

Latvia
Ministry of the Economy

**The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC,
Article 22**

Executive summary

The share of renewable energy (hereinafter - RE) in total final energy consumption in 2017 and 2018 increased from 37.14% in 2016 to 39.02% in 2017 and to 40.29% in 2018, thus reaching the target set for Latvia for 2020, which is 40%. The increase in the share of RE in 2017 and 2018 was mainly influenced by changes in the mandatory fuel mix requirements and promotion of the use of renewable energy sources in district heating and industrial sectors.

1. The sectoral and overall shares of energy from renewable sources in the preceding two calendar years (2017 and 2018) (Article 22 (1) (a) of Directive 2009/28 /EC).

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

Table 1 Share of energy from renewable sources by sectors (electricity, heating and cooling, transport) and in total¹

	2017	2018
RE-heating and cooling ² (%)	54.60	55.89
RE-electricity ³ (%)	54.35	53.50
RE-transport ⁴ (%)	2.56	4.73
Overall RE share ⁵ (%)	39.02	40.29
<i>Of which from cooperation mechanism⁶ (%)</i>	0	0
<i>Surplus for cooperation mechanism⁷(%)</i>	0	0

Table 1.a: Calculation table for the contribution of each sector of renewable energy to final energy consumption (thousand tonnes of oil eq.)⁸

	2017	2018
(A) Gross final consumption of RES in heating and cooling	1286.8	1374.5
(B) Gross final consumption of electricity produced from RE	344.3	346.6
(C) Final consumption of energy from RE in transport	14.0	40.7
(D) Gross RE total final consumption ⁹	1645.1	1761.8
(F) RES transfer to other Member States	0	0
(E) RES transfer from other Member States and third countries	0	0
(G) RE consumption versus target (D) - (E) + (F)	1645.1	1761.8

Table 1.b: Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the electricity sector¹⁰

	2017		2018	
	MW	GWh	MW	GWh
Hydroenergy ¹¹ :	1564.3	2979.8	1565.0	2989.3
non-accumulating	1564.3	2979.8	1565.0	2989.3
<i>accumulating</i>	0	0	0	0
<i>mixed¹²</i>	0	0	0	0
Geothermal energy	0	0	0	0
Solar:	0.7	0.4	2.0	1.3
<i>Photovoltaic</i>	0.7	0.4	2.0	1.3
<i>Concentrated solar power</i>	0	0	0	0
Tide, wave, ocean	0	0	0	0
Wind:	77.1	147.6	78.2	149.7
<i>Onshore</i>	77.1	150.0	78.2	122.0
<i>Off-shore</i>	0	0	0	0

¹ For easier comparison with Table 3 and Table 4a of NREAPs.

² Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources in heating and cooling (as defined in Article 5 (1) (b) and Article 5 (4) of Directive 2009/28 / EC) divided by gross final energy consumption in heating and cooling. The same methodology applied as in Table 3 of NREAPs.

³ Share of renewable energy in electricity: gross final consumption of energy from renewable sources in heating and cooling (as defined in Article 5 (1) (a) and Article 5 (3) of Directive 2009/28 / EC) divided by gross final energy consumption. The same methodology applied as in Table 3 of NREAPs.

⁴ Share of renewable energy in transport: final energy consumption from renewable sources consumed in transport (compared with Article 5(1)(c) and 5(5) of Directive 2009/28/EC) divided by the consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). The same methodology applied as in Table 3 of NREAPs.

⁵ Share of renewable energy in gross final energy consumption. The same methodology applied as in Table 3 of NREAPs.

⁶ In percentage points of overall RE share.

⁷ In percentage points of overall RE share.

⁸ For easier comparison with Table 4a of NREAPs.

⁹ According to Article 5(1) of Directive 2009/28/EC gas, electricity and hydrogen from renewable energy sources shall only be considered once. No double counting is allowed.

¹⁰ For easier comparison with Table 10.a of NREAPs.

¹¹ Normalized according to Directive 2009/28 / EC and Eurostat methodology.

¹² According to the new Eurostat methodology

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

Biomass ¹³ :	154.0	930.6	134.1	943.6
<i>solid biomass</i>	93.7	525.3	72.6	569.6
<i>biogas</i>	60.3	405.4	61.5	374.1
<i>bioliquids</i>	0	0	0	0
TOTAL	1796.1	4058.5	1779.2	4084.0
<i>of which in CHP</i>		930.6		943.7

Table 1.c Total actual contribution (final energy consumption⁽¹⁴⁾ of each renewable energy technology in Latvia to meet the mandatory 2020 targets and the indicative interim trajectory for the share of energy from renewable sources in heating and cooling (thousand tonnes of oil equivalent)¹⁵

	2017	2018
Geothermal (excluding low temperature geothermal heat in heat pump applications)	0	0
Solar energy	0	0
Biomass ¹⁶ :	1265.9	1337.2
<i>solid biomass</i>	1233.8	1307.5
<i>biogas</i>	32.1	29.6
<i>bioliquids</i>	0	0
Renewable energy from heat pumps:	0.7	0.7
- of which aerothermal	0.2	0.2
- of which geothermal	0.5	0.5
- of which hydrothermal	0	0
TOTAL	1266.7	1337.9
<i>Of which DH¹⁷</i>	<i>316.3</i>	<i>330.9</i>
<i>Of which biomass in households¹⁸</i>	<i>505.4</i>	<i>536.3</i>

Table 1.d Total actual contribution of each renewable energy technology in Latvia to meet the mandatory 2020 targets and the indicative interim trajectory for the share of energy from renewable sources in transport sector (thousand tonnes of oil equivalent)^{19, 20}

	2017	2018
- Bioethanol	7.91	8.46
- Biodiesel (FAME)	1.36	29.37
- Hydrogenated vegetable oil (HVO)	n/r	n/r
- of which bio-methane	n/r	n/r
- Fischer-Tropsch synthesis diesel	n/r	n/r
- Bio-ETBE	n/r	n/r
- Bio-MTBE	n/r	n/r
- Bio-DME	n/r	n/r
- Bio-TAEE	n/r	n/r
- Biobutanol	n/r	n/r
- Biomethanol	n/r	n/r
- Pure plant oil	n/r	n/r
Sustainable biofuels in total	9.27	37.83
Of which:		
sustainable biofuels made from raw materials listed in Part A of Annex IX	n/r	n/r
other sustainable biofuels included in the target referred to in Article 3 (4) (e)	n/r	n/r
sustainable biofuels made from raw materials listed in Part B of Annex IX	n/r	n/r
sustainable biofuels subject to the limitation in Article 3 (4) (d) related to the	n/r	n/r

¹³ Taking into account only those complying with the sustainability criteria (cf. Article 5(1) last subparagraph of Directive 2009/28/EC).

¹⁴ Direct use and district heating as defined in Article 5(4) of Directive 2009/28/EC.

¹⁵ For easier comparison with Table 11 of NREAPs.

¹⁶ Taking into account only those complying with the sustainability criteria (cf. Article 5(1) last subparagraph of Directive 2009/28/EC).

¹⁷ District heating and/or cooling from total renewable heating and cooling consumption.

¹⁸ In total renewable heating and cooling consumption.

¹⁹ Taking into account only biofuel compliant with the sustainability criteria (cf. Article 5(1) last subparagraph).

²⁰ For easier comparison with Table 12 of NREAPs.

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

achievement of the renewable energy targets		
Imports from third countries	n/r	n/r
Hydrogen from renewable resources	n/r	n/r
Renewable electricity	9	8.90
of which:		
consumption in road transport	4.64	2.45
consumption in railways	3.39	5.87
consumption in other transport sectors	0.98	0.59
Other (specify)	n/r	n/r
Other (specify)	n/r	n/r

2. Measures taken over past two years and/or planned at national level to promote the growth of energy from renewable sources taking into account the indicative trajectory towards the national renewable energy targets, as set out in the National Renewable Energy Action Plan (Directive 2009/28/EC) Article 22 (1) (a).

