Funds started in practice.

COOPERATION WITH OTHER INDUSTRIES, R&D INSTITUTIONS

Nature Protection Agency: www.daba.gov.lv

The Nature Protection Agency ensures implementation of a unified nature protection policy in Latvia.

Marine and Inland Waters Administration (MIWA) (www.vvd.gov.lv) is a structural unit of the State Environmental Service of the Ministry of the Environment of the Republic of Latvia. MIWA carries out its duties set by laws and regulations in the territorial waters, continental shelf, exclusive economic zone of the Republic of Latvia and ports (Latvian marine waters), as well as in inland waters of Latvia, international waters stipulated by fisheries regulations of the European Union and international regional fishing organizations, and waters of member states of the European Union and third countries.

Institute of Energy Systems and the Environment (Riga Technical University) (www.videszinatne.lv) includes a Climate Technology Laboratory, Green Laboratory, and Environmental Monitoring Laboratory.

Latgale sustainable development research institute (www.ru.lv). The objective of the institute's operation is to form and perfect on an ongoing basis a theoretical and practical research basis in the field of preservation of environmental quality, efficient utilization of the resources of the national economy, and introducing eco-technologies necessary for the planning and development of the national economy in Latgale region. The Institute conducts research on problems in environmental protection, eco-technologies, natural resources, agricultural ecology and regional economics in order to achieve its objectives.

The Latvian Association for Environmental management is a non-governmental organization that aims to join the efforts of all stakeholders interested in promotion and implementation in Latvian enterprises and municipalities patterns of sustainable consumption and production, a systematic approach to environmental management and principles of local sustainable development.

Environmental Research Laboratory of SIA Estonian, Latvian & Lithuanian Environment (www.environment.lv) is accredited in the areas of environmental noise and air quality testing.

LEGISLATION

Environmental protection policy in Latvia is implemented by the Ministry of the Environment.

Latvia has finalized harmonization of its legislation with the various EU environmental directives. Latvia has taken the path of the EU environmental policy, and, therefore, at the present moment it aims to reduce emissions – especially greenhouse gas emissions (GHG), reduce the impact on the climate, and increase the use of renewable energy sources. Latvia has successfully taken part in the first EU emission-trading scheme for 2005-2007 and in the end of 2006 submitted the second version of the Second National Allocation Plan (NAP) for 2008-2012 to the European Commission.

USEFUL LINKS

Ministry of the Environment: www.vidm.gov.lv
State Environmental Service: www.vvd.gov.lv
Environment State Bureau: www.vpvb.gov.lv
Latvian Environment, Geology and Meteorology Centre: www.meteo.lv
Waste management association of Latvia: www.lasa.lv
Latvian Association of Waste Management Companies: www.lasua.lv
Latvian Association for Environmental Management: www.lvpa.lv

Renewable Energy in Latvia

Latvia has the highest share 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. It has significant forest resources, which contribute to it being a net exporter of biomass for energy.

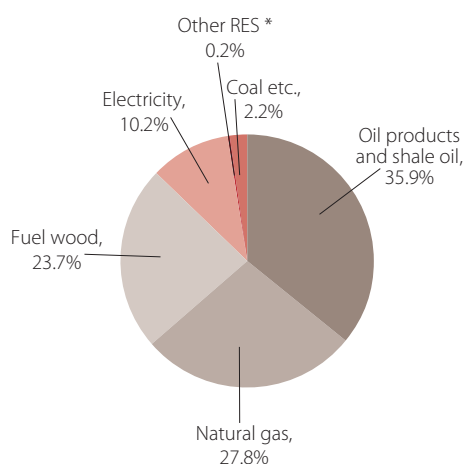
Since Latvia regained its independence in 1991, the main institution developing the overall energy policy, especially regarding the energy sector, is the Ministry of Economics (Department of Energy) supported by the Government and the Parliament.

However, since 2005 issues concerning renewable energy sources are addressed as well by the Ministry of Environment (Climate and Renewable Energy Department), but still the main role and decisive powers belong to the Ministry of Economy. Minor influences at the political level have two other executive institutions: Investment and Development Agency of Latvia (LIAA) and the Public Utilities Commission (Regulator); this last is in charge for setting network tariffs and default supply tariffs.

Although renewable energies are an integral part of the fight against climate change, Latvia has in the first place a role to increase the electrical basic load and also to contribute to growth, job creation. The renewable energy targets are calculated as the share of renewable consumption to gross final energy consumption. Renewable energy consumption comprises the direct use of renewable energy (e.g. biofuel) plus the part of the electricity and heat that is produced from renewable energy (e.g. wind, hydro), while final energy consumption is the energy that households, industry, services, agriculture and the transport sector use.

Lacking fossil resources, Latvia has a high level of import dependency, with oil and gas imported mainly from Russia. Hydro and gas provide nearly all of the domestic supply of electricity, with wind and biomass added to the mix in recent years representing a share of less than 1% from all energy produced from renewable energy sources.

The Structure of Primary Energy Consumption in 2007, %



*Straw, biogas, bioethanol, biodiesel

According to the Central Statistical Bureau of Latvia, the proportion of renewable energy sources in the primary energy balance was 29.1 % in 2007. The main part of this (approximately 80 %) is wood fuel. Considering that the available amount of hydro resources depends on meteorological conditions and water flow in rivers, the proportion of renewables in the primary energy balance fluctuates according to those factors.

INFORMATION ON ENERGY POLICY IN LATVIA

The main objectives of the energy policy are to ensure sustainable accessibility to the necessary energy resources and security of supply in order to foster economic growth and improve the quality of life, to ensure environmental quality retention and meet the objectives set in the Kyoto Protocol of UN FCCC and the Latvian Climate Change Programme on GHG emissions reduction for the years 2005 – 2010.

Electricity Supply is dominated by state JSC "Latvenergo" that generates more than 88% of all electricity generated in Latvia and ensures the importation of electricity, its distribution and supply to consumers. The Cabinet of Ministers adopted electricity trade regulations in its session of June 2007 which led to Latvia's electricity

market becoming fully de-regulated. There are more than 100 small power plants and over 10 licensed electricity distribution and sale companies operating in the territory of Latvia, the largest of which is the Estonian national energy company Eesti Energia.

JSC "Latvenergo" with several power stations: large hydro power stations Ķegums, Pļaviņas and Rīga with total capacity respectively of 264.1 MW, 868.5 MW, and 402 MW; two thermal power station - TEC-1 (144Mw) and TEC-2 (330 Mw); wind park Ainaži (1.2MW); small HES Aiviekste (0.8MW)

In 2007, the total amount of electricity produced was 4127 GWh.

The largest volume of electricity is produced by large hydro stations, which makes up to 60-70% of energy of the total energy balance. Thermoelectric stations produce about 30%, and the rest is divided between independent producers like small-scale hydro stations, wind parks, and others.

For a standard Latvian consumer with an annual consumption of 3500 kWh the payment for 100 kWh is EUR 10.03 however EU-27 average price is EUR 16.73. Industrial consumers with an annual consumption between 20000 and 70000 MWh in Latvia pays EUR 7.96 per 100 kWh and in the meantime EU-25 average price is EUR 10.29.

At present, JSC "Latvijas Gāze" is the only merchant in the natural gas market in Latvia. In compliance with licenses issued by the Public Utilities Commission, JSC "Latvijas Gāze" carries out the transmission, distribution, storage and sale of natural gas. Approximately 70 companies compete in the supply of liquefied petroleum gas.

Amendments to the Energy Law made on 26 May 2005 envisage main conditions for opening the natural gas market and were developed, taking into account Directive 2003/55/EC of the European Parliament and of the Council concerning common rules for the internal market in natural gas. The law covers issues concerning operation of systems, duties and rights of market participants and competition opportunities in the natural gas market. The Saeima has passed a special law prescribing that these amendments will come into force on 1 January 2010.

By choosing a regulated procedure of access, member states carry out the necessary measures to confer rights of accessing the system to natural gas companies and qualified users inside or outside the area, which contains an interconnected system, on the basis of published tariffs and other conditions and obligations that are to be complied with, when the system is used.

HEAT MARKET IN LATVIA

Preservation and development of heat networks is a national priority which enables application of combined heat and power production and reduction of the environmental impact of heat supply. In order to apply competitive combined heat and power production, preservation of the existent district heating networks, particularly in regions with large local energy resources, an increase of the technical level and efficiency of district heating networks is supported.

The largest heat energy consumer in Latvia is the household sector, which makes up 74% of the total heat energy demand.

