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**Ministry of Economics**
**of the Republic of Latvia**

# Regular report of the Republic of Latvia on progress towards meeting the national indicative targets pursuant to Article 3 (3) of Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market

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## Introduction

In accordance with Latvia's Guidelines for the Utilisation of Renewable Energy Sources 2006-13, Energy Development Guidelines 2007-16 and Biogas Production and Utilisation Development Programme 2007-11, increasing the proportion of renewable energy sources (hereinafter – RES) utilised in total energy consumption is linked to the following main objectives:

1. increasing the proportion of RES in Latvia's total consumption of energy;

2. fostering the security of Latvia's energy supply.

3. In the long term, secure RES investment towards the reduction of greenhouse gas (hereinafter – GHG) emissions

## 1. Regulatory enactments

The main regulatory enactment governing the utilisation of and support for RES is the Electricity Market Law (2005). The Law prescribes:

- Latvia's national indicative target for electricity produced from RES as a proportion of total electricity consumption, which Latvia is to meet by 2010 and which is 49.3%;
- the implementation of new electricity production capacity and increase of existing electricity production capacity;
- the regulation of the generation of electricity from RES.

The following Cabinet Regulations have been issued on the basis of the delegation incorporated in the Electricity Market Law:

- Cabinet Regulations No 695 of 29 August 2006, Regulations regarding permits for increasing electricity generation or the implementation of new generation capacity (hereinafter – Cabinet Regulations No 695), entered into force on 2 September 2006;
- Cabinet Regulations No 921 of 6 November 2006, Regulations regarding electricity production by co-generation (hereinafter – Cabinet Regulations No 921), entered into force on 11 November 2006;
- Cabinet Regulations No 503 of 24 July 2007, Regulations regarding electricity generation from renewable energy sources (hereinafter – Cabinet Regulations No 503), entered into force on 22 August 2007.

## 2. The proportion of renewable energy sources in Latvia's energy consumption balance

In terms of Latvia's primary energy consumption, the proportion of RES has traditionally been significant and in 2006 comprised 30.2% of total end consumption.

The main RES being widely used are wood and hydro-energy resources; wind energy, straw, biogas and solar energy are also used to a lesser extent.

In 2006, the RES segment of the electricity supply structure comprised wind generators, small hydro-power stations, biogas power stations and wood-fired power stations. In 2006, the proportion of RES in the supply and consumption of electricity, as a result of the reduced proportion of hydro-energy resources, comprised 37.7% of self-supplied electricity, 10.7% less than in 2005, because the amount of available hydro-energy is dependent on meteorological conditions and water flow in rivers.

Hydro-energy resources are mainly used in the large-scale hydro-power stations owned by *AS Latvenergo*. In 2006, in the said electricity supply structure, large-scale hydro-power stations provided 35.9%, small-scale hydro-power stations 0.5%, wind generators 0.6%, biogas-fired power stations 0.5% and wood-fired power stations 0.1% of electricity.

Having regard to the fact that the amount of energy produced is, to a large extent, dependent on water flow in the Daugava, the RES segment of electricity consumption can vary significantly from year to year.

Diagram 1. Structure of electricity supply in 2006, GWh, %

**Key**

Large pie chart (left)

| Latvian | English | Consumption GWh | %age |
|---|---|---|---|
| *Liel•s HES* | Large-scale hydro-power stations | 2658 | 35.9 |
| *Neto imports* | Net imports | 2508 | 33.9 |
| *Dabas g•ze* | Natural gas | 2100 | 28.4 |
| *Citi* | Others | 133 | 1.8 |

Small pie chart (right)

| Latvian | English | Consumption GWh | %age |
|---|---|---|---|
| *VES* | Wind generators | 46 | 0.6 |
| *Maz•s HES* | Small-scale hydro-power stations | 40 | 0.5 |
| *Biog•ze* | Biogas | 36 | 0.5 |
| *Koksne* | Wood | 6 | 0.1 |
| *Naftas produkti* | Oil products | 5 | 0.1 |

## 3. Support scheme for the generation of electricity from renewable energy sources

Pursuant to the Electricity Market Law, also to Cabinet Regulations No 503 'Regulations regarding electricity generation from renewable energy sources' and Cabinet Regulations No 921, support measures for economic operators who generate electricity from RES shall be implemented **within the framework of mandatory procurement**.

Comparing Cabinet Regulations No 503 and No 921, it should be noted that the most significant difference, as regards the mandatory procurement of electricity generated from RES, relates to the regulation of the amount of mandatory procurement.