Table 2 Overview of all policies and measures

Name and reference of the measure	Type of measure*	Expected results**	Targeted group and/or activity ***	Existing or planned* ***	Start and end dates of the measure
1. The right to sell the produced electricity in the form of obligatory purchase of electricity (Cabinet of Ministers (hereinafter - Cabinet) Regulation No. 262 of 16 March 2010 "Regulations on Production of Electricity Using Renewable Energy Resources and Pricing Procedure")	Financial/r egulatory	The use of RE and energy produced from renewable energy sources (hereinafter — RES) to promote competitiveness.	Merchants generating or planning to produce electricity from RES at a power plant in territory of Latvia using: hydroenergy, biogas, solid or liquid biomass of any kind, wind energy, solar energy.	Existing ²¹	As from 22 August, 2007. Within the framework of the compulsory procurement rights currently granted, the indicative expiry date is 2037.
2. Mandatory Purchase of Electricity Produced in Cogeneration Power Plant (Cabinet Regulation No. 221 of 10 March 2009 "Regulations on Electricity Production and Pricing of Electricity Produced in Cogeneration")	Financial/r egulatory	Promotion of cogeneration of electricity from RES.	Electricity producer generating electricity in high efficiency cogeneration units.	Existing ²²	As from 11 November 2006. Within the framework of the compulsory procurement rights currently granted, the indicative expiry date of the aid is 2032.
3. The right to receive a guaranteed payment for the electric capacity installed in a cogeneration unit (Cabinet Regulation No. 221 of 10 March 2009 "Regulations on Electricity Production and Pricing in the Production of Electricity in Cogeneration").	Financial/r egulatory	Promotion of cogeneration of electricity from RES.	Electricity producer generating electricity in high efficiency cogeneration units.	Existing ²³	As from 18 March 2009. Currently, within the framework of the right to receive guaranteed payment for the installed electric capacity, the aid period expires in 2028.
4. Reduced rate of excise tax (Law on Excise Tax)	Financial	Promotion of biofuel use	Reduced excise tax rates apply to the following types of fuel: - unleaded petrol and ethyl alcohol blend containing ethyl alcohol from 70% to 85%	Existing	As from 1 May 2004

²¹ Granting of new rights in accordance with Regulation No. 262 of 16 March 2010 "Regulations on Production of Electricity Using Renewable Energy Sources and Pricing Procedures" is suspended as from 26 May 2011.

²² Granting of new rights in accordance with Regulation No. 221 of 28 August 2012 "Regulations on Production of Electricity Using Renewable Energy Sources and Pricing Procedures" is suspended as from 10 September 2012.

²³ Granting of new rights in accordance with Regulation No. 221 of 28 August 2012 "Regulations on Production of Electricity Using Renewable Energy Sources and Pricing Procedures" is suspended as from 10 September 2012.

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

			(including) by vol. (E85); - rapeseed oil marketed or used as fuel, and biodiesel fully derived from rapeseed oil (B100).		
5. Mandatory biofuel blend in fossil fuels (Cabinet Regulation No 332 of 26 September 2000 laying down rules for the Conformity Assessment of Petrol and Diesel Fuel)	Regulatory	Promotion of biofuel use	Mandatory biofuel blend concerns moderate climatic A, B, C, D, E and F diesel and 95 gasoline	Existing	From 1 October 2009
6. Net settlement system for electricity ²⁴	Regulatory	Use of AEs for household consumption	Electricity end-users	Existing; supplements the action plan	From 1 January 2014.
7. Call for projects for an emission allowance auction instrument - 'Reducing Greenhouse Gas Emissions through Smart Urban Technologies' (Cabinet Regulation No 333, 12 June 2018)	Financial	Deployment and demonstration of smart urban technologies that reduce GHG emissions	Energy end-users: a local authority, local authority body or local authority company involved in local government	Supplements the action plan	12 June 2018 to 26 May 2020 (two years from the date of entry into force of the project agreement)
8. Call for projects for an emission allowance auction instrument 'Reducing Greenhouse Gas Emissions by developing the Construction of Energy Self-Sufficient Buildings' (Cabinet Regulation No 418, 17 July 2018)	Financial	Limitation of potential GHG emissions by supporting the construction of new and sustainable low-energy, energy-efficient, self-sufficient buildings and provision of the necessary demonstrations and promotion of low carbon technologies in Latvia	Energy end-users: local authority or a local authority body	Supplements the action plan	17 July 2018 to 11 November 2021 (four years from the date of entry into force of the project agreement)
9. Call for projects for an emission allowance auction instrument 'Reducing Greenhouse Gas Emissions in Nationally Protected Architectural Monuments' (Cabinet Regulation No 35, 12 January 2016)	Financial	Reduction in GHGs through the rebuilding, restoration or simplified facade restoration of nationally protected architectural monuments	Energy end-users: secondary public entities, bodies under direct government control managing public property, State limited companies managing public property, religious organisations, educational institutions established by the State, or cultural institutions established by the State or a local authority in accordance with the Law on Cultural Institutions	Existing; supplements the action plan	12 January 2016 to 23 August 2020 (four years from the date of entry into force of the project agreement)
10. Call for projects for an emission allowance auction instrument 'Reducing Greenhouse Gas Emissions in Low-Energy Consumption Buildings' (Cabinet Regulation No. 69, 26 January 2016)	Financial	Reduction of GHG emissions by building new low-energy buildings and converting or renovating existing buildings into low energy buildings	Energy end-users: local authorities or local authority bodies, or authorities under direct government control	Existing; supplements the action plan	26 January 2016 to 4 October 2019 (three years from the date of entry into force of the project agreement)
11. Open call for projects 'Development of Sustainable Buildings, Renewable Energy Technologies and Innovative Emission	Financial	Reduction of CO ₂ emissions through energy efficient technologies and solutions for	Energy end-users: government institutions under direct or indirect government control, associations or	Existing; supplements the action plan	18 March 2014 to 30 April 2017

²⁴ Law on the Electricity Market, Article 30.¹.

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

Reduction Technologies', under the EEA financial instrument (Cabinet Regulation No 149 of 18 March 2014)		sustainable buildings, the use of renewable energy technologies for energy production and other new (innovative) technologies, (including technological processes) or products (including goods and services)	foundations, as well as registered traders		
12. Specific aid objective 4.2.2. "To promote energy efficiency improvement and use of RES in municipal buildings" of the Operational Programme 'Growth and Employment' (Cabinet Regulation No 152 of 8 March 2016)	Financial	Increase in the use of RES technologies and a reduction in GHG emissions	Energy end-users: local authorities	Existing; supplements the action plan	8 March 2016 to the second half of 2023
13. Exhibition Environment and Energy 2017	Soft	Increasing public awareness of the use of RES technologies and a reduction in GHG emissions	Energy producers and end users	Existing; supplements the action plan	19-22 October 2017
14. Alternative Fuels Development Plan (approved by Cabinet Order No.202 of 25 April 2017)	Regulatory	Deployment of alternative fuels infrastructure, thus facilitating the use and spread of alternative fuel vehicles	Drivers	Existing	2017-2020
15. Conceptual Report on the Use of Renewable Energy Sources in the Transport Sector (Approved by Cabinet Resolution No 379 of 21 July 2017)	Regulatory	Identification of solutions to reach the RES transport target	Drivers, fuel merchants	Existing	From 2017
16. Development of recharging infrastructure for electric transport vehicles in Latvia (Cabinet Regulation No 637 of 3 November 2015 laying down Implementing Provisions for Specific Aid Objective 4.4.1 'To Develop ETL Recharging Infrastructure in Latvia' of the Operational Programme 'Growth and Employment')	Financial (ERDF)	Promote the use of electric transport vehicles in the transport sector, thereby increasing the use of renewable energy in transport and reducing pollution and imports of fossil fuels	Users of electric transport vehicles	Existing	2015-2023
17. Development of environmentally friendly public transport infrastructure (rail transport) (Cabinet Regulation No 281 of 4 May 2016 laying down Implementing provisions for Specific Aid Objective Measure No 4.5.1.1 'Development of environmentally friendly public transport infrastructure (rail transport)' to achieve Specific Aid Objective 4.5.1. 'Development of environmentally friendly public transport infrastructure' of the Operational Programme 'Growth and Employment')	Financial (Cohesion Fund)	Use of environmentally friendly public transport	Public transport users, residents of cities with tram infrastructure	Existing	2016-2023

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

<p>18. Development of environmentally friendly public transport infrastructure (bus) (Cabinet Regulation No 848 of 20 December 2016 laying down Implementing provisions for Specific Aid Objective Measure No 4.5.1.2 'Development of environmentally friendly public transport infrastructure (bus)' to achieve Specific Aid Objective 4.5.1. 'Development of environmentally friendly public transport infrastructure' of the Operational Programme 'Growth and Development'</p>	<p>Financial (Cohesion Fund)</p>	<p>Use of environmentally friendly public transport</p>	<p>Users of public transport</p>	<p>Existing</p>	<p>2016-2023</p>
<p>19. Electrification of the Latvian Railway Network (Cabinet Regulation No 69 of 31 January 2017 laying down Implementing Provisions for Specific Aid Objective Measure 6.2.1.1 'Electrification of the Latvian Railway Network' to achieve Specific Aid Objective 6.2.1 'To ensure a competitive and environmentally friendly TEN-T railway network by promoting its safety, quality and capacity' of the Priority Axis 'Sustainable Transport System' of the Operational Programme 'Growth and Employment'</p>	<p>Financial (Cohesion Fund)</p>	<p>Promotion of the electrification of the Latvian railway network</p>	<p>Users of railway infrastructure and users of other related transport modes</p>	<p>Existing</p>	<p>2017-2023</p>
<p>20. Measures to improve the energy efficiency of processing industry buildings and equipment (Cabinet Regulation No 590 of 6 September 2016 Implementing provisions for Action Program "Growth and Employment" 4.1.1. Specific Aid Objective "To promote the efficient use of energy, reduce energy consumption and transition to RES in the processing industry")</p>	<p>Financial (Cohesion Fund)</p>	<p>Increased energy efficiency of industrial buildings and facilities by supporting refurbishment of buildings, utilities and switching to RES heating and switching production facilities, thereby reducing heat consumption and GHG emissions from industrial buildings as well as the energy consumption of the production process.</p>	<p>Small, medium and large manufacturing companies registered in the Republic of Latvia.</p>	<p>Existing</p>	<p>13 December 2016 to 31 December 2020</p>
<p>21. Measures to improve the energy efficiency of processing industry buildings and equipment (Cabinet Regulation No 38 of 16 January 2018 Implementing provisions for Action Program "Growth and Employment" 4.1.1. Specific Aid Objective "To promote the efficient use of energy, reduce energy consumption and transition to RES in the processing industry" of the</p>	<p>Financial (Cohesion Fund)</p>	<p>Increased energy efficiency of industrial buildings and facilities by supporting refurbishment of buildings, utilities and switching to RES heating and switching production facilities, thereby reducing heat consumption and GHG emissions</p>	<p>Small, medium and large manufacturing companies registered in the Republic of Latvia.</p>	<p>Existing</p>	<p>13 March 2018 to 31 December 2020</p>