Total heat energy consumption in district heating (DH) systems has decreased in recent years, for example from 10527 MWh in 1994 to 6828 MWh in 2004. The reasons of this reduction were the restructuring of the industries and agricultural market and household switch from DH to private heating. The following primary resources are used for heat energy production in Latvia:

- natural gas,
- oil products (oil, heavy fuel oil, liquid fuel oil),
- coal,
- shale oil,
- peat,
- wood.

The most commonly applied types of fuel in Latvia are natural gas, fuel oil (heavy fuel oil), diesel, coal, wood (wood, wood-processing residues, woodchips etc), and peat.

WIND ENERGY

Latvia has a very good potential for wind energy development alongside the Baltic Sea coastline, especially because a high voltage transmission line runs along the coastline. The total installed wind energy capacity in Latvia at the end of 2007 was about 26 MW.

According to the data from the Renewable Energy Program, technical potential for wind energy production has been estimated around 1277 GWh however the practical potential is estimated at 1000 GWh/year and it represents about 2000 MW of wind technical/or economical potential. Suitable sites for wind energy plants are the west coast and the eastern part of the Gulf of Rīga (nearby Ainaži). As well as according to the research results provided by the Ministry of Economy, wind energy potential in Latvia is about 0.8-4.5PJ or 220-1250GWh (2007).

The main wind park in Latvia is installed in Grobiņa, on the west coast close to Liepāja (220 km to the West from Riga). The project was commissioned in the end of 2002, with the installation of 33 wind generators of 6000 kW each for a total installed capacity of 19.4 MW.

There are up to 50 private wind farms in the country that produce electricity for their own or public needs in small amounts.

Current relevant suppliers and/or installation companies:

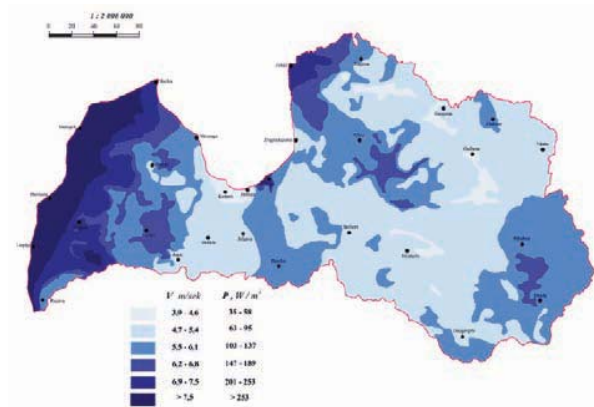
- Kroneši LTD, Sales of small wind mill power equipment,
- Baltic Wind Power Corporation LTD,
- ZS Virtelji Ltd.,
- "KG Enerģija 4",
- BK Energy LTD.

Wind energy potential depends on wind availability in the country. Several research studies show that there are three most favourable regions in Latvia for wind farms:

- 10-30km wide breeze zone in Kurzeme,
- Kurzeme highlands with elevation of 80 meters and more,
- Ainažu breeze region with 15km zone from the seashore.

The map shows the average annual wind speed at an elevation of 50 metres:

Wind Map of Latvia



The current situation with de-regulated electricity market and a well-developed electricity network provide favourable conditions for wind electricity generation in the country.

After the establishment of the first two major wind energy projects (popularly called "Ainaži" and "Grobiņa") in around 2000, no further projects were implemented anymore, because of financial reasons. The so-called "double tariff" support system established during the nineties on renewable energy was not available any more for new projects.

SOLAR ENERGY

Solar radiation level in Latvia has similar values as in other northern European countries, for example Denmark. However the use of solar energy in Latvia is not so popular and only few projects have been implemented within the framework of different bilateral programmes, for example the solar heating system of Aizkraukle secondary school

financed by the Danish Energy Authority. Aizkraukle is the first city in Latvia where heat is partly generated using solar collectors that have been installed onto the roofs of two buildings:

- On the roof of Aizkraukle Gymnasium - 33 m²,
- On the roof of the boiler house - 110 m².

The project was initiated in 2001 and was implemented within the framework of a Danish and Latvian cooperation programme. The solar collectors were installed in January 2003. However, research in the field of solar heating systems is now on going at the Institute of Energy Systems and Environment of Rīga Technical University.

The market (trade in panels) is very small and young. The market orientation is only on the private housing and industrial sector and larger public buildings. Some small trading companies:

- Solar systems LTD
- Taupi LTD, www.Saule_Kolektors.lv LTD

BIOMASS, BIOFUELS AND BIOGAS ENERGY

Biomass is the most important source of renewable energy so far. This Chapter addresses the "renewable" energy produced from biomass. However, biomass can be categorised into two groups. Biomass can be processed either into heat and electricity (mostly wood and biogas), or into liquid biofuel (biodiesel or ethanol). These are different technologies and have different economic characteristic; for instance, liquid biomass is mostly associated with the transportation industry and solid biomass with district heating and electricity production.

Wood fuel or solid biomass, in particular in the form of wood, is the main renewable energy source available in Latvia together with hydro energy resources. Biofuels, biogas and straw are less widespread and less used. Wood is actively used for heat production in district heating and separate boiler houses. More than 50% of existing biomass resources are exported to European and other countries and this is the reason for the slow development of this sector. Evaluation of these existing resources that are not being used (agricultural, residues, roadside wood) and sustainable forestry being currently implemented by the State Forest Agency and is a good start for wood source market development.

There are two straw boiler houses in Latvia which were started up as pilot projects.

Today there is a great variety of systems, methods and equipment used in harvesting of wood raw material for fuel and the production and handling of wood fuels in Latvia.

Three biogas stations also operate in Latvia. One of them is a CHP located in Riga that belongs to the wastewater treatment company "Rīgas ūdens" and produces energy

from wastewater sludge. Another two cogeneration plants produce energy from landfill gas and are located in Rīga and Liepāja. Their total installed capacity is 7.5 MW.

The first agricultural biogas plant is in start-up phase now in Vecauce, a student research village of Latvia Agricultural University. The first stage of the plant development is biogas production, the second - installation of a cogeneration plant for energy production.

It is forecasted that the available biogas amount in Latvia will increase by improving the logistics and waste separation practice. Today a number of new biogas projects are being developed and most of them are agricultural biogas projects.

There are 2 bioethanol production plants, 5 biodiesel plants and 7 rapeseed oil production plants operating in Latvia. Regarding the information provided by Latvian Ministry of Agriculture over the next few years at least 6 new biofuel production plants will be developed. The total annual capacity of biodiesel plants in Latvia in 2006 was around 11 000 tons, while bioethanol production units had a capacity of 10 000 tons.

According to the State Revenue Service's data, biofuels accounted for 0.22 % of the total fuel used for transportation in Latvia in 2006. In 2006, 71 % of the biodiesel and 93 % of the bioethanol produced in Latvia was exported to EU Member States.

Liquid biofuel use projections and the related production and marketing issues are described in the programme for production and use of biofuels in Latvia (2003-2010). According to the calculations of Ministry of Agriculture of Latvia, for biofuel to reach a 5.75 % share of total consumption, 75 000 tons of biofuel will have to be produced, *i.e.* for example 32 000 tons of bioethanol and 43 000 tons of biodiesel.

HYDROPOWER ENERGY

The Latvian hydropower industry can be divided into two groups:

- The large hydropower plants in the Daugava operated by JSC Latvenergo; and
- The small units, which have no impact on installed capacity on a national scale, but a large negative impact on the environmental aspects.

In three Daugava hydropower plants, JSC Latvenergo generates on average 70% of the total electricity volume generated in the country. The capacity of Ķegums HPP constitutes 264.1 MW, Pļaviņas HPP - 868.5 MW and Rīga HPP - 402 MW.

Ķegums HPP includes two hydropower plants. Ķegums HPP-1 is the oldest hydropower plant on the Daugava

(constructed in 1936-1940). During the reconstruction of Ķegums HPP-1 in 1998-2001 all four hydroelectric generating units and their automated control systems were replaced by new ones. Ķegums HPP-2 was put into operation in 1979. It has three hydroelectric generating units with the total capacity of 192 MW.

Pļaviņas HPP with its ten hydroelectric generating units has the greatest capacity in the Baltic States. It was launched in 1968. The geological and hydrological features of Pļaviņas HPP are complicated as it is built on sandy loam and loamy soil with a rather steep drop. In 1991-2001 six hydroelectric generating units were modernised, resulting in the increase of the plant capacity to 868.5 MW.

Rīga HPP was put into operation in 1974 and there are six hydroelectric generating units installed in it. To regulate the network voltage the plant also operates in the synchronous compensator regime.

The small one of Latvenergo is Aiviekste HPP with the capacity of 0.8 MW. The small power plants generate about 0.1% of Latvenergo's total electricity volume.