Cabinet Regulations No 503 prescribe the amount of support for the annual mandatory procurement of different types of RES for the period 2007-2010, expressing this amount as a percentage proportion of Latvia's total end-user electricity consumption.

In turn, Cabinet Regulations No 921 do not provide for any quantitative limits for the procurement, within the framework of mandatory procurement, of electricity produced by co-generation processes.

### *a. Mandatory procurement pursuant to Cabinet Regulations No 503*

Cabinet Regulations No 503 were adopted with a view to transposing the requirements of Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market. The purpose of Cabinet Regulations No 503 is to promote an increase in the proportion of RES and to meet the indicative targets prescribed for Latvia, pursuant to which at least 49.3% of electricity consumed must be generated from RES by 2010.

The regulations referred to above include the following rules:

- they prescribe criteria pursuant to which producers generating electricity utilising RES may acquire the rights to sell the electricity generated by way of an amount of mandatory procurement of electricity;
- they prescribe procedures for determining the amount of mandatory procurement and of electricity generated from RES;
- they prescribe the proportion for each type of RES which, of Latvia's entire, total end-user electricity consumption, shall be covered by electricity generated utilising RES;

- procedures for determining prices of electricity generated utilising RES, depending on the type of energy source;
- procedures for determining, implementing and monitoring the amount of mandatory procurement;
- procedures under which the rights to sell electricity generated utilising RES, within the framework of mandatory procurement, can be declined;
- they prescribe procedures for obtaining certificates of origin for electricity generated utilising RES;
- they provide for measures for the promotion of electricity generation from biomass.

Pursuant to Cabinet Regulations No 503, mandatory procurement is applied to such types of RES as hydro-energy, wind energy, biogas and biomass.

Decisions regarding the allocation of rights to sell electricity generated from RES, within the framework of mandatory procurement, are made by the Ministry of Economics, issuing conforming administrative orders to economic operators pursuant to the requirements of Cabinet Regulations No 503.

The Regulations provide for three mechanisms for calculating mandatory procurement prices:

1) for the procurement of RES-generated electricity from wind generators, the lowest price principle shall be applied under tender procedures;
2) mandatory procurement price formulae shall be applied to biomass power stations with installed capacity of up to 4 MW, biogas power stations, hydro-power stations with installed capacity of up to 5 MW and wind generators with installed capacity of up to 0.25 MW.
3) for biomass power stations with installed capacity above 4MW, within the framework of mandatory procurement, the selling price for electricity generated from RES shall be set by the Public Utilities Commission (PUC) in accordance with the methodology approved by the PUC.

Pursuant to Cabinet Regulations No 503, those amounts of electricity generated from RES which economic operators are not entitled to sell within the framework of mandatory procurement shall have their selling price set by the economic operators negotiating with any participant in the electricity market.

***Procedure for mandatory procurement on the basis of price formulae***

Pursuant to Cabinet Regulations No 503, mandatory procurement price formulae shall be applied to electricity generated by biomass power stations with installed capacity of up to 4 MW, biogas power stations with no restrictions on installed capacity, hydro-power stations with installed capacity of up to 5 MW, as well as to wind generators with installed capacity of up to 0.25 MW if not more than one wind generator is connected to a single electricity distribution-system transformer or distribution point or electricity transmission sub-station.

No time restrictions are set on the utilisation of mandatory procurement rights if economic operators have acquired such rights for the generation of electricity from RES in the power stations referred to above.

Selling prices for the amount of renewable electrical energy which economic operators have the right to sell within the framework of mandatory procurement shall be calculated using the formulae listed in Table 1:

Table 1

| Type of power station | Installed electrical capacity | Tariff | Starting year | Support period for mandatory procurement |
|---|---|---|---|---|
| Wind generators | • 0.25 MW | For 10 years from start-up $C = \frac{T_g \times k}{9.2} \times 3.5$ * | 2007 | unlimited |
| | | 10 years after start-up $C = \frac{T_g \times k}{9.2} \times 2.6$ | | |
| Biomass power stations | • 4 MW | For 10 years from start-up $C = \frac{T_g \times k}{9.2} \times 4.5$ | 2007 | unlimited |
| | | 10 years after start-up $C = \frac{T_g \times k}{9.2} \times 3.4$ | | |
| Biogas power stations | No restrictions on capacity | For 10 years from start-up $C = \frac{T_g \times k}{9.2} \times 4.5$ | 2007 | unlimited |
| | | 10 years after start-up $C = \frac{T_g \times k}{9.2} \times 3.4$ | | |
| Hydro-power stations | • 5 MW | $C = \frac{T_g \times k}{9.2} \times 3.8$ | 2007 | unlimited |