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

second call for proposals”)		from industrial buildings as well as the energy consumption of the production process.			
22. Measures to improve the energy efficiency of industrial buildings and facilities (Cabinet Regulation No 506 of 5 November 2019 laying down implementing provisions for the third project application selection round to achieve Specific Aid Objective 4.1.1. "To promote the efficient use of energy, reduce energy consumption and transition to RES in industrial production" of the Operational Programme 'Growth and Employment')	Financial (Cohesion Fund)	Increased energy efficiency of industrial buildings and facilities through support for the refurbishment of buildings and the switching of utilities and heating to a system using RES to produce heat, thereby reducing heat consumption and GHG emissions from industrial buildings and energy consumption in the production process.	Small, medium and large manufacturing companies registered in the Republic of Latvia.	Planned	December 2019 to 31 December 2022
23. Measures to increase energy efficiency and promote RES technologies in residential buildings (Cabinet Regulation No 160 of 15 March 2016 laying down implementing provisions for Specific Aid Objective Measure 4.2.1.1. 'To Promote Improvement of Energy Efficiency in Residential Buildings' to achieve Specific Aid Objective 4.2.1. 'To Promote Improvement of Energy Efficiency in Public and Residential Buildings' of the Operational Programme 'Growth and Employment')	Financial (ERDF, state budget)	An increase in RES technology, an increase in the energy efficiency of buildings, and a reduction in the heat consumption of buildings, thereby reducing GHG emissions.	Owners of apartment buildings	Existing	1 July 2016 to 31 December 2023
24. Measures to increase energy efficiency and promote RES technologies in public buildings (Cabinet Regulation No 534 of 9 August 2016 laying down implementing provisions for the first project application selection round for Specific Aid Objective Measure 4.2.1.2. 'To Promote Improvement of Energy Efficiency in Residential Buildings' to achieve Specific Aid Objective 4.2.1. 'To Promote Improvement of Energy Efficiency in Public and Residential Buildings' of the Operational Programme 'Growth and Employment')	Financial (ERDF, state budget)	An increase in RES technology, an increase in the energy efficiency of buildings, and a reduction in the heat consumption of buildings, thereby reducing GHG emissions.	Owners and users of public buildings	Existing	19 June 2016 to 31 October 2022
25. Measures to increase energy efficiency and promote RES technologies in public buildings (Cabinet Regulation No.13 of 4 January 2018 laying down Implementing provisions for the second project application selection round	Financial (ERDF, state budget)	An increase in RES technology, an increase in the energy efficiency of buildings, and a reduction in the heat consumption of buildings, thereby reducing GHG	Owners and users of public buildings and engineering structures	Existing	7 March 2018 to 31 October 2022

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

for Specific Aid Objective Measure 4.2.1.2. 'To Promote Improvement of Energy Efficiency in Residential Buildings 'to achieve Specific Aid Objective 4.2.1. 'To Promote Improvement of Energy Efficiency in Public and Residential Buildings' of the Operational Programme 'Growth and Employment'"))		emissions.			
26. Measures to increase the efficiency of district heating systems (Cabinet Regulation No 135 of 7 March 2017 laying down Implementing provisions for the first project application selection round to achieve Specific Aid Objective 4.3.1. 'To Promote the Improvement of Energy Efficiency and the use of Local RES in District Heating' of the Operational Programme 'Growth and Employment')	Financial (Cohesion Fund)	A significant increase in heat production efficiency, reduced heat loss in transmission and distribution systems, and facilitated substitution of fossil fuels by RES.	Energy supply companies engaged in the provision of district heating services, and consumers of heat energy	Existing	18 April 2017 to 31 December 2021
27. Measures to increase the efficiency of district heating systems (Cabinet Regulation No.495 of 22 August 2017, "Implementing provisions of Action Program "Growth and Employment" 4.3.1. Specific Aid Objective "To Promote Improvement of Energy Efficiency use of Local RES in District Heating" of the second call for proposals")	Financial (Cohesion Fund)	Significantly increased heat production efficiency, reduced heat loss in transmission and distribution systems and promotion of fossil fuel substitution with RES.	Energy supply companies engaged in the provision of district heating services, consumers of heat energy.	Existing	1 November 2017 to 31 December 2021
28. Measures to increase the efficiency of district heating systems (Cabinet draft Regulation "Implementing provisions of Action Program "Growth and Employment" 4.3.1. Specific Aid Objective "To Promote Improvement of Energy Efficiency use of Local RES in District Heating" of the third call for proposals")	Financial (Cohesion Fund)	Significantly increased heat production efficiency, reduced heat loss in transmission and distribution systems and promotion of fossil fuel substitution with RES.	Energy supply companies engaged in the provision of district heating services, consumers of heat energy.	Planned	June 2020 to 31 December 2022
29. "Warmer living" information campaign	Soft (information campaign)	Residents, managers, builders, designers of apartment buildings and other stakeholders are informed at seminars and exhibitions on current topics and solutions to improve energy efficiency of buildings, improvement of engineering structures, the use of RES technologies for energy self-consumption, current changes in regulatory enactments related	Residents, managers, builders, designers of apartment buildings and other stakeholders	Existing	2010 to 13 December 2021

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

		to both construction and management of buildings, as well as possibilities to attract EU co-financing for energy efficiency improvement of buildings.			
30. Contribution to Climate Change Mitigation Measures (Cabinet Regulation No. 600 of 30 September 2014 "Procedures for Granting National and European Union Aid through Open Call for Proposals for the Investment in Tangible Assets" Sub-measure 4.1. "Aid to investments in agricultural business")	Financial	Climate change mitigation is being promoted by introducing technologies to reduce GHG and/or ammonia emissions	Farmers (physical and legal persons), co-operatives	Existing	Project acceptance: the fourth call for proposals 7 November 2017 to 7 December 2017 the fifth call for proposals 18 October 2018 to 22 November 2018 (The monitoring period for all projects is 5 to 7 years after implementation)
31. Contribution to Climate Change Mitigation Measures (Cabinet Regulation No. 600 of 30 September 2014 "Procedures for Granting National and European Union Aid through Open Call for Proposals for the Investment in Tangible Assets" Sub-measure 4.2. "Aid to investments in processing")	Financial	Climate change mitigation is being promoted by introducing technologies to reduce GHG and/or ammonia emissions	Processing companies, households	Existing	Project acceptance: the sixth call for proposals 7 November 2017 to 7 December 2017 the seventh call for proposals 18 October 2018 to 22 November 2018 (The monitoring period for all projects is 5 years after implementation)
32. Contribution to Climate Change Mitigation Measures (Cabinet Regulation No. 600 of 30 September 2014 "Procedures for Granting National and European Union Aid through Open Call for Proposals for the Investment in Tangible Assets" Sub-measure 4.3. "Aid to investments in the development of agricultural and forestry infrastructure")	Financial	Climate change mitigation is being promoted by introducing technologies to reduce GHG and/or ammonia emissions	Agricultural companies, municipalities, natural or legal persons, etc.	Existing	Project acceptance: the fourth call for proposals 7 November 2017 to 7 December 2017 the fifth call for proposals 18 October 2018 to 22 November 2018 (The monitoring period for all projects is 5 years after implementation)

* Indicate if the measure is (predominantly) regulatory, financial or soft (i.e. information campaign).

** **Expected outcome — changing habits, installed power (MW; t /year), energy produced (thousand tonnes of oil equivalents).

*** Target audience: investors, end users, public administration, planners, architects, installers, etc. or relevant sector/industry: biofuel production, use of manure for energy, etc.

**** Does this measure supersede or complement the measures listed in Table 5 of NREAP?

2.a Outline the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to development of renewable energy. (Article 22(1)(e) of Directive 2009/28/EU).