GEOHERMAL ENERGY

The main data about Latvian geothermal energy potentials is obtained during scientific research performing deep boring. Borings have been made in more than 100 places in Latvia and as a result two anomalies were discovered with border temperature of 570C and 650C. The first anomaly is located in the central part of Latvia between Jūrmala and Eleja, the second is located in the coastal part of the Baltic Sea. No projects have been developed for these areas, though. Total potential for Latvian geothermal energy is estimated at 175MW.

Nevertheless, geothermal energy is becoming more and more popular in Latvia due to the constant increase of tariffs for heat energy and electricity.

However, there are no statistical data available on actual use of this alternative type of energy in households. As well there is no information on specialized engineering companies and existing projects.

An interesting address of a leading engineering company in field of water and ground works is Geo Consultants LTD (www.geoconsultants.lv)

Heat pump supply for private and public buildings is a common business as well in Latvia. However, it is questionable whether this falls under the "renewable energy" category since the consumption of "black" electricity is still significant.

NATIONAL LEGISLATION FOR RENEWABLE ENERGY SOURCES (RES)

In order to obtain the rights to set up a new electric power plant or to increase the installed electrical capacity of an existing power plant, it is necessary to receive a permit from the Ministry of Economics according to the Regulations No. 883 "Regulations on Permissions for the Increase of Electric Energy Production Capacity or Establishment of New Production Plants", issued by the Cabinet of Ministers on 11 August 2009 (initially adopted on 29 August 2006 as Regulation No. 695). Regulations No. 883 stipulate that Ministry of Economics (Energy Department) issues the permission for the introduction of new production plants.

The Cabinet of Ministers Regulation No. 221 "Regulations on Electricity Production from Cogeneration" (initially adopted on 6 November 2006 as Regulation No. 921) in force since 10 March 2009 sets the criteria by which cogeneration power stations are qualified to receive rights to sell the produced electricity within compulsory procurement.

The Cabinet of Ministers Regulation No. 198 "Regulations on Electricity Generation from Renewable Energy Sources (RES)" (initially adopted on 24 July 2007 as Regulation No.503) was adopted on 24 February 2009. It prescribes conditions for electricity production using renewable energy sources (wind, small hydro, biomass, biogas, solar) and defines criteria for RES electricity producers to be eligible to sell their electricity within compulsory procurement with fixed purchase prices (a feed-in tariff system) if the installed electrical capacity exceeds 1 MW.

Merchants, which have acquired the right to sell electricity produced from the renewable energy resources within the scope of mandatory procurement in accordance with the procedures specified in Regulation No. 198, the selling prices for the volume of electricity which they are entitled to sell within the scope of mandatory procurement shall be calculated using the following formulae:

| Resource | Specification | Formula | Duration (years that an investor is entitled to support) |
|----------|--|---|---|
| Wind | power plants if the electric capacity set thereof does not exceed 0.25 MW and if no more than one electricity generating installation has been connected to one transformer or distributing station of the electricity distribution system | $C = 147 \times e \times k$ | for 10 years starting from the power station commissioning day |
| Wind | power plants which do not conform with the aforementioned conditions | $C = 120 \times e \times k$ | for 10 years starting from the power station commissioning day |
| Biomass | power plants with an installed electric capacity up to 4 MW and for the biogas power plants with the capacity of 2MW or higher | $C = \frac{T_g \times k}{9.3} \times 4,5$ | for 10 years starting from the power station commissioning day |
| Biomass | power plants with an installed electrical capacity that exceeds 4 MW | $C = \frac{T_g \times k}{9.3} \times 3,6$ | for 10 years starting from the power station commissioning day |
| Hydro | power plants with an installed electric capacity up to 5 MW | $C = 159 \times e \times k$ | for 10 years starting from the day an administrative act is issued by the Ministry of Economics granting permission to sell electricity produced from RES |
| Biogas | Power plants with the capacity smaller than 2MW | $C = 188 \times e \times k$ | for 10 years starting from the power station commissioning day |
| Solar | | $C = 427 \times e$ | |

C – is the price without value added tax for which a public trader purchases electricity produced from renewable energy resources (LVL/MWh) from the power plant;

k – is the price differentiation coefficient (See 1. table, page 14);

e – National currency (Lats) exchange rate against EUR set by the Bank of Latvia on the day an invoice for electric energy is issued;

T_g – is the trade final tariff for natural gas approved by the regulator without value added tax, which is specified for the consumption of natural gas from 126 thousand n.m³ up to 1 260 thousand n.m³ per year if the calorific power of the natural gas is 7 900 kcal/n.m³ (LVL/thousand n.m³).

Values of coefficient k depending on installed electrical capacity

| Installed electrical capacity, MW | Coefficient k value |
|-----------------------------------|---------------------|
| ≤ 0.08 MW | 1.240 |
| > 0.08 MW – 0.15 MW | 1.231 |
| > 0.15 MW – 0.20 MW | 1.202 |
| > 0.20 MW – 0.40 MW | 1.131 |
| > 0.40 MW – 0.60 MW | 1.086 |
| > 0.60 MW – 0.80 MW | 1.072 |
| > 0.80 MW – 1.00 MW | 1.055 |
| > 1.00 MW – 1.50 MW | 1.035 |
| > 1.50 MW – 2.00 MW | 1.008 |
| > 2.00 MW – 2.50 MW | 0.992 |
| > 2.50 MW – 3.00 MW | 0.982 |
| > 3.00 MW – 3.50 MW | 0.974 |
| > 3.50 MW – 10.00 MW | 0.965 |
| > 10.00 MW – 20.00 MW | 0.950 |
| > 20.00 MW – 40.00 MW | 0.920 |
| > 40.00 MW – 60.00 MW | 0.890 |
| > 60.00 MW – 80.00 MW | 0.860 |
| > 80.00 MW – 100.00 MW | 0.830 |
| >100.00 MW | 0.800 |

Share from final electricity consumption of end users in Latvia that mandatorily has to be covered with electricity produced using renewable energy sources

| RES type | 2009 | 2010 and the following 10 years |
|---|---------|---------------------------------|
| Hydropower plants with capacity over 5 MW | 36.35 % | 34.31 % |
| Hydropower plants with capacity of 5 MW and less | 1.88 % | 1.98 % |
| Wind power plants with capacity that does not exceed 0.25 MW and where no more than one unit is connected to the power distribution point | 0.20 % | 0.27 % |
| Wind power plants which do not fall under aforementioned criteria | 3.88% | 5.10% |
| Biogas electricity generation plants | 6.90% | 7.93% |
| Biomass power plants and biomass and fossil fuel co-firing power plants | 3.46 % | 4.97 % |
| Solar power plants | 0.00 % | 0.01 % |
| Total | 52.67 % | 54.57 % |

Cabinet of Ministers Regulation No. 772 "Regulations Regarding Requirements for Biofuel Quality, Conformity Assessment, Market Supervision and Procedures for Consumer Information" (approved on 18 October 2005)

Cabinet of Ministers Regulation No. 498 "Procedures for the Circulation of Fuel Containing Bioproducts and

Administration of the Relevant Excise Duty" (approved on 5 July 2005)

Cabinet of Ministers Regulation No. 280 "Regulations Regarding the Financial Assistance Quotas for Biofuel Production"

Financial Assistance Quotas for Biofuel Production for 2008–2010

| Nr. | Source | 2008 | 2009 | 2010 |
|-----|--|------------|------------|------------|
| 1. | Bioethanol, litres | 27 848 101 | 34 177 215 | 40 506 329 |
| 2. | Biodiesel, litres | 31 818 182 | 39 772 727 | 48 863 636 |
| 3. | Biofuel proportion in the fuel market, % | 4.25 | 5.00 | 5.75 |
| 4. | Total biofuel, litres | 59 666 283 | 73 949 942 | 89 369 965 |

"Law on Biofuel" (2005) specifies the measures which would ensure that biofuel comprises not less than 5.75% of the total amount of fuel existing in the national economy intended for transport by 31 December 2010. It also determines that the State assistance shall be granted (in a form of quotas) in order to produce the minimum necessary annual amount of biofuel. Currently State assistance consists of a lower excise duty rate and the financial assistance quotas for biofuel production. Annual financial assistance quotas are estimated according to the production capacity of each producer and will be granted to enterprises until 2011.

"Law on Control of Aid for Commercial Activity" (2002) specifies that aid for investments in the production of energy from renewable resources may be approved up to 40% from the aid for environmental protection activities. Aid may also be granted in order to compensate for the difference between the costs of production of renewable energy and the electricity market price (electricity sales tariff).