* Symbols used in formulae:

- *C* – price, excluding value added tax, for which the public marketer buys electricity (LVL/MWh) generated from RES, from power stations;
- $T_g$ – final market tariff for natural gas (LVL/'000 $nm^3$), excluding value added tax, approved by the regulator, set for annual natural gas consumption between 126 000 $nm^3$ and 1 260 000 $nm^3$, if the heat capacity of the natural gas is 7 900 kcal/$nm^3$;
- *k* – differentiation coefficient for the price whose value, depending on the installed electrical capacity, varies between 0.965 for power stations whose capacity exceeds 3.50 MW and 1.240 for power stations whose capacity does not exceed 0.08 MW.

***Procedures for mandatory procurement tenders***

Pursuant to Cabinet Regulations No 503, tender procedures shall only be used to allocate the rights to sell electricity generated by wind generators whose installed electrical capacity does not exceed 0.25 MW within the framework of mandatory procurement.

Within the framework of mandatory procurement, tenders for the allocation of rights to sell electricity generated from RES by wind generators shall be organised by the Ministry of Economics on the basis of the conditions stipulated in Cabinet Regulations No 503.

The time limit for the utilisation of mandatory procurement rights obtained under tender procedures is prescribed as being from 2010 to 2019.

Those economic operators who comply with all the requirements for the qualifications for bidders prescribed by Cabinet Regulations No 503 and whose average weighted price offered for electricity generated from RES is the lowest shall be deemed to be winners of tenders.

Fulfilling the requirements of Cabinet Regulations No 503, on 5 March 2008 the Ministry of Economics published an invitation to participate in a tender for the selling of electricity generated from RES by wind generators within the framework of mandatory procurement in the official newspaper *Latvijas V•stnesis*. Bidders were invited to apply to participate in the tender by 30 December 2008.

The opening price was stipulated as approximately 70.2804 LVL/MWh in the tender invitation.

### *i. Structure for meeting national indicative targets*

Pursuant to what is prescribed in Annex 1 to Cabinet Regulations No 503, for the period 2007-2010, the structure by RES type represented in Table 2 is anticipated for the amounts of electricity generated from RES to undergo mandatory procurement for Latvia to meet its indicative targets.

Table 2

| Type of RES and power station | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|
| Hydro-power stations with capacity above 5 MW | 41.28% | 39.32% | 37.35% | 35.39% |
| Hydro-power stations with capacity up to 5 MW | 1.04% | 1.06% | 1.08% | 1.10% |
| Wind generators | 1.48% | 2.78% | 4.08% | 5.37% |
| Biogas power stations | 0.38% | 1.07% | 1.77% | 2.46% |
| Biomass power stations and power stations utilising biomass together with fossil fuel | 0.44% | 1.95% | 3.46% | 4.97% |
| Total | 44.62% | 46.18% | 47,74% | 49.30% |

The public marketer shall calculate and publish the amounts of electricity generated from RES to undergo mandatory procurement for each year up to 31 December 2010.

Furthermore, the public marketer, pursuant to Cabinet Regulations No 503, is obliged, commencing in 2008, to calculate and publish, by 1 March, more accurately defined amounts of electricity generated from RES for subsequent years, on the basis of actual indicators from the previous year and on more accurately defined forecasts for end-user consumption of electricity.

As the public marketer, *AS Latvenergo*, published on 22 February 2008 in the newspaper *Latvijas V•stnesis*, the amounts of electricity generated from RES to undergo mandatory procurement have been stipulated in the amounts (MWh) below for the period up to 31 December 2010. The amounts of electricity generated from RES are represented in Table 3.