Regulator Board Resolution No.1/7 of 27 March 2018 approved the new version of the “System Connection Rules for Electricity System Participants”, which provides for simplified requirements for connection of micro-generators (up to 11.1 kW). The draft regulation lays down a simplified procedure for connecting micro-generators to a system designed to generate electricity for the user's own use (self-consumption). In addition, amendments to the Electricity Market Law were approved in January 2020, which stipulates that the installation of micro-generators will no longer require the permission of the Ministry of Economics (hereinafter -

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

ME), thus easing the administrative procedures to persons wishing to produce renewable electricity for self-consumption.

At the same time, in 2018 the net electricity metering system was evaluated²⁵, and the work began on the net system improvement and development of additional solutions to promote electricity self-consumption.

Work on the National Energy and Climate Plan 2021 - 2030 commenced in 2018, in which, among other things, obstacles to the further development of wind energy in Latvia's electricity market have been identified.

2.b Outline the measures taken to ensure the transmission and distribution of electricity produced from renewable energy sources, and to improve the system or rules for bearing and sharing the costs of connection to the grid and for increases in network capacity (Article 22 (1) of Directive 2009/28 / EC) (f).

The connection of electricity producers to the grid is regulated by the Electricity Market Law. Article 8 of the Electricity Market Law regulates the activities of the system operator and regulates the supervision of the activities of the electricity system owner. Pursuant to Article 8, paragraph 2 of the Electricity Market Law, the Public Utilities Commission (hereinafter - Regulator) shall establish uniform system connection rules for producers and users, as well as the methodology for determining the connection fee.

Article 9, paragraph 2²⁶ of the Electricity Market Law provides that the system operator has a permanent obligation within the scope and term of the license to provide system participants with necessary connection to the respective system in accordance with the unified system connection rules established by the regulator. There is no network congestion in the Latvian electricity system that would restrict free access to the electricity system, therefore any electricity producer who has a contract for the sale of electricity has an unrestricted and guaranteed access to the electricity system. Regulations approved by the Regulator's Council No.1/6 of

22 February 2012, "System Connection Rules for Electricity Producers", establish common system connection rules and the methodology for determining the connection fee for electricity producers. Item 2.3²⁷, item 7²⁸ and item 10²⁹ of the Regulator's Regulation stipulate that the

²⁵ Research "Evaluation of Net Electricity System and Proposals for System Improvements" (Riga Technical University, 2018)

²⁶ Article 9(2) of the Electricity Market Law:

"(2) A system operator has a permanent obligation within the scope and term of the license to provide system participants with the necessary connection to the respective system in accordance with the unified system connection rules established by the regulator, if the system participant complies with the technical requirements for connection set by the system operator. The connection fee shall correspond to the justified installation costs of the respective system connection. The distribution of costs between the system participant and the system operator in the cases specified in paragraph 2.1 of this Article shall be determined by the regulator. The connection fee for a system participant shall not include the costs of the system development."

²⁷ Decision No.1/6 of the Board of Public Utility Service Commission of 22 February 2012 "System connection rules for electricity producers" sub-item 2.3:

"2.3 connection point - a connection point in the electricity transmission or distribution system to which the producer's power plant may be connected according to justified technical requirements and economically justified costs."

²⁸ Decision of the Board of Regulator of 22 February 2012 No. 1/6 "System connection rules for electricity producers", item 7:

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

production equipment must be connected according to justified technical requirements and economically justified costs. Consequently, the influence of the manufacturers is assessed by issuing technical regulations that reflect, among other things, the construction costs of the connection. In addition, Sadales tīkls AS, Latvia's largest distribution system operator, which provides distribution system operator services in 99% of the country's territory, applies a connection and load change regulation for micro-generator connections, which allows introduction of renewable energy production facilities in a relatively simple way such as solar panels and low-power wind generators. As from 1 January 2014, Article 30.¹ of the Electricity Market Law has introduced a NETO settlement system for all households producing electricity for their own needs from renewable energy sources, which provides for the possibility to transfer the produced electricity to the electricity grid and to use it again when needed. In a month, when a household has supplied more electricity than it consumed, the corresponding amount of electricity is transferred to the next electricity billing period.

It is planned that the amendments to Article 22 of the Electricity Market Law will come into force on 15 February 2020, which stipulate that in the future the permit for the introduction of electricity production equipment from the ME will be required only for electricity generating equipment with a capacity exceeding 11.1 kW. This will ease the administrative burden for installers of micro-generators (solar panels) and, consequently, further promote the integration of renewable energy into the electricity grid.

Cabinet Regulations No. 483 of 16 August 2017 "Procedures for Financing the Connection Installation for Protected Users" (hereinafter - Regulations No. 483) provide for criteria by which the applicant's compliance with the protected user status is evaluated, as well as the procedures for installation of the financed connection at the connection object. Under these Regulations, the installation of a connection to a protected user's home can only be financed once. Similarly, Regulations No. 483, item 12 stipulates that the ME shall ensure supervision of the use of the state budget funds allocated for financing the installation of connection of protected user, as well as ME has the right to request information related to the connection installation from the electricity distribution system operator and competent authorities. Decision No.1/7 of the Board of the Public Utility Service Commission of 27 March 2018 "System Connection Rules for Electricity System Participants" establishes common rules for installing a new connection or changing the permissible load on an existing connection and methodology for calculating connection fees for transmission and distribution system operators and end-users. The rules state that reducing the permissible connection load is a free of charge service, however the system user must pay for the increase of the permissible connection load. In this case, the connection fee shall be calculated as a new connection, the eligible costs being applied only for the additional requested load, taking into account the total authorized load for that connection.

With respect to the interruption and restoration of electricity supply, the Regulations stipulate that, if the power supply has been interrupted for no more than 6 months, the system user shall bear only the actual costs of the reconnection, and, if the power supply to the facility has been interrupted for more than 6 months, the system operator will evaluate the possibilities

"7. The location and conditions of connection shall be determined by the system operator within sixty days of receipt of the application by issuing a clear and technically sound technical regulation to the producer, which shall be valid for a period of two years."

²⁹ Decision of the Board of Regulator of 22 February 2012 No. 1/6 "System connection rules for electricity producers", sub-item 10:

"10. The connection fee shall be set according to the economically justified costs of installing the connection. "

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

of restoring the electricity connection and the system user will have to cover the actual and eligible costs related to the installation of the connection.

As from 1 January 2015, the electricity market in Latvia was fully opened, and households joined to legal persons that have been able to choose an electricity trader since 2007. Market conditions created preconditions that electricity may be traded by mutual competing traders, and citizens, in turn, were able to choose between various traders and various electricity tariff plans or product packages. An important precondition for the entry of new RE producers into the market is the development of the national energy infrastructure. There were no significant changes in electricity distribution networks during the reporting period. At the same time, 1,884 km of power lines were restored in 2018, including 800 km of medium voltage power lines (in 2017: 637 km), 897 km of low-voltage power lines (in 2017: 799 km), as cable solution 187 km (2015: 210 km), 816 transformer substations were reconstructed and built (in 2017: 726 transformer substations). The total number of connections constructed in 2018 was 9,445 (in 2017 - 8,907).

In the transmission system, the implementation of the project for the strengthening of the transmission network of the Western region of Latvia (Kurzeme Ring) started in 2010.

The Kurzeme Ring project consists of 3 stages:

- Construction of a 330kV cable in Riga between Imanta and TEC1, increasing the security of Riga's power supply and providing the necessary infrastructure for the connection of the Kurzeme Ring 330kV lines to the Imanta substation.
- Construction of 330kV line Grobina (Liepaja) -Ventspils;
- Construction of 330kV line Ventspils –Imanta (Riga).

First stage: Construction of 330 kV cable between Riga TEC-1 substation and Imanta substation was completed in 25 September 2013. It strengthened the security and stability of Riga's electricity supply, as well as ensured a more stable connection of the central part of Latvia's networks and generation to the Kurzeme Ring. The completion of this stage and the construction of the Kurzeme Ring will eliminate the "narrow space" of electrical connections between the centre of Latvia and the West, which in some cases, due to insufficient capacity, limits the flow of electricity transit.

Second stage: The 330 kV high-voltage power transmission line Grobina-Ventspils is connected to the voltage on 1 July 2014. The project was started in 2010 and all works were completed in June 2014. Total cost of the second phase is EUR 63.8 million.

Third stage concludes the construction of the Kurzeme Ring with the Ventspils - Tume - Imanta section. This laid the foundation for a stable and secure power supply section. In 2014, the EIA and the route exploration activities were completed and in November 2014, the European Co-financing of 45% of the Connecting Europe Facility was granted for the construction of the Ventspils-Tume-Imanta section of the Kurzeme Ring. The implementation of the Ventspils-Tume-Imanta section was started in December 2014. In 2015, the third stage of Kurzeme Ring was granted the status of a national interest object. In summer 2017, the construction of the first objects of the third stage was started. The third and final stage of the Kurzeme Ring project was completed in autumn 2019. The implementation of the energy infrastructure project Kurzeme Ring will increase the security of electricity supply for consumers in Kurzeme region and towns, provide infrastructure for the growing electric load in Kurzeme region, as well as ensure the connection potential for new electricity users which will enable the connection of new onshore and offshore wind mills planned in the Kurzeme region. The implementation of this project will create the basis for the development of wind farms on the Kurzeme coast.