"Law On Excise Duties" (2003) prescribes that fuels with added biofuels are subject to a reduced excise tax rate, while rapeseed oil (marketed as fuel) and biodiesel fuel, which is 100% acquired from rapeseed oil, are exempt from excise tax.

| Resource | Total support level (= tax exemption incl. reduction of VAT to be paid) EUR/litre | Comments |
|---|---|--|
| Rapeseed oil and Biodiesel | Excise tax rate: 0 | Rapeseed oil, which is marketed or used for fuel, and biodiesel fuel, which is 100% acquired from rapeseed oil |
| Biodiesel (if biodiesel add-on is from 5-30%) | Excise tax rate: 317 EUR (223 lats) per 1000 litres | Added rapeseed oil to mineral oil products or biodiesel fuel acquired from rapeseed oil |
| Biodiesel (if biodiesel add-on is at least 30%) | Excise tax rate: 233 EUR (164 lats) per 1000 litres | Added rapeseed oil to mineral oil products or biodiesel fuel acquired from rapeseed oil |

Law "On Environmental Impact Assessment" (1998) prescribes the procedures to be performed in order to assess the possible impact of the implementation of intended activities or a planning document on the environment and to develop proposals for the prevention or decrease of negative effects or to prohibit the initiation of an intended activity in cases of the violation of the requirements. The Law directly regulates impact assessment of wind power plants.

STATE SUPPORT FOR RENEWABLE ENERGY PROJECTS

Along with the feed-in tariff system to promote electricity generation from RES, the following support instruments are also available in Latvia:

Ministry of Economics provides co-funding from the EU financial support instruments (in accordance with the procedures and criteria specified in the legal enactments regulating the instruments of financial support of the European Union) for projects that intend to produce electricity from biomass and wind. The grants stated below are administered by the Construction, Energy and Housing State Agency.

Ministry of Agriculture provides co-funding from the EU financial support instruments (in accordance with the procedures and criteria specified in the legal enactments regulating the instruments of financial support of the European Union) for projects which aim to grow, acquire and produce biomass, intended for electricity production. The available grants are administered by the Rural Support Service.

Ministry of Environment has elaborated another support system called "Green Investment Scheme" which is a long-term financing system that transfers revenues from the sale of greenhouse gas emission (CO₂) assigned amount units to environmental and energy efficient measures with the focus on climate benefits.

RENEWABLE ENERGY TARGETS FOR LATVIA

- The target within the framework of the Directive 2001/77/EC for Latvia is to reach 49.3% of electricity consumption from renewable sources by 2010.

- The target within the framework of the Directive 2003/30/EC for Latvia is to reach a 5.75% share of biofuel use for the transportation sector by 2010.

- The target within the framework of the new Directive 2009/28/EC for Latvia is 40% share of energy from renewable sources in final consumption of energy and 10% share of renewable energy use for transport sector by 2020.

The new Renewables Directive stipulates the submission of the national action plan for achieving the set targets to the European Commission by 30 June 2010. Thus, the national approach is to be outlined now – will the use of renewable resources be in the focus for generating electricity and thermal energy? What energy efficiency measures, especially relating to thermal energy, are to be implemented and what the benefit from it might be?

USEFUL LINKS

Latvia Biogas Association (LBA)
Mr Andis Kārklīņš, President
E-mail: andis.alabastrs@apollo.lv

Latvia Biofuel and Bioenergy Association (LBBA)
Mr Daumants Znatnajs, President
Phone: +371 67210018
E-mail: info@latvijasdegviela.lv

Latvian Biomass Association (LATBIONRG)
Mr Didzis Palejs, Member of the Board
Phone: +371 67298369
E-mail: didzis.palejs@latbionrg.lv
WEB: www.latbionrg.lv

Latvian Wind Energy Association
Mr Paulis Barons, President
Phone: +371 29411216
E-mail: paulis@lps.lv
WEB: www.windenergy.lv

Small Hydropower Plant Association (MHEA)
Mr Orvils Henrišs, President
Phone: +371 26439106
E-mail: orvils@autoosta.lv
WEB: http://mhea.lv

Rural Support Service
Phone: +371 67027542
Fax: +371 67027120
E-mail: lad@lad.gov.lv

Ministry of Economics
Mr Dins Merirands
Head of Energy Department
Phone: +371 67013227
E-mail: dins.merirands@em.gov.lv
WEB: www.em.gov.lv

Construction, Energy and Housing State Agency
Ms Signe Kajaka
Phone: +371 67041956
Fax: +371 67041961
E-mail: Signe.Kajaka@bema.gov.lv
WEB: http://esfondi.bema.gov.lv/parmums.html

Major Product Lines

| No | Company | Technological equipment allows manufacture and provide the following services | | | | | | | | | | |
|----|---|---|-------------------------------------|---------------------------------|-----------|-------------|--------------------------------------|---------------------------|---------|--------|---------|--|
| | | Recycling | Engineering – project organizations | Higher educational institutions | Expertise | Utilization | Scientific and research institutions | Training of professionals | Biofuel | Biogas | Biomass | Others |
| 1 | ARRE CONCEPTS, LTD | | | | | | | | | | | Wave movement energy |
| 2 | ASSOCIATION OF BIOTECHNOLOGY OF LATVIA, ASSOCIATION | | | | | | | | | | | |
| 3 | BAO, JSC | | | | | | | | | | | |
| 4 | BIODEGVIELA, LTD | | | | | | | | | | | |
| 5 | BIOTEHNISKAIS CENTRS, JSC | | | | | | | | | | | |
| 6 | ECO TOP, LTD | | | | | | | | | | | Technological equipment for waste water treatment system different modules production |
| 7 | EKODOMA, LTD | | | | | | | | | | | |
| 8 | EKO OSTA, LTD | | | | | | | | | | | |
| 9 | EKOSERVIS LAT, LTD | | | | | | | | | | | |
| 10 | ESTONIAN, LATVIAN & LITHUANIAN ENVIRONMENT, LTD | | | | | | | | | | | |
| 11 | FILTRI, LTD | | | | | | | | | | | |
| 12 | HARMAN, LTD | | | | | | | | | | | Installation, repair and service of different waste management machinery |
| 13 | HOST ENERGO, LTD | | | | | | | | | | | |
| 14 | LATVIAN BIOGAS ASSOCIATION, SOCIETY | | | | | | | | | | | |
| 15 | LATVIJAS VIDES, ĢEOLOĢIJAS UN METEOROLOĢIJAS CENTRS, STATE LTD | | | | | | | | | | | |
| 16 | LIEPĀJAS RAS, LTD | | | | | | | | | | | |
| 17 | L & T, LTD | | | | | | | | | | | |
| 18 | INSTITUTE OF ENVIRONMENT AND ENERGY SYSTEMS (RIGA TECHNICAL UNIVERSITY), SCIENTIFIC INSTITUTION | | | | | | | | | | | |
| 19 | VALKAS BIOENERGO KOMPĀNIJA, LTD | | | | | | | | | | | |
| 20 | VENTEKO, LTD | | | | | | | | | | | Technical assistance and institutional capacity building projects, development of professional training programs |
| 21 | VIDES KONSULTĀCIJU BIROJS, LTD | | | | | | | | | | | Contamination handling and pollution treatment machinery and equipment; monitoring and sampling equipment |
| 22 | VIDES PROJEKTI, STATE LTD | | | | | | | | | | | Film Production Studio |
| 23 | VIDES SERVISS, LTD | | | | | | | | | | | Waste collection, transfer, used package pretreatment, disposal services. |
| 24 | ZIEMEĻVIDZEMES ATKRITUMU APSAIMNIEKOŠANAS ORGANIZĀCIJA, LTD | | | | | | | | | | | Exchange of experience in waste management sector |
| 25 | ZEMGALE REGIONAL ENERGY AGENCY (ZREA), ASSOCIATION | | | | | | | | | | | |

Company Profiles



ARRE CONCEPTS

Legal form: LTD
Address: Kapseļu iela 7-44, Rīga, LV-1046, Latvia
Phone: +371 29943734
Fax: +371 67410233
E-mail: rimis_v@inbox.lv
Website: www.arreconcepts.com

Director: Mr Rims Vaitkus
Contact: Mr Rims Vaitkus
Position of the contact person: Member of the Board
Languages spoken: Latvian, Russian, English
Number of employees: 1
Founded in: 2007
Main markets: Latvia

Business Profile: We are in the business of manufacturing WAVE POWER ONLY (WPO) electrical power stations. A WPO is a device which transforms undulating motion directly into rotational motion in order to operate various mechanical devices or to produce electricity.

Desired Cooperation: Looking to form a joint venture in Greece, Malaysia, India.