Table 3

| Type of RES and power station | 2008 | 2009 | 2010 |
|---|---|---|---|
| Hydro-power stations with capacity above 5 MW | 2 732 334 | 2 707 413 | 2 663 023 |
| Hydro-power stations with capacity up to 5 MW | 73 659 | 78 287 | 82 773 |
| Wind generators | 193 181 | 295 750 | 404 081 |
| Biogas power stations | 74 354 | 128 303 | 185 110 |
| Biomass power stations and power stations utilising biomass together with fossil fuel | 135 505 | 250 807 | 373 982 |
| Total | 3 209 033 | 3 460 560 | 3 708 968 |

### *ii. Procedures for implementing and monitoring mandatory procurement*

The Ministry of Economics shall register the decision issued to economic operators: an administrative order regarding the allocation of mandatory procurement rights. The Ministry shall keep records so as to ensure that, when the stipulated amount of mandatorily procured electricity for the respective RES type, for the corresponding time period (year), has been exhausted, the issuing of the said administrative orders shall be halted.

The provisions for mandatory procurement provide for economic operators being obliged to commence the generation of electricity and selling it to the public marketer within 36 months of the Ministry of Economics issuing them an administrative order regarding the allocation of mandatory procurement rights.

If economic operators obtain mandatory procurement rights for planned power stations, they have an obligation to commence the construction of the power station no later than 18 months after the Ministry of Economics has issued them with an administrative order regarding the allocation of mandatory procurement rights. If this obligation is not fulfilled, the Ministry of Economics can make a decision to rescind the administrative order which allocated the mandatory procurement rights.

Mandatory procurement shall be effected on the basis of a contract concluded between the public marketer and the economic operator or authorised person thereof, on the basis of the administrative order for the allocation of mandatory procurement rights issued by the Ministry of Economics.

For a power station to be able to sell electricity generated from RES within the framework of mandatory procurement, it must be equipped with recording measuring equipment, in conformity with the technical requirements specified and published by the system operator, to measure the electricity transferred to the electricity network and received from the network.

Economic operators are obliged, by 1 March each year, to submit an annual report to the Ministry of Economics as regards power stations generating electricity by utilising RES. The report shall indicate the type of energy source utilised, the amount of electricity generated and the technology utilised for generating electricity. The annual report shall include data whose conformity shall be attested to by the system operator to whose electricity networks the economic operator’s power station is connected.

### *iii. Obtaining certificates of origin*

Producers who utilise RES for generating electricity may, pursuant to Cabinet Regulations No 503, obtain certificates of origin as regards the electricity produced, stating that the power station they own or are operating generates electricity from renewable energy sources.

Certificates of origin shall be issued by the Ministry of Economics at the request of economic operators.

For economic operators to obtain certificates of origin, they must submit annual reports regarding power stations generating electricity by utilising RES to the Ministry of Economics.

### *b. Mandatory procurement pursuant to Cabinet Regulations No 921*

Cabinet Regulations No 921 were adopted with a view to transposing the requirements of Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC.

The regulations referred to above include the following rules:

- criteria for classifying cogeneration power plants for them to obtain the rights to sell the electricity they generate within the framework of mandatory procurement;
- procedures regarding the mandatory procurement of electricity generated by cogeneration power plants and the monitoring thereof;
- procedures for setting the price of electricity generated by cogeneration power plants depending on the electrical capacity of and fuel utilised by the cogeneration power plant;
- procedures under which economic operators who have obtained the rights to sell the electricity they generate within the framework of mandatory procurement can decline to do so;
- procedures under which economic operators who have obtained the rights to sell the electricity they generate within the framework of mandatory procurement can obtain certificates of origin.

Pursuant to Cabinet Regulations No 921, no quantitative restriction shall be applied to electricity generated by a RES-cogeneration process.

As with Cabinet Regulations No 503, the setting of mandatory procurement prices for electricity generated by RES-cogeneration processes, which economic operators may sell to the public marketer, shall have applied a price formula which incorporates the same variables as the price formulae used in Regulations No 503: the gas tariff and a price differentiation coefficient dependent on the installed electrical capacity.

Pursuant to Cabinet Regulations No 921, if the electricity produced by a cogeneration process is produced from RES or from local energy sources such as peat, a higher mandatory-procurement-support coefficient shall be applied than for cases where fossil energy sources are utilised (Table 4).

Table 4

| Type of resource | Installed electrical capacity | Tariff | Starting year | Support period for mandatory procurement |
|---|---|---|---|---|
| Fossil resources | up to 4 MW | $C = \frac{Tg \times k}{9{,}2} \times 3.4$ * | 2006 | unlimited |
| Biomass | up to 4 MW | $C = \frac{Tg \times k}{9{,}2} \times 4.5$ | 2006 | unlimited |
| Peat | up to 4 MW | $C = \frac{Tg \times k}{9{,}2} \times 4.5$ | 2006 | unlimited |

* Symbols used in formulae:

- *C* – price, excluding value added tax, for which the public marketer buys electricity (LVL/MWh) produced by a cogeneration process;
- $T_g$ – final market tariff for natural gas (LVL/'000 $nm^3$), excluding value added tax, approved by the regulator if the heat capacity of the natural gas is 7 900 kcal/$nm^3$;
- *k* – differentiation coefficient for the price whose value, depending on the installed electrical capacity, varies between 0.965 for power stations whose capacity exceeds 3.50 MW and 1.240 for power stations whose capacity does not exceed 0.08 MW.