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

Similarly, the reinforcement of the Estonian-Latvian third interconnection internal network in the territory of Latvia with the transmission line Riga TEC-2 - Riga HES on the regional scale will play a significant role in increasing the throughput capacity in the Baltic region North-South. The grid reinforcement should be in operation by 2020, when the third Estonia-Latvia interconnection project is planned, which is a significant step in increasing cross-border capacity and removing congestion in the Latvia-Estonia cross-border and a prerequisite for efficient cross-border electricity trade and competitive electricity market development.

Significant emphasis should also be placed on the Baltic electricity interconnection project with the European network, which is one of the most ambitious energy infrastructure projects in the EU, as the construction of additional electricity interconnections improves the functioning of the EU internal energy market and the achievement of Energy Union objectives. As part of the synchronization project, the power systems of the Baltic States will start operating in synchronous mode with the Continental Europe network, while disconnecting from the IPS / UPS (Russian and Belarusian power system). It is a part of the overall EU integration process, the completion of which is scheduled by 2025. Within the framework of the project, the reconstruction and construction of the internal infrastructure of each of the Baltic States as well as the construction of the Lithuanian-Polish direct current cable in the sea are planned. At the European Council meeting of 20-21 March 2019, the EC representative and the Baltic and Polish prime ministers signed a road map on the future implementation of the synchronization project from the political point of view.

3. Provide information on aid schemes and other measures put in place to promote the use of energy from renewable sources, and report on changes in the applied measures in relation to the renewable energy set out in the National Renewable Energy Action Plan (Article 22 (1) (b) of Directive 2009/28/EC).

Excise tax relief for biofuel

In accordance with the Law on Excise Tax, as from 2006 on biofuels and biofuels blends with fossil fuels (B100, E85). The reduced rates of excise tax apply equally to biofuels produced domestically as well as to biofuels and blends with fossil fuels imported from other EU Member States.

Table 3.a
Excise tax rates on fuel in Latvia, EUR/1000 litres

Type of fuel:	2017	2018
Unleaded petrol	436	476
Unleaded petrol with 4.5-5% bioethanol added	436	476
Unleaded petrol with 70-85% bioethanol added(E85)	131	142.8
Diesel	341	372
Diesel fuel with 4.5-5% biodiesel added.	341	372
Biodiesel (B100)	0	0

Sources: The Law on Excise Tax

Mandatory biofuel blend

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

According to Cabinet Regulation No.332³⁰, till 31 December 2019, 95 gasoline may be sold in Latvia only if the added bioethanol content is 4.5-5% of the total gasoline volume. Diesel may be sold:

- until 31 March 2018, only with a biofuel content of at least 4.5% by volume of the total quantity of finished product;

- from 1 April 2018 to 31 December 2019, if any of the following fuels are added to the diesel fuel:

- biodiesel derived from rapeseed oil in the amount of 4.5-7% by volume of the total blend volume;
- paraffinic diesel derived from biomass in the amount of at least 4.5% by volume of the total blend volume.

These mandatory fuel mixing requirements do not apply to:

- gasoline 98;
- gasoline used in spark ignition engines of racing sports cars, provided that the racing sports car has been registered with the Road Traffic Safety Directorate and has been marked "sports" in the registration certificate of the vehicle;
- gasoline used in aviation engines;
- diesel used in marine fleet engines;
- diesel used in aviation engines;
- Arctic and severe winter diesel fuel marketed between 1 November and 15 April.

According to amendments to Cabinet Regulations No. 332³¹, as from 1 January 2020 diesel fuel is allowed to be sold only if biofuel is added to, that complies with regulatory enactments regarding sustainability criteria of biofuels and bioliquids, the implementation mechanism and monitoring and control procedures, not less than 6.5% by volume of the total volume of the blend. Petrol with a research octane rating of 95 or higher, but less than 98 (95 grade gasoline) may be sold only if it is supplemented with bioethanol that complies with the regulatory enactments regarding the sustainability criteria for biofuels and bioliquids, the implementation mechanism and monitoring and control procedures, not less than 9.5% by volume of the total volume of the blend. Petrol with a research octane rating of 98 or higher, but less than 100 (98 grade gasoline) may be sold only if it is supplemented with bioethanol that complies with the regulatory enactments regarding the sustainability criteria for biofuels and bioliquids, the implementation mechanism and monitoring and control procedures of no more than 5% by total volume of the blend.

These mandatory fuel mixing requirements do not apply to:

- gasoline used in spark ignition engines of racing sports cars, provided that the racing sports car has been registered with the Road Traffic Safety Directorate and has been marked "sports" in the registration certificate of the vehicle;
- gasoline used in aviation engines;
- diesel used in marine fleet engines;
- diesel used in aviation engines;
- Arctic and severe winter diesel fuel marketed between 1 November and 1 April.

Mandatory procurement of electricity produced from RES

³⁰ Cabinet Regulations No 332 of 26 September 2000 "On assessment of the conformity of petrol and diesel"

³¹ Cabinet Regulations No 332 of 26 September 2000 "On assessment of the conformity of petrol and diesel"

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

The aid for electricity RES production is implemented in Latvia through mandatory electricity procurement since 2007. Producers using RES for electricity generation had the opportunity to qualify for the right to sell the produced electricity under mandatory procurement at a guaranteed feed-in tariff. The prices of electricity purchased in the framework of mandatory procurement depend on the type of energy used, the installed capacity and the number of hours worked by the plant. Taking into account that electricity has its own market value at the moment of production, the difference between the mandatory procurement price of the produced electricity and the market price is compensated or subsidized. This provides the power generator with a specific procurement price regardless of the market price.

All costs of mandatory electricity procurement are borne by end-users and the collection of these costs from end-users of electricity in Latvia is carried out by the companies operating in the electricity market.

Compulsory procurement rights for existing producers under the existing aid mechanism have been discontinued and there is no plan to re-establish it.

Table 3.b

Average unit price (EUR/MWh) of electricity produced from RES in the framework of mandatory procurement (before payment of subsidized electricity tax)

Type of power plants	2017	2018
<i>Hydro power plants</i>	172.09	147.64
<i>Wind power plants</i>	107.39	105.79
<i>Biomass power plants</i>	142.39	148.85
<i>Biogas power plants</i>	172.85	174.42
<i>Average:</i>	152.13	153.14

Sources: ME

Guaranteed payment for electricity installed in CHP plant using RES

Cabinet Regulation No. 221³² also defines qualification procedures for merchants to obtain the right to receive a guaranteed payment for the electrical capacity installed in a cogeneration unit, including those using RES, as well as the procedure for determining the payment for the electric capacity installed in the cogeneration unit depending on the production technology, the fuel used and the installed electrical capacity of the cogeneration unit, as well as the procedures for the payment thereof.

Only one merchant - SIA Fortum Jelgava, whose biomass cogeneration plant with an installed electrical capacity of 23 MW was commissioned on 24 September 2013, is entitled to receive the guaranteed payment for the installed electric capacity of the CHP plant using RES. In 2017 and 2018, the power plant received 5,162,556.96 EUR/year (before the payment of the subsidized electricity tax effective till 31 December 2017) as the guaranteed payment for electricity capacity installed at the power plant.

The granting of the guaranteed payment for the electricity capacity installed in the cogeneration plant under the existing aid mechanism has ceased and no re-establishment is planned.

Subsidized electricity tax relief for electricity produced from RES

³² Cabinet Regulation No. 604 of 28 August 2012 “Amendments to Cabinet Regulation No. 221 of 10 March 2009 ”Regulations on the production and pricing of electricity in cogeneration” ”

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

On 6 November 2013, the Parliament adopted the Subsidized Electricity Tax Law (hereinafter - SET Law), which came into force on 1 January 2014 and was applied until 31 December 2017, which was aimed to limit the sharp increase in the aid costs of RES and CHP that should be compensated by electricity users.

The law was introduced as part of a package of measures to prevent further increases in electricity prices³³. SET Law establishes the object, taxable persons and tax rate in respect of the tax on subsidised electricity (hereinafter - SET), the procedures for establishing and maintaining the register of producers of subsidised electricity, the procedures for calculating, paying and administering the tax, and liability for infringements of this Law.

The SET was applied to the proceeds of the sale of electricity in the framework of the mandatory procurement, as well as to the revenue from the guaranteed payment for the electrical capacity installed at the plant.