BAO

Legal form: JSC
Address: Mūkusalas iela 33, Rīga, LV-1004, Latvia
Phone: +371 67612259
Fax: +371 67614945
E-mail: bao@bao.lv
Website: www.bao.lv

Director: Mr Māris Kalniņš
Contact: Mr Māris Kalniņš
Position of the contact person: Chairman of the Board
Languages spoken: Latvian, Russian, English
Number of employees: 79
Founded in: 1996

Turnover in 2007: EUR 2 610 817
Turnover in 2008: EUR 2 280 571
Export volume 2007: EUR 2 607 653
Export volume 2008: EUR 2 261 511
Main markets: Latvia

Business Profile: BAO is a company active in handling medical waste, industrial waste, discarded electronic and electrical equipment and in the treatment of contaminated soil. The company provides sorting and processes services for most materials derived from the discarded electronic and electrical equipment it handles.

Desired Cooperation: The company is looking for clients who would be interested in receiving waste treatment services of a high quality at competitive prices. The company is also looking for clients intending to increase their amount of waste discharge.

Certificates in use: ISO 9001, ISO 14001



BIODEGVIELA

Legal form: LTD
Address: Terēzes iela 1, Rīga, LV-1012, Latvia
Phone: +371 64807674
Fax: +371 64807682
E-mail: biodegviela@inbox.lv
Website: www.bioethanol.lv

Director: Mr Rolands Zagorskis
Contact: Mr Ivars Minkevičs
Position of the contact person: Project Manager
Languages spoken: Latvian, Russian, English
Number of employees: 65
Founded in: 2004

Turnover in 2007: EUR 2 846
Turnover in 2008: EUR 123 124
Main markets: Latvia, Lithuania

Business Profile: Producer of ethyl alcohol and bio-ethanol (dehydrated alcohol). The company produces ethyl alcohol from agricultural products. Rye, wheat and triticale constitute the main raw ingredients in ethyl alcohol production.

Desired Cooperation: We welcome anyone interested in the sale of bio-ethanol. Countries of particular interest for cooperation are Germany, Poland, Sweden etc.

Certificates in use: bio-ethanol standard



BIOTEHNISKAIS CENTRS

Legal form: JSC
Address: Dzērbenes iela 27, Rīga, LV-1006, Latvia
Phone: +371 67553518
Fax: +371 67553518
E-mail: btc@edi.lv
Website: www.bioreactors.net, www.btc-automation.lv

Director: Mr Juris Vanags
Contact: Mr Juris Vanags
Position of the contact person: Chairman of the Board
Languages spoken: Latvian, Russian, English, German
Number of employees: 11
Founded in: 1996

Turnover in 2007: EUR 402 247
Turnover in 2008: EUR 424 462
Export volume 2007: EUR 114 077
Export volume 2008: EUR 116 605
Main markets: Latvia, Russia, Germany, Switzerland

Business Profile: This company runs laboratory bioreactors using a novel magnetic drive as well as pilot-project scale bioreactors (till 2500l). They are bioprocess controllers flexible enough to adapt to various bioreactors and fermentations. *Biotehniskais Centrs* is also engaged in refurbishing second-hand bioreactors as well as customised industrial process automation using *Siemens Simatic*, *Schneider Electric* and equipment from the *PLC* company, as well as *Siemens WinCC*, *ARC Informatique*, *PC Vue* and software from the *SCADA* company).

Desired Cooperation: The company is looking for cooperation in the fields of product delivery, project implementation, customised orders and joint project development.

Certificates in use: ISO 9001



EKODOMA

Legal form: LTD
Address: Noliktaivas iela 3-3, Rīga, LV-1010, Latvia
Phone: +371 67323212
Fax: +371 67323210
E-mail: ekodoma@ekodoma.lv
Website: www.ekodoma.lv

Director: Mr Claudio Rochas
Contact: Ms Jūlija Bulgakova
Position of the contact person: Project Manager
Languages spoken: Latvian, Russian, English, Italian
Number of employees: 20
Founded in: 1992

Turnover in 2007: EUR 401 692
Turnover in 2008: EUR 344 713
Main markets: Latvia, EU

Business profile: We offer high-quality expertise, energy auditing project development, analysis and business plan development services in the fields of energy efficiency, renewable energy sources and cleaner technologies associated with energy production, transfer and utilisation, industries, residential areas and municipalities, among others. We have more than 17 years of experience on the Latvian and European market. Our highly trained staff and broad network of local contacts has gained us high esteem. As well, we actively participate in European projects within the framework of the Intelligent Energy Europe programme and contribute to the fulfilment of European energy, efficiency and environmental objectives.

Desired Cooperation: We are interested in taking part across Europe and locally in projects related to energy efficiency, energy production and utilisation as equal partners or as local experts.

Certificates in use: Energy auditor's certificate: Dagnija Blumberga, Nr. EA 1-0001, Gatis Žogla, Nr. EA 1-0009, Agris Kamenders, Nr. EA 1-0014



EKO OSTA

Legal form: LTD
Address: Tvaika iela 39, Rīga, LV-1034, Latvia
Phone: +371 67393860
Fax: +371 67393067
E-mail: ekoosta@ekoosta.lv
Website: www.ekoosta.lv

Director: Mr Andrejs Laškovs
Contact: Mr Emīls Laškovs
Position of the contact person: Project Manager
Languages spoken: Latvian, Russian, English
Number of employees: 60
Founded in: 1999

Turnover in 2007: EUR 2 339 514
Turnover in 2008: EUR 3 586 109
Main markets: Latvia

Business Profile: Our goal is to limit environmental pollution and to support the integration of environmentally friendly technologies. We engage in the management of hazardous waste, in technology, construction and maintenance of any type of purification facility. We are also active in design and technical consultation as well as the purification of contaminated soil using biotechnological methods (e.g. the fermentation technique).

Desired Cooperation: Participation in joint projects.

Certificates in use: ISO 14001



Ekoservis Lat

EKOSERVIS LAT

Legal form: LTD

Address: Atlasa iela 5, Rīga, LV-1026, Latvia

Phone: +371 67387342

Fax: +371 67387343

E-mail: info@ekoservislat.lv

Website: www.ekoservislat.lv

Director: Mr Igors Dovgijs

Contact: Ms Regīna Kampāne

Position of the contact person: Member of the Board

Languages spoken: Latvian, Russian, English

Number of employees: 4

Founded in: 2004

Turnover in 2007: EUR 152 642

Turnover in 2008: EUR 93 400

Main markets: Latvia

Business Profile: We deal in waste water treatment plants for private houses, pumping stations, grease catchers, oil separators, aeration components, compressors and pumps.

Desired Cooperation: Seeks to cooperate in the design of waste water equipment.

Certificates in use: ISO 14001



SIA Estonian, Latvian & Lithuanian Environment

ESTONIAN, LATVIAN & LITHUANIAN ENVIRONMENT

Legal form: LTD

Address: Skolas iela 10-8, Rīga, LV-1010, Latvia

Phone: +371 67242411

Fax: +371 67242466

E-mail: elle@environment.lv

Website: www.environment.lv

Director: Mr Valts Vilnītis

Contact: Mr Valts Vilnītis

Position of the contact person: Member of the Board

Languages spoken: Latvian, Russian, English

Number of employees: 18

Founded in: 1998

Turnover in 2007: EUR 1 602 290

Turnover in 2008: EUR 1 399 103

Export volume 2007: EUR 850 000

Export volume 2008: EUR 800 000

Main markets: Latvia, Lithuania, Estonia, Scandinavia, Eastern Europe

Business Profile: We offer a wide range of consultancy, analytical and management services including: environmental due diligence, environmental management systems (ISO 14001) – development and auditing, environmental modelling (air pollution, dispersion, environmental noise) and geographic information systems (GIS). Furthermore, our services include environmental testing and laboratory services, institutional building and capacity development, environmental impact assessment (EIA), strategic environmental assessment (SEA), environmental permits (IPPC) and not to mention environmental project preparation and management, nature management, biodiversity studies, territorial planning, the organisation and facilitation of seminars, conferences and workshops.

Desired Cooperation: We look forward to working on joint consulting and research projects in Latvia, Lithuania, Estonia and the Nordic Countries as well as in Central and Eastern Europe.

Certificates in use: ISO 9001, ISO 17025



EURO BION

Legal form: LTD
Address: Lielirbes iela 27, Rīga, LV-1046, Latvia
Phone: + 371 26585221
Fax: + 371 67215068
Website: www.eurobion.lv, www.eurobion.eu

Director: Mr Ainars Lorencs
Contact: Mr Andris Junkurs
Position of the contact person: Member of the Board
Languages spoken: Latvian, Russian, English
Number of employees: 7
Founded in: 2007
Turnover in 2007: EUR 67 000
Turnover in 2008: EUR 25 000
Main markets: Latvia

Business profile: Our company has the necessary experience in the construction and reconstruction of new waste water treatment facilities of varying capacity. We implement the new technologies based on rhythmic aerotanks. Complete biological purification meeting all quality standards is a hallmark of "EUROBION" technology.