### *i. Procedures for implementing and monitoring mandatory procurement*

Mandatory procurement shall be effected on the basis of a contract concluded between the public marketer and the economic operator or authorised person thereof, on the basis of the administrative order for the allocation of mandatory procurement rights issued by the Ministry of Economics.

For a cogeneration plant to be able to sell electricity produced by a cogeneration process within the framework of mandatory procurement, it must be equipped with recording measuring equipment, in conformity with the technical requirements specified and published by the system operator, to measure the electricity transferred to the electricity network and received from the network. Cogeneration plants must be equipped with recording measuring equipment or a measuring equipment system which provides separate records for the heat energy produced by the cogeneration plant, by different heat-energy furnaces or heat energy produced by other means and the useful heat energy sold to end users.

Economic operators are obliged, by March 1 each year, to submit an annual report to the Ministry of Economics as regards the operation of cogeneration plants. The Ministry of Economics shall, within three months, evaluate the conformity of a cogeneration plant with efficiency criteria. If a cogeneration plant does not conform to the efficiency criteria, the Ministry of Economics shall send a warning to the economic operator regarding the non-conformity and the possibility of the rights to sell the electricity produced by the cogeneration process within the framework of mandatory procurement being forfeited. After its contract is cancelled, a cogeneration plant may continue to operate and sell the electricity it generates to any market participant, having mutually agreed to the selling terms. The conformity of the data in the annual report shall be attested to by the system operator to whose electricity networks the economic operator's power station is connected.

### *ii. Obtaining certificates of origin*

Producers who utilise a cogeneration process for generating electricity may, pursuant to Cabinet Regulations No 921, obtain certificates of origin as regards the amount of electricity produced, stating that the cogeneration plant conforms with the efficiency criteria prescribed by these Regulations.

Certificates of origin shall be issued by the Ministry of Economics at the request of economic operators.

In order for economic operators to obtain certificates of origin, they must submit annual reports regarding power stations generating electricity by cogeneration to the Ministry of Economics.

## *c. Example of calculation of mandatory procurement price*

A graphical comparison of the scale of the support for mandatory procurement provided for by Cabinet Regulations Nos 503 and 921 is shown in the examples of the utilisation of price formulae in Table 5.

| Regulations | Power station | | Natural gas tariff (LVL/'000nm$^3$) | Mandatory procurement price (LVL/MWh) |
|---|---|---|---|---|
| No 503 | biomass power stations >3.5 MW - • 4 MW | For 10 years from start-up | 212.15 | 100.12 |
| | biogas power stations >3.5 MW | 10 years after start-up | 212.15 | 75.65 |
| No 921 | biomass and biogas power stations >3.5 MW - • 4 MW | | 206.19 | 97.29 |

Table 5

On the basis of the mandatory procurement price formulae prescribed by Cabinet Regulations No 503 for biomass and biogas power stations commissioned no later than ten years ago, the range for the mandatory procurement price of electricity generated in power stations with installed electrical capacity within the range from 1 to 4 MW comprises 107.41 to 100.12 LVL/MWh.

In turn, on the basis of the mandatory procurement price formulae prescribed by Cabinet Regulations No 921 for biomass and biogas power stations, the range for the mandatory procurement price of electricity generated in power stations with installed electrical capacity within the range from 1 to 4 MW comprises 104.4 to 97.33 LVL/MWh.

Diagram 2 shows the dependence of the mandatory procurement price on the installed electrical capacity pursuant to Cabinet Regulations No 503 and Cabinet Regulations No 921.

Diagram 2. Dependence of the mandatory procurement price on the installed electrical capacity as per Cabinet Regulations Nos 503 and 921

Key

| | |
|---|---|
| Cena | Price |
| Jauda | Capacity |
| Nr. | No |

Minister for Economics K. Gerhards

| State Secretary | Director, Legal Department | Official responsible for control | Official responsible |
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