There were three different SET rates:

- ✓ 15% for cogeneration plants using fossil fuels;
- ✓ 10% for power plants using RES;
- ✓ 5% for power plants meeting the following conditions:

1) high-efficiency natural gas cogeneration units with an electrical capacity of up to 4 MW or plants using unrestricted RES, provided by district heating systems with thermal energy;

2) high-efficiency cogeneration units with an electrical output of up to 4 MW providing at least 30% of the electricity production with animal by-products or derived products and ensuring at least 70% of the raw material itself or purchased from a producer which holds more than 50% shares in the tax payer's share capital, and the heat produced is used for production of its own products;

3) high-efficiency wood biomass cogeneration plants with an electrical capacity of up to 4 MW and at least 70% of the thermal energy from cogeneration are used for production of its own production;

4) high-efficiency natural gas cogeneration units with an electrical capacity of up to 4 MW or with no limits of installed electrical capacity in RES cogeneration units, which use at least 70% of the thermal energy generated for the vegetation process in covered areas with total area of at least 5000 m².

The reduced SET rates for RES-fuelled plants facilitated the competitive production of electricity from RES.

Notification of state aid

The support measures implemented in Latvia have been assessed in the context of state aid. It was concluded that the aid to electricity producers in the form of compulsory procurement of electricity or guaranteed payment for installed capacity adheres to the state aid rules within the meaning of European Union legislation concerning the state aid, and hence must be co-ordinated with the European Commission, pursuant to Articles 107 and 108 of the Treaty on the Functioning of the European Union and the European Community guidelines on State aid for environmental protection (2008/C 82/01) that were applicable until 31 December 2014.

³³ Informative Report "Complex Solution to the Issues of Electricity Market" was reviewed by the Cabinet on 13 August 2013.

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

On 17 December 2013, a pre-notification process was initiated with the European Commission in the framework of state aid case SA.37970 (2013/PN) - *Aid to energy producers*. On 22 September 2015, a notification process was initiated in the framework of state aid case SA.43140 (2015/PN) - *Aid to energy producers*. The state aid case also describes the mechanism for enforcing SET.

The European Commission adopted a decision of 24 April 2017, in the State aid case “Aid to Electricity Producers”, concluding that the existing aid scheme in Latvia in the form of mandatory electricity procurement and guaranteed payment for installed capacity complies with the requirements of the European Union internal market.

3.1 Provide information on how the eligible electricity is allocated to final energy consumers in application of Article 3 (6) of Directive 2003/54/EC (Article 22 (1) (b) of Directive 2009/28/EC).

In accordance with Article 3 (9) of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal electricity market and repealing Directive 2003/54/EC, Member States shall ensure that electricity suppliers shall specify the following information either on invoices or in accompanying advertising materials to direct users:

- a) the contribution of each energy source to the overall fuel mix of the supplier over the preceding year in a comprehensible and, at a national level, clearly comparable manner;
- b) at least the reference to existing reference sources, such as publicly available web sites, where information on the environmental impact, in terms of at least CO₂ emissions and the radioactive waste resulting from the electricity produced by the overall fuel mix of the supplier over the preceding year;
- c) information concerning their rights as regards the means of dispute settlement available to them in the event of a dispute.

As regards points (a) and (b) of the first sub-paragraph with respect to electricity obtained via electricity exchange or imported from a company situated outside the Community, aggregate figures provided by the exchange or the company in question over the preceding year.

The regulatory authority or another competent national authority shall take the necessary steps to ensure that the information provided by suppliers to their customers pursuant to this Article is reliable and is provided, at a national level, in a clearly comparable manner.

Regulator's Board decision No.1/6 of 9 March 2017 approved the “Regulations on Information to Electricity and Natural Gas End-Users” issued in accordance with Article 32, paragraph 4 of the Electricity Market Law and Article 107, paragraph 6 of the Energy Law. The Regulations determine the amount of information that the electricity trader, natural gas trader, incl. the natural gas distribution system operator shall ensure on invoices and informative materials issued to the end user of electricity or natural gas. At the same time, the Regulations set out the rights of end-users as to the means of dispute settlement and the origin of the electricity supplied. "Regulations on Information on Electricity and Natural Gas End-Users" require the electricity trader to make available to end-users at least once a year, not later than by 1 April, an information material on the origin of electricity supplied during the previous calendar year, indicating the following:

- the share of electricity purchased from electricity producers in Latvia in the total amount of electricity supplied to the end user;

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

- the share of electricity purchased from other electricity producers in the total amount of electricity supplied to the end user;
- the share of electricity purchased in the electricity exchange in the total amount of electricity supplied to the end user;
- the share of electricity produced from each renewable energy source (hydro, biogas, biomass, wind, solar or other renewable energy) in the total amount of electricity supplied to end-users, if such information is available to the electricity trader;
- the share of electricity produced from of each type of fossil fuel (natural gas, coal, shale or other fossil fuel) in the total amount of electricity supplied to end-users, if such information is available to the electricity trader.

Similarly, at least once a year, and no later than by 1 April, the natural gas trader and the public natural gas trader shall make available to the end-user an information material containing the origin of the natural gas delivered during the previous calendar year, indicating the following:

- the country of origin of the natural gas supplied to the end-users, including the country of origin of the liquefied natural gas, if such information is available to the natural gas trader and the public natural gas trader;
- sources of natural gas, including biomethane, in Latvia, if such information is available to the natural gas trader and the natural gas public trader.

At least once a year not later than by 1 April, the electricity trader shall make available to end-users an information material indicating where is publicly available information on the environmental impact of electricity supplied to end-users during the previous calendar year at least for carbon dioxide emissions and radioactive waste, if such information is available to the electricity trader.

4. Where relevant, provide information on how the aid schemes are structured to take into account the usage of renewable energy that offer additional benefits but may also have higher costs, including for biofuels made from waste, residues, non-food cellulosic feedstock and lignocellulosic feedstock (Article 22 (1) (c) of Directive 2009/28/EC).

Not applicable

5. Provide information on the functioning of the system of guarantees of origin for electricity, heating and cooling from renewable energy sources and the measures taken to ensure the reliability of the system and its protection against fraud (Article 22 (1) of Directive 2009/28 / EC) (d)

Pursuant to Article 29.2 of the Electricity Market Law, producers of electricity using RES for electricity generation may obtain a certificate of origin for the amount of electricity produced in megawatt hours (MWh) in accordance with the procedures specified by the Cabinet.

Paragraph 2 of Cabinet Regulations No. 900 of 22 November 2011, "Regulations for Obtaining a Certificate of Origin for Electricity Produced Using Renewable Energy Sources" (hereinafter - Regulations No. 900) provide that a producer who owns or uses a power plant generating electricity from RES may obtain a certificate of the electricity origin.

Paragraph 1 of Regulations No 900 stipulates the following:

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

(1) the procedures whereby a producer of electricity using renewable energy sources can obtain a certificate of origin for the amount of electricity produced, expressed in megawatt hours (MWh);

(2) the procedure whereby a producer using RES for electricity generation can obtain a certificate of origin of the electricity produced;

(3) the information to be included in the certificate of origin, as well as the authorized body issuing the certificate of origin. In accordance with Article 2, Paragraphs 1.1, 1.2 and 1.3 of Regulations No. 900,³⁴ the certificate of origin of the electricity referred to in paragraph 1 can be obtained by a producer who owns or uses the power plant that generates the electricity using the RES. The producer may obtain one or more certificates of origin. Paragraph 3 of Regulations No.900³⁵ stipulates that the ME shall electronically issue and register the certificate of origin referred to in Paragraph 2 of Regulations No.900. Paragraph 4 of Regulations No. 900³⁶ states that in order to receive a certificate of origin, the producer shall submit a paper application or an electronic document to the ME for receipt of the certificate of origin (Annex to Regulations No.900) in addition, the data shall be certified by the system operator to whose power grid the power plant is connected.

Pursuant to Paragraph 7³⁷ of Regulations No.900 and Annex thereto, ME examining the information provided by the producer, including information on the amount of electricity sold to the electricity market participants, shall make a decision on issuing the certificate of origin to electricity traders so that to allow the producer to provide the necessary quantity of certificates of origin to electricity traders, taking into account demand.

At the request of merchants, ME has issued 27 certificates of origin in 2017 (for total volume of 2436,88 GWh) for electricity produced from RES. At the request of merchants, ME has issued 9 certificates of origin in 2018 (for total volume of 2026,22 GWh) for electricity produced from RES.