Desired Cooperation: We are looking for local partners to help in producing and implementing new "EUROBION" waste water treatment systems.



FILTRI

Legal form: LTD
Address: Baltā iela 7, Rīga, LV-1055, Latvia
Phone: +371 67466674
Fax: +371 67466652
E-mail: filtri@filtri.lv
Website: www.filtri.lv

Director: Ms Lienīte Bite
Contact: Ms Lienīte Bite
Position of the contact person: Chairman of the Board
Languages spoken: Latvian, Russian, English
Number of employees: 9
Founded in: 2004

Turnover in 2007: EUR 370 000
Turnover in 2008: EUR 475 000
Export volume 2007: EUR 8 600
Export volume 2008: EUR 16 000
Main markets: Lithuania, Estonia

Business Profile: Our core skills and experience in manufacturing and assembling air filters for HVAC in the Latvian market gives us the means to expand our market share in the Baltic States and Eastern Europe.

Desired Cooperation: The company is interested in attracting investments in order to increase the efficiency of the business. Advanced technology, a high degree of technical skills, a reputation for honest dealings with customers over a long period of existence guarantees that cooperation with *FILTRI Ltd.* will be successful.

Certificates in use: ISO 9001



HARMAN

Legal form: LTD
Address: Ventas iela 4, Sigulda, Siguldas nov.,
LV- 2150, Latvia
Phone: +371 67973229
Fax: +371 67976072
E-mail: harman@apollo.lv
Website: www.harman.lv

Director: Mr Jānis Buivids
Contact: Mr Jānis Zviedris
Position of the contact person: Project Manager
Languages spoken: Latvian, Russian, English
Number of employees: 4
Founded in: 2003
Main markets: Latvia, Estonia, Lithuania

Business Profile: Harman is in the business of delivery, maintenance, service and repair of the following waste processing and recycling machinery: balers, various kinds of stationary and mobile shredders and crushers, waste-sorting lines, various screens, compost production equipment and equipment for the processing of tyres and electronic scrap.

Desired Cooperation: The company is looking to cooperate in the fields of distribution, installation, service and repairing of various kinds of machinery.



HOST ENERGO

Legal form: LTD
Address: Maskavas iela 42 - 51B, Rīga, LV-1050, Latvia
Phone: +371 67204617
Fax: +371 67204619
E-mail: info@host.lv
Website: www.host.lv, www.host.nl

Director: Mr Hermanus Klein Teeselink
Contact: Mr Ebbing Klaas Osinga
Position of the contact person: Commercial Director
Languages spoken: Latvian, Russian, English,
German, Dutch
Number of employees: 7
Founded in: 2001

Turnover in 2007: EUR 968 128
Turnover in 2008: EUR 1 989 699
Main markets: Latvia, Estonia, Lithuania

Business Profile: We work with farm-scale and industrial biogas plants, biomass co-generation and flue gas condensers as well as engineering, delivery, installation and consultancy.

Desired Cooperation: We are looking to work together in developing biomass and biogas CHP projects. Partners of interest would include farms, industries, power supply and waste management companies as well as municipal institutions and enterprises.



L & T

Legal form: LTD
Address: Vietalvas iela 5, Rīga, LV-1009, Latvia
Phone: +371 67111001
Fax: +371 67270148
E-mail: kc@l-t.lv
Website: www.l-t.lv

Director: Mr Reinis Cepelis
Contact: Ms Kristīne Kudrjavceva
Position of the contact person: Translator
Languages spoken: Latvian, Russian, English
Number of employees: 1050
Founded in: 1993

Turnover in 2007: EUR 10 933 946
Turnover in 2008: EUR 24 046 581
Export volume 2007: EUR 474 145
Export volume 2008: EUR 1 001 505
Main markets: Latvia, Lithuania, Finland, Greece, etc.

Business Profile: L & T is active in the field of household, hazardous and bulky recyclable waste management and collection as well as sorting, property maintenance and cleaning services to shops, offices and production plants, environmental products.

Desired Cooperation: The company is seeking to join forces with waste management and recycling companies as well as producers of environmental products.

Certificates in use: ISO 9001, ISO 14001



LIEPĀJAS RAS

Legal form: LTD
Address: "Ķīvītes", Grobiņas pag., Grobiņas nov.,
LV- 3430, Latvia
Phone: +371 63459091
Fax: +371 63459092
E-mail: birojs@liepajasras.lv
Website: www.liepajasras.lv

Board Member: Mr Normunds Niedols
Contact: Mr Normunds Niedols
Position of the contact person: Member of the Board
Languages spoken: Latvian, Russian, English
Number of employees: 43
Founded in: 2000

Turnover in 2007: EUR 1 045 585
Turnover in 2008: EUR 1 431 171
Main markets: Latvia

Business Profile: This company's basic operation is the management of solid waste processing plant based on biodegradable energy cells with LFG collection and electric production.

Desired Cooperation: To work in innovating waste processing technologies.

Certificates in use: Internal quality assurance system



LATVIAN ENVIRONMENT, GEOLOGY AND METEOROLOGY CENTRE

Legal form: State LTD
Address: Maskavas iela 165, Rīga, LV-1019, Latvia
Phone: +371 67032600
Fax: +371 67145154
E-mail: lvgmc@lvgmc.lv
Website: www.lvgmc.lv, www.meteo.lv

Director: Mr Andris Leitass
Contact: Ms Inita Stikute
Position of the contact person: Director of Operations
Languages spoken: Latvian, Russian, English
Founded in: 2009

Main markets: Latvia, EU, Scandinavian countries

Business Profile: Engaged in meteorological, hydrological, environmental, geological observations, storage, systematisation and supplementation of such information. Meteorological, hydrological and other specific forecasts are also available from this centre. Other activities include the production of information for air navigation, the management of radioactive waste and nuclear objects, the testing of radioactive materials and the taking of environmental samples.

Desired Cooperation: Meteorological, hydrological, environmental and geological observations and storage, systematization and supplementation of the respective information. Meteorological, hydrological and other specific estimations. Preparation of information for air navigation. Management of radioactive waste and nuclear sites. Testing of radioactive materials and environmental samples.

Certificates in use: ISO 9001, Laboratories LVS EN ISO/IEC 17025:2005, Air navigation LV - ANS 02, Radioaktivitat



VALKAS BIOENERGO KOMPĀNIJA

Legal form: LTD
Address: Raiņa iela 12B, Valka, LV- 4701, Latvia
Phone: +371 64724075
Fax: +371 64724074
E-mail: bioenergo@valka.lv
Website: www.host.lv, www.host.nl

Director: Mr Ebbing Klaas Osinga
Contact: Mr Ebbing Klaas Osinga
Position of the contact person: Chairman of the Board
Languages spoken: Latvian, Russian, English, German, Dutch
Number of employees: 12
Founded in: 2001

Turnover in 2007: EUR 435 765
Turnover in 2008: EUR 535 016
Main markets: Latvia

Business Profile: Active in the production and supply of heat and electricity from biomass.

Desired Cooperation: This company is interest in cooperating in the field of biomass production (wood chips) and in investment.



VENTEKO

Legal form: LTD

Address: Rīgas iela 22, Piņķi, Babītes nov.,

LV- 2107, Latvia

Phone: +371 67913155

Fax: +371 67913156

E-mail: info@venteko.com

Website: www.venteko.com

Director: Ms Arta Bazovska

Contact: Mr Jānis Geks

Position of the contact person: Business Development Director

Languages spoken: Latvian, Russian, English

Number of employees: 50

Founded in: 1997

Turnover in 2007: EUR 3 567 302

Turnover in 2008: EUR 3 483 726

Export volume 2007: EUR 140 000

Export volume 2008: EUR 100 000

Main markets: Latvia, Lithuania, Estonia, Middle East and Gulf Region, Balkans, Eastern Europe

Business Profile: Environmental protection and sustainable management, environmental management training courses, environmental impact assessment, environmental investigation, geotechnical investigation, environmental remediation, elimination of hydrocarbon leakages and spills, management of hazardous and industrial waste and the designing of water supply and sewage systems.

Desired Cooperation: VENTeko is looking for cooperation with ministerial, state and municipal institutions for implementation of technical assistance and capacity-building projects, and development of professional training programs. We are seeking projects for implementation relating to environmental investigation and remediation services, drafting of environmental policy documents and providing environmental consulting.

Certificates in use: ISO 9001, ISO 14001, OHSAS 18001, Latvian Award of Quality



VIDES KONSULTĀCIJU BIROJS

Legal form: LTD

Address: Ezermalas iela 24/26, Rīga, LV-1014, Latvia

Phone: +371 67557668

Fax: +371 67801703

E-mail: birojs@vkb.lv

Website: www.vkb.lv

Director: Mr Sigits Duduris

Contact: Mr Sigits Duduris

Position of the contact person: Member of the Board

Languages spoken: Latvian, Russian, English, German

Number of employees: 25

Founded in: 1996

Turnover in 2007: EUR 1 304 708

Turnover in 2008: EUR 1 350 927

Main markets: Latvia, Lithuania, Estonia, Belarus

Business Profile: We work with environmental consultations and quality analysis, engineering geology and geological analysis, infrastructure research and traffic flow analysis, soil and groundwater research, monitoring, sanitation and analysis.

Desired Cooperation: We would be happy to work together with gas and oil companies, petrol stations, landfills, construction companies, municipalities and government institutions.

Certificates in use: Special permits and certificates



VIDES PROJEKTI

Legal form: State LTD
Address: Šmerļa iela 3, Rīga, LV-1006, Latvia
Phone: +371 67221469
Fax: +371 67214274
E-mail: info@videsprojekti.lv
Website: www.videsprojekti.lv

Director: Mr Ivars Ozoliņš
Contact: Mr Andris Junkurs
Position of the contact person: Project Manager
Languages spoken: Latvian, Russian, English
Number of employees: 45
Founded in: 1997

Turnover in 2007: EUR 2 700 000
Turnover in 2008: EUR 2 300 000
Main markets: Latvia, Ukraine, Belarus, Georgia, Moldova

Business Profile: The company conducts research of polluted locations and prepares recovery projects. Engages in environmental planning and landscape architecture, consultations and the drafting of projects in order to attract financial resources from the European Union and other support foundations. Even cooperates with local governments in drafting up feasibility studies, planning and carrying out public awareness events with regard to the environment and environmental protection.

Desired Cooperation: Looking to cooperate in the development of energy efficiency and waste management projects, the implementation of ecotourism infrastructure projects, elaborate on development strategies in relation to environmental protection, research polluted places and prepare recovery projects for them as well as film production services.

Certificates in use: ISO 9001



VIDES SERVISS

Legal form: LTD
Address: Salātu iela 7A, Bauska, LV- 3901, Latvia
Phone: +371 63960613
Fax: +371 63960614
E-mail: pasts@videsserviss.lv
Website: www.videsserviss.lv

Director: Mr Egils Pukinskis
Contact: Mr Egils Pukinskis
Position of the contact person: Member of the Board
Languages spoken: Latvian, Russian, English
Number of employees: 113
Founded in: 1992

Turnover in 2007: EUR 1 400 000
Turnover in 2008: EUR 1 770 000
Main markets: Latvia

Business Profile: *Vides Serviss* provides municipal solid waste management, like unsorted waste collection, separate waste collection, transfer, used package pre-treatment and disposal services. The company is a member of two waste management company associations: *LASA* and *LASUA* in Latvia. *Vides Serviss Ltd* cooperate with *Latvijas Zālais punkts* (Green Dot).

Desired Cooperation. To exchange experience about waste management systems and new services.



ZIEMEĻVIDZEMES ATKRITUMU APSAIMNIEKOŠANAS ORGANIZĀCIJA

Legal form: LTD

Address: Rīgas iela 32, Valmiera, LV-4201, Latvia

Phone: +371 64281250

Fax: +371 64281251

E-mail: zaao@apollo.lv

Website: www.zaao.lv

Director: Mr Aivars Sirmāis

Contact: Ms Ingrīda Gubernatorova

Position of the contact person: Head of R&D Department

Languages spoken: Latvian, Russian, English

Number of employees: 105

Founded in: 1998

Turnover in 2007: EUR 3 509 156

Turnover in 2008: EUR 4 165 177

Main markets: Latvia

Business profile: ZAAO, Ltd offers high quality services in waste management including waste collection, transportation and depositing in an environmentally friendly way. Our spheres of operation are: collection, sorting, storage, treatment, reloading, transporting and depositing of waste.

Desired Cooperation: The biogas used to generate electricity. RDF market and waste management technology.

Certificates in use: ISO 9001, ISO 14001

Educational Establishments and Research Institutions



INSTITUTE OF ENVIRONMENT AND ENERGY SYSTEMS (RIGA TECHNICAL UNIVERSITY)

Legal form: Scientific institution
Address: Kronvalda bulvāris 1, Rīga, LV-1010, Latvia
Phone: +371 67089908
Fax: +371 67089908
E-mail: info@videszinatne.lv
Website: www.videszinatne.lv

Director: Ms Dagnija Blumberga
Contact: Ms Terēza Bezručko
Position of the contact person: Secretary
Languages spoken: Latvian, Russian, English, French
Number of employees: 33
Founded in: 2006

Business Profile: The Institute of Environment and Energy Systems is active in energy and environmental research, renewable energy resources (biomass, biogas, solar), energy efficiency and the rational use of energy. Special attention at the institute is paid to climate change policy, greenhouse gas reduction technologies and sustainable energy development. The institute offers bachelor, master and PhD study programmes, conducts scientific researches on a local and international level in cooperation with major foreign scientific institutions, participates in scientific conferences and other events with presentations and lectures and takes an active part in the development of local energy and environmental policy.

Desired Cooperation: The institute is interested in cooperating with public authorities, scientific and educational institutions, manufacturing enterprises, power supply enterprise and others.



FACULTY OF GEOGRAPHY AND EARTH SCIENCES (UNIVERSITY OF LATVIA)

Address: Alberta iela 10, Rīga, LV-1010, Latvia
Phone: + 371 67332704; +371 29104605
E-mail: zeme@lu.lv
Website: <http://www.lu.lv/eng/faculties/fges/>

Dean: Professor Oļģerts Nikodemus
Contact: Mr Māris Kļaviņš
Position of the contact person: Professor
Languages spoken: Latvian, Russian, English

Business Profile: Faculty of Geography and Earth Sciences at the University of Latvia provides academic studies in geography, geology and environmental science. Faculty offers higher academic education at 3 level studies – bachelor's, master's and doctoral study programmes, as well as professional training in teacher's study programme of geography and natural sciences, and also professional higher education master's study programme of spatial development planning.

Desired Cooperation: The institute is interested in cooperating with public authorities, scientific and educational institutions, manufacturing enterprises, power supply enterprise and others.

Professional Associations



ASSOCIATION OF BIOTECHNOLOGY OF LATVIA

Address: Dzērbenes iela 27,
Rīga, LV-1006, Latvia
Phone: +371 67553518
Fax: +371 67553518
E-mail: latbiotech@edi.lv
Website: www.latbiotech.lv

Director: Mr Juris Vanags
Contact: Mr Juris Vanags
Position of the contact person: Chairman of the Board
Languages spoken: Latvian, Russian, English, German
Number of members: 10
Founded in: 2006

Business Profile: The main aim of the ABL is to promote the development of biotechnology in Latvia by clustering academia, governmental bodies and industry in joint projects, by participation in the international project, by joint representation of their members in meetings and exhibitions, by promoting the training of young specialists in biotechnology and related fields and by raising public awareness on biotechnology in society. Several of the initiators behind the ABL are already involved in the ScanBalt network: www.scanbalt.org. ABL is also a member of the European Federation of Biotechnology. The participation in EU cooperation projects is a priority of the ABL in promoting Latvian biotechnology integration in Europe.



ASSOCIATION OF WASTE MANAGEMENT COMPANIES OF LATVIA

Address: Mūkusalas iela 33,
Rīga, LV-1004, Latvia
Phone: +371 67442926
Fax: +371 67442926
E-mail: info@lasua.lv
Website: www.lasua.lv

Director: Mr Jānis Vilgerts
Contact: Mr Armands Nikolajevs
Position of the contact person: Managing director,
Member of the Board
Languages spoken: Latvian, Russian, English
Number of members: 50
Founded in: 1996

Business Profile: Latvian Association of Waste Management Companies (LASUA) is a public organization established in April 1996. Currently there are more than 50 members in the Association who together cover almost 90% of the total Latvian market. Our members are professional companies engaged in management, collection, depositing, processing, handling, burying of household and hazardous waste and removal of industrial waste, and also providing for other utilities.



LATVIAN ASSOCIATION FOR ENVIRONMENTAL MANAGEMENT (LAEM)

Address: Skolas iela 10-8,
Rīga, LV-1010, Latvia
Phone: +371 67242411
Fax: +371 67242466
E-mail: lvpa@lvpa.lv
Website: www.lvpa.lv

Executive Director: Ms Aiga Kāla
Contact: Ms Aiga Kāla
Position of the contact person: Board of Administration
Languages spoken: Latvian, Russian, English
Number of members: 24
Founded in: 2003

Business Profile: Latvian Association for Environmental management (LAEM) - is a non-governmental organization, designed to join efforts of all stakeholders, interested in promotion and implementation in Latvian enterprises and municipalities patterns of sustainable consumption and production, systematic approach to environmental management and principles of local sustainable development.