Although Directive 2009/28/EC has left Member States the discretion to decide how to use certificates of origin in compliance with the obligation to inform consumers, we note that the sole purpose of certificates of origin in Latvia is the one mentioned in Directive

³⁴ Regulations No. 900, Paragraphs 1.1, 1.2, 1.3:

“1. The Regulations lay down:

1.1 the procedures whereby a producer of electricity using renewable energy sources can obtain a certificate of origin for the amount of electricity produced), expressed in megawatt hours (MWh);

1.2 the procedures whereby a producer using RES for electricity generation can obtain a certificate of origin of the electricity produced;

1.3 the procedures whereby a producer using biomass or biogas for electricity generation can obtain a certificate of origin of the electricity produced;”

³⁵ Regulations No. 900, Paragraph 3:

“3. ME shall electronically issue and register certificates of origin mentioned in Paragraph 2 of Regulations No. 900”

³⁶ Regulations No. 900, Paragraph 4:

“4. In order to receive a certificate of origin, the producer shall submit to the Ministry an application for a certificate of origin in paper or electronic form (Annex) (hereinafter - application). The data referred to in Paragraph 7 of the application shall be certified by the system operator to whose power grids the power plant is connected. ”

³⁷ Regulations No. 900, Paragraph 7:

“7. If the application contains all the necessary information and the producer complies with the requirements of these Regulations, the Ministry shall take a decision to issue a certificate of origin to the producer, notify the producer on the decision in question and deliver the certificate of origin to him. The certificate of origin shall indicate all the information referred to in the section headed "Information on the power plant using renewable energy sources for electricity production" of Annex to Regulations.”

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

2009/28/EC, i.e. to prove to the electricity users that a certain part or the amount of electricity consumed by them is produced from RES. Pursuant to Directive 2009/28/EC, paragraph 52 of the preamble and Article 15, the sole function of certificates of origin issued in accordance with Directive 2009/28/EC is to prove to end-users that a given share or quantity of electricity is produced from RES. In Latvia, the minimum requirements of Article 15 of Directive 2009/28/EC have been introduced by Regulations No. 900, without laying down additional criteria for the applicability of certificates of origin, including without regulating the trade with certificates of origin.

On 21 February 2017, the Cabinet Regulations No. 68 “Procedures for Receiving Certificates of Origin of Electricity” took effect incorporating the conditions included in Regulation No.900 regarding issuance of certificates of origin for energy produced from RES, as well as Cabinet Regulations No.221 on the issue of certificates of origin for high-efficiency cogeneration.

In 2016, work began on transferring certificates of origin to transmission system operator and allowing Latvia to join the European system of certificates of origin. It is planned that the amendments to the Electricity Market Law will come into force in 2020, according to which the transmission system operator will have to ensure as from 1 December 2020 the operation of the system of certificates of origin according to the European system of certificates of origin.

6. Report on trends in the availability and use of biomass resources for energy purposes over the last two years (*Article 22 (1) (b) of Directive 2009/28/EC*).

Table 4 Biomass supply for energy purposes

	Volume of domestic raw materials (*)		Primary energy in domestic raw materials (thousand tons oil equivalent)		Volume of imported raw materials (*)		Primary energy in imported raw materials (thousand tons oil equivalent)		Volume of exported raw materials (*)		Primary energy in exported raw materials (thousand tons oil equivalent)	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
<i>Biomass supply for heat and electricity:</i>												
1. Firewood, thousand m3	3052	3728	561	686	21	66	4	12	108	149	20	27
2. Wood briquettes, thousand t	61	55	24	22	18	18	7	7	36	22	15	9
3. Wood granules, thousand t	1466	1736	614	727	187	239	78	100	1606	1764	674	739
4. Wood waste, thousand m3	2720	4291	175	276	161	195	10	13	92	85	6	6
5. Wood chips, thousand m3	8456	9368	658	730	308	562	24	44	1805	1735	140	135
6. Straw, other biomass, thousand t	16	14	6	5	-	10	-	3	-	-	-	-
7. Landfill gas, millions m3	17	17	9	8	-	-	-	-	-	-	-	-
8. Sewage sludge gas, millions m3	5	4	2	2	-	-	-	-	-	-	-	-
9. Other biogas, millions m3	182	170	83	78	-	-	-	-	-	-	-	-
<i>Biomass supply for transport:</i>												
6. Bioethanol, thousand t	9	8	6	5	10	11	6	7	7	6	4	4

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

7. Biodiesel, thousand t	53	88	47	79	5	21	4	19	59	82	52	73
--------------------------	----	----	----	----	---	----	---	----	----	----	----	----

* Units according to biomass type

Sources: CSB

In 2017 and 2018 grain corps, rapeseed and rapeseed oil were used to produce biofuels.

Table 4.a Domestic agricultural land use for production of dedicated energy crops (ha)

Land use	Area (ha)	
	2017	2018
1. Land occupied by common arable crops (wheat, sugar beet, etc.) and oilseed crops (rape, sunflower, etc.) (indicate main types)	623000*	565500*
2. Land occupied by trees with short felling (willows, poplars) (specify main types)	n/r	n/r
3. Land occupied by other energy crops such as grasses (barley, wicker millet, miscanthus), sorghum (please specify main types)	n/r	n/r

* wheat, rape and rye

Sources: CSB

Farmers submit crop and land use data each year when applying for the single area payment. The table below summarizes the land use and crops used by farmers for biogas production.

Area declared for the single area payment (ha)

Land use	Area declared for the single area payment (ha)	
	2017	2018
1. Land occupied by conventional arable crops (maize for biogas production)	5297.85	4333.74
2. Land occupied by trees with short felling (aspen, willow, grey alder)	810.11	700.35
3. Land occupied by other energy crops (barley, wolverine)	258.46	252.16

Sources: Rural Support Service

Use of crop for biogas (ha)

Crop	Use of crop for biogas (ha)	
	2017	2018
Wheat, winter	58.12	10.75
Wheat, summer	23.41	n/r
Rape, summer	n/r	92.22
Rye	63.18	n/r
Barley, summers	10.8	n/r
Oat	0.3	n/r
Permanent grassland	223.34	117.08
Other grasses	80.79	73.63
Mixture of grasses or fodder grasses sown in arable land	398.71	177.83
Lucerne	116.57	50.69
Fodder galega	33.48	33.78
Maize for biogas production	4895.09	4134.83
Other maize	-	18.03
Total	5903.79	4708.84

Sources: Rural Support Service

- 7. Provide information on changes in raw material prices and land use in the Member State over the last two years related to increased use of biomass and other forms of energy from renewable sources. Where possible, reference should be made to the relevant documents proving these effects in the country concerned (Article 22 (1) (h) of Directive 2009/28/EC).**

Latvia has been a net exporter of grain and energy crops in recent years and has a high level of self-sufficiency. However, as the production of energy crops increases, the production of other grain crops may decrease.

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

Changes in raw material prices in 2017 and 2018 are shown in Table 4b.

Table 4.b
Crop production indices (at comparable prices)

	2017	2018
	% against previous year	% against previous year
Grit	108.56	115.96

Sources: CSB

There is a grain crops price increase in 2017 compared to 2018

The forest area in Latvia (excluding bogs, slopes, flooded openings and land under infrastructure) amounts to 3285 thous. ha, which is an increase of 1.6% since 2009. The area of forest stands on agricultural land increased from 144 thousand ha in 2009 to 176 thousand ha in 2018.

8. Report on the development and share of biofuels produced from waste, residues, non-food cellulosic material and ligno-cellulosic material (Article 22 (1) (i) of Directive 2009/28/EC)

Table 5

In biofuel development stage Provide information on the total volume of biofuels produced from raw materials listed in Annex IX to Directive 2009/28/EC (thousand tonnes of oil eq.)

Raw materials listed in Part A of Annex IX to Directive 2009/28/EC	2017	2018
a) algae if cultivated on land in ponds or photobioreactors.	n/r	n/r
b) biomass fraction of mixed municipal waste, but not separated household waste subject to recycling targets under item (a) of Article 11(2) of Directive 2008/98/EC.	n/r	n/r
c) biowaste as defined in item(4) of Article 3 of Directive 2008/98/EC from private households subject to separate collection as defined in item(11) of Article 3	n/r	n/r
d) biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry, and excluding feedstocks listed in part B of this Annex	n/r	n/r
e) straw	n/r	n/r
f) animal manure and sewage sludge	n/r	n/r
g) palm oil mill effluent and empty palm fruit bunches	n/r	n/r
h) tall oil pitch	n/r	n/r
i) glycerol, crude	n/r	n/r
j) bagasse	n/r	n/r
k) grape marcs and wine lees	n/r	n/r
l) nut shells	n/r	n/r
m) husks	n/r	n/r
n) cobs cleaned of kernels of corn	n/r	n/r
o) biomass fraction of wastes and residues from forestry and forest-based industries, i.e. bark, branches, pre-commercial thinnings, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, fibre sludge, lignin and tall oil	n/r	n/r
p) other non-food cellulosic material as defined in item (s) of the second paragraph of Article 2	n/r	n/r
q) other ligno-cellulosic material as defined in point (r) of the second paragraph of Article 2 except saw logs and veneer logs	n/r	n/r
Raw materials listed in Part B of Annex IX to Directive 2009/28/EC	2017	2018
a) used cooking oil	n/r	n/r
b) animal fats classified as categories 1 and 2 in accordance with Regulation (EC) No 1069/2009 of the European Parliament and of the Council	n/r	n/r

Resource assessment

Provide a resource assessment of raw materials listed in Annex IX to Directive 2009/28/EC focusing on sustainability aspects related to the substitution of food and feed products for biofuel production, taking due account of the waste management hierarchy developed in Directive 2008/98/EC and the biomass cascade principle, taking into account regional and local economic and technological conditions, the maintenance of the required carbon stock in soil and the quality of soil and ecosystems.