LATVIAN BIOGAS ASSOCIATION

Address: Dzintara iela 60,
Rīga, LV-1006, Latvia
Phone: +371 29425176
Fax: +371 63027425
E-mail: latvijasbiogaze@gmail.com,
andis.karklins@apollo.lv
Website: www.latvijasbiogaze.lv

Director: Mr Andis Kārklīņš
Contact: Mr Andis Kārklīņš
Position of the contact person: Chairman of the Board
Languages spoken: Latvian, Russian, German
Number of members: 21
Founded in: 1994

Business Profile: This association supports and develops biogas production.



SMALL HYDROPOWER PLANT ASSOCIATION

Address: Ausekļa iela 3,
Rīga, LV-1010, Latvia
Phone: +371 26439106
E-mail: orvils@autoosta.lv
Website: http://mhea.lv

Director: Mr Orvils Henriņš
Contact: Mr Orvils Henriņš
Position of the contact person: Chairman of the Board
Languages spoken: Latvian, Russian, English
Founded in: 1999
Main markets: Latvia

Business profile: Promote energy use in Latvia from small and medium sized rivers and support use of renewable energy and national energy independence.



LATVIAN BIOMASS ASSOCIATION „LATBIONRG”

Address: Klijānu iela 21-1,
Rīga, LV-1012, Latvia
Phone: +371 67298369
Fax: +371 67298370
E-mail: didzis.palejs@latbionrg.lv
Website: www.latbionrg.lv

Contact: Mr Didzis Palejs
Position of the contact person: Member of the Board
Languages spoken: Latvian, Russian, English
Number of members: 8
Founded in: 2008
Main markets: Latvia

Business profile: The main aims are:

1. To popularize usage of local renewable energy recourses in energy production, to achieve higher economical and energetical independence of Latvia;
2. To spread in public space objective information about availability of local renewable energy sources and usage aspects.
3. To promote development of scientific works in direction renewable energy and research of optimal harvest technologies.



ZEMGALE REGIONAL ENERGY AGENCY (ZREA)

Address: Pulkveža Brieža iela 26,
Jelgava, LV-3001, Latvia
Phone: +371 63080205
Fax: +371 63080206
E-mail: zrea@zrea.lv
Website: www.zrea.lv

Director: Mr Mārtiņš Prīsis
Contact: Ms Irīda Bauze
Position of the contact person: Assistant to Director
Languages spoken: Latvian, Russian, English, Greek
Number of members: 9
Founded in: 2009
Main markets: Latvia

Business profile: We are consultants with expertise in the sector of energy management.

Promotion of Entrepreneurship, Investment and Foreign Trade



Latvijas Investīciju un attīstības aģentūra
Investment and Development Agency of Latvia



Latvian Export Import Directory

Investment and Development Agency of Latvia
Address: Pērses iela 2, Rīga, LV-1442, Latvia
Phone: +371 67039410
Fax: +371 67039401
E-mail: liao@liao.gov.lv
Websites: www.liao.gov.lv, www.exim.lv, www.een.lv

The mission of the Investment and Development Agency of Latvia (LIAA) is to promote growth of the economy of Latvia. Accordingly, the objective of LIAA is to promote business development by facilitating increased foreign investment, while elevating the competitiveness of Latvian entrepreneurs in both domestic and foreign markets.

Having more than 15 years experience in the attraction of foreign direct investment to Latvia and the promotion of foreign trade, the Agency has worked continually to improve the business environment and provide services appropriate to the needs of business.

Following Latvia's accession to the EU in 2004 the Agency needed to adopt new methods and tools, including the effective utilisation of resources from EU Structural funds. Today LIAA offers an integrated solution – it supports companies in Latvia trading internationally as well as overseas businesses seeking partners or locations in Latvia and administers state support programmes for entrepreneurs co-financed from EU Structural funds.

To ensure high quality communications with customers the Agency has representative offices in London (UK), Berlin (Germany), Warsaw (Poland), Stockholm (Sweden), Paris (France), Amsterdam (the Netherlands), Oslo (Norway), Copenhagen (Denmark), Moscow (Russia) and Tokyo (Japan).

An ability to anticipate the rapidly changing needs of businesses and markets by offering new services characterises the Agency's own competitiveness, built on the knowledge and competencies of our experienced specialists. LIAA pays close attention to the quality of performance, comparing it with world best practices, and subsequently introducing new services and solutions for our customers.

In recognition of LIAA's competitive and high quality services, the Agency was recently named one of the top 10 performing national Investment Promotion Intermediaries (IPI's) in the world according to the Global Investment Promotion Benchmarking published by the World Bank. LIAA finished 7th in the fierce competition of 213 investment promotion agencies.

Representative Offices of the Investment and Development Agency of Latvia

Representative Office in Denmark
Embassy of the Republic of Latvia
Rosbæksvej 17, DK-2100,
Copenhagen Ø, Denmark
Phone: +45 3927 6009
Fax: +45 3927 6173
E-mail: dk@liaa.gov.lv

Representative Office in France
Ambassade de Lettonie
6, villa Saïd 75116 Paris, France
Phone: +33 1 53 64 58 15
Fax: +33 1 53 64 5819
E-mail: fr@liaa.gov.lv

Representative Office in Germany
Botschaft der Republik Lettland
Reinerzstr. 40-41, D-14193 Berlin, Germany
Phone: +49 (0) 162 98 11075
E-mail: de@liaa.gov.lv

Representative Office in Japan
37-11 Kamiyama-cho, Shibuya-ku,
Tokyo, 150-0047, Japan
Phone: +81 3 3467 6888
Fax: +81 3 3467 6897
Mob.: +81 90 8016 5023
E-mail: jp@liaa.gov.lv

Representative Office in the Netherlands
Visitors' address:
Havengebouw, 11th floor
De Ruyterkade 7
1013 AA Amsterdam
Postal address:
P.O. Box 94261
1090 GG AMSTERDAM
The Netherlands
E-mail: nl@liaa.gov.lv
Website: www.liaa.nl

Representative Office in Norway
Bygdøy Allé 76, Post Box 3163
Elisenberg, 0208 Oslo, Norway
Phone: +47 22 542 286
Fax: +47 22 546 426
E-mail: no@liaa.gov.lv

Representative Office in Poland
Embassy of the Republic of Latvia
19, Królowej Aldony Str.
03-928 Warszawa, Poland
Phone: +48 22 617 11 05
Fax: +48 22 617 42 89
E-mail: pl@liaa.gov.lv

Representative Office in the Russian Federation
Embassy of the Republic of Latvia
Ul. Chapligina 3, 103062 Moscow
Russian Federation
Phone/Fax: +(7 495) 7301834
Mob.: +7 926 66 530 80
E-mail: ru@liaa.gov.lv

Representative Office in Sweden
Odengatan 5, Box 19167,
10432 Stockholm, Sweden
Phone: +46 8 7006311
Mob.: +46 704956849
Fax: +46 8 140 151
E-mail: se@liaa.gov.lv

Representative Office in the United Kingdom
72 Queensborough Terrace,
London, W2 3SH
United Kingdom
Phone: +44 (0)20 7229 8173
Fax: +44 (0)20 7727 7397
Mob.: +44 (0)79 9060 5422
E-mail: uk@liaa.gov.lv



Exim

Latvian Export Import Directory

www.exim.lv

The Latvian Export Import Directory

- The online database that will jumpstart your business in Latvia.

With online company promotion, search features and details freely available, **EXIM** helps companies to connect.

With **EXIM** you can:

- Promote your products or find new ones on Latvia's B2B trade website;
- Create an online business proposal and advertise your products;
- Find new business partners and find out about actual events in Latvia;
- Access all the business news from Latvia.

The main sections of the portal:

- Companies – a database of Latvian companies;
- Proposals – business advertisements and commercial ideas;
- Events – a list of events in Latvia and abroad;
- Market Info - information about the Latvian economy, industry and commerce.

We make it easy for international businesses to find the right contacts in Latvia!

 **LIAA**
Latvijas Investīciju un attīstības aģentūra
Investment and Development Agency of Latvia

Pērses iela 2, Rīga, LV-1442, Latvia; phone: +371 67039459, fax: +371 67039401, e-mail: exim@liaa.gov.lv, www.liaa.gov.lv



Latvijas Investīciju un attīstības aģentūra
Investment and Development Agency of Latvia