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

Currently, second-generation biofuels made from waste, residues, non-food cellulosic raw materials and lignocellulosic raw materials are not produced and used in Latvia.

No studies have been conducted in Latvia during the reporting period to evaluate the raw materials listed in Annex IX to Directive 2009/28/EC.

9. Provide information on the estimated impact of biofuel and bioliquid production on biodiversity, water resources, water quality and soil quality in the Member State over last two years. Provide information on the methods used in evaluation of the impact, reference should be made to the relevant documents proving these effects in the country concerned (*Article 22 (1) (j) of Directive 2009/28/EC*).

No studies have been conducted in Latvia during the reporting period to assess the impact of biofuel and bioliquid production on biodiversity, water resources, water quality and soil quality.

In Latvia, grain and rapeseed are mainly used for biofuel production. Bioethanol is traditionally made from wheat, rye and triticale, while biodiesel is from rapeseed and rapeseed oil.

According to the information provided by the Latvian Biofuels and Bioenergy Association (hereinafter - LBBA) (see Table 5a), the amount of rapeseed purchased for the production of biodiesel in 2018 increased by 38% compared to 2017, while the amount of rapeseed oil purchased increased by 137% during this period. In 2018, 70% of rapeseed and 25% of rapeseed oil for biodiesel production were purchased in Latvia.

Table 5a
Amount of raw materials purchased by Latvian biofuel producers for biofuel production, thous. t

Year	Rapeseed*				Rapeseed oil*			
	EU	Outside EU	Total	Latvia	EU	Outside EU	Total	Latvia
2017	64.729	9.412	74.141	50.032	8.270	14.014	22.284	3.990
2018	85.012	17.521	102.533	71.294	19.285	33.511	52.796	13.176

* Quantities in warehouse bought in the respective year

Sources: LBBA

According to the CSB data on the production of biofuels (see Table 5b), it can be concluded that the production of biodiesel has increased during the reporting period. The volume of bioethanol production, on the other hand, has not changed significantly during the reporting period, however, it has increased in comparison with the previous reporting period (3 thousand tons in 2015 and 5 thousand tons in 2016).

Table 5b
Production of biodiesel and bioethanol in Latvia, thous. t

Bio fuel	2017	2018
Bioethanol	9	8
Biodiesel	53	88

Sources: CSB

According to the CSB information on sown areas of agricultural crops (see Table 5c), the total sown area in 2018 was 1208.7 thousand. ha, which is 0.5% less than in 2017. In 2018, the sown area of cereals was 690.9 thousand. ha, which is 1.8% less than in previous year. In 2018, the sown area of rapeseed was 123.6 thousand. ha, which is 5.3% more than in 2017.

Table 5c

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

Agricultural sown area in Latvia, thous. ha

	2017	2018
Total area sown, including	1214.3	1208.7
Cereals, including	703.5	690.9
Winter crops, including	375.5	244.5
wheat	331.2	215.1
rye	34.0	22.0
Summer crops, including	328.0	446.4
wheat	140.4	204.8
Rape	117.4	123.6

Sources: CSB

10. Provide an estimate of the net greenhouse gas net savings from the use of energy from renewable sources (Article 22 (1) (k) of Directive 2009/28/EC).

Table 6 Estimated GHG savings from renewable energy (t CO₂ eq)

Environmental aspects	2017	2018
Total estimated GHG savings from renewable energy use³⁸	4,156,079	4,439,604
- Estimated net GHG savings from renewable electricity use	801,296	807,345
- Estimated net GHG savings from renewable energy use for heating and cooling purposes	3,332,813	3,565,754
- Estimated net GHG savings from renewable energy use in transport	21,970	66,505

For other types of RE excluding transport, the methodology for calculating GHG savings is not provided in Directive 2009/28/EC.

Using the approach used in the European Union Emissions Trading Scheme and in accordance with Commission Implementing Regulation No 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions under Directive 2003/87/EC of the European Parliament and of the Council amending Commission Regulation (EU) No. 601/2012, for solid, liquid and gaseous biomass, the CO₂ emission factor for energy production (both electricity and heat) is 0 t CO₂ /TJ.

The CO₂ emission factor for energy production from solar collectors, solar power plants and hydropower plants is also set at 0 t CO₂/TJ, as the operation of these installations does not require the production, processing and transport of energy resources. Regarding GHG savings for heat generation from heat pumps, the amount of electricity used to run the heat pumps, not listed separately, must be taken into account.

This report specifies the CO₂ emission factors used in previous reports.

According to official statistics and taking into account the CO₂ emission factors³⁹ of fuels used in Latvia, the CO₂ emission factor for gross electricity consumption in Latvia (the total CO₂ intensity of fuel used for electricity production) used to calculate GHG savings from renewable electricity use is as follows:

- 2017 – 0,20013 t CO₂ / MWh;
- 2018 – 0,20029 t CO₂ / MWh.

³⁸ The share of gas, electricity and hydrogen in renewable energy sources should be reported by final consumption (electricity, heating, cooling or transport) and only counting once in the total estimated GHG savings.

³⁹ http://www.meteo.lv/fs/files/CMSP_Static_Page_Attach/00/00/00/02/03/CO2_met_2020_2.pdf

The 5th Regular Report of the Republic of Latvia as defined in Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Article 22

In 2017, 0.02% of fossil energy sources used for electricity generation were diesel fuel, while in 2018 0.09% was peat use, therefore in 2017 and 2018 CO₂ emission factor is different.

In order to calculate GHG savings from the use of renewable energy for heating and cooling, similarly to the fossil fuels used for electricity generation, Latvia's national CO₂ emission factor for heat produced from fossil energy sources in Latvia (the total CO₂ intensity of fuel used for heat production) was determined. This emission factor was determined taking into account official statistics on the amount of fossil energy consumed in the production of heat and the CO₂ emission factors of fuels used in Latvia. Taking into account the above, the CO₂ emission factor for the production of heating and cooling used in the calculation of GHG emission savings from renewable electricity use in Latvia is as follows:

- 2017 – 61,86 g CO₂ / MWh;
- 2018 – 61,9607 g CO₂ / MWh.

The above mentioned CO₂ emission factor and consequently calculated GHG emission savings are lower than previously calculated because in Latvia the share of heat produced from natural gas in the centralized and decentralized heating system has significantly increased, i.e. for more than 70%.

11. Provide (for the previous 2 years) and estimate (for the following years until 2020) the surplus/shortage (compared to the indicative trajectory) of energy from renewable sources that could be transferred to other Member States / imported from other Member States and/or third countries as well as estimated potential for joint projects till 2020. (Article 22(1)(l)(m) of Directive 2009/28/EC).

Table 7 Actual and estimated surplus or shortage of energy from renewable sources in Latvia that can be redistributed to/from other Member States and/or third countries in relation to the indicative trajectory (thousand tonnes of oil eq.)^{40, 41}

		2017	2018
Actual/estimated surplus or shortage (broken down by types of renewable energy and origin/destination of imports/exports)	Gross final consumption of RE in heating and cooling	37.8	92.5
	Gross final consumption of electricity produced from RE	0	-42.4
	Final consumption of energy from RE in transport	-59	-39.3
	Total gross RE final consumption	-36.9	15.8

The total gross final energy consumption of RE in 2018 exceeds the level set in the Action Plan, however, the total final energy consumption in 2017 is by 326.5 thousand. tons of oil eq. and in 2018 by 252.1 thousand. tons of oil eq. less than projected in the Action Plan which several times exceeds the difference between the planned and achieved gross final AE consumption.

No estimation of the excess/shortage of RES-produced energy till 2020 (compared to the indicative trajectory) has been made in Latvia, and the potential for joint projects during this period has not been estimated.

⁴⁰ Use the actual figures for reporting excess production in the two years preceding the report and estimates for the following years until 2020. In each report the Member State may correct the data of the previous reports.

⁴¹ When filling in the table, indicate the shortfall of output by negative numbers (for example, - x thousand tons of oil equivalents).

11.1 Provide information on statistical transfers, jointly implemented projects and decision-making rules for joint aid schemes.

Latvia has not taken any decisions on the joint or partial coordination of state aid mechanisms during this period and there are no plans to combine or partially coordinate the aid mechanisms. Latvia has not used the opportunity to agree with other EU Member States on the statistical transfer or receipt of a certain amount of energy produced from RES, while the possibility of purchasing statistics for other EU Member States to meet the national target for the share of RES in total final consumption in transport in 2020.

12. Provide information on how the share of biodegradable waste in the waste used for energy production is estimated, and what measures have been taken to improve and verify these estimates (Article 22 (1) (n) of Directive 2009/28/EC).

Biodegradable waste and residues (materials) in Latvia are used as raw materials for production of biogas in landfill sites, bioreactors in production plants and biogas power plants in agriculture and production plants. During their decomposition, biogas is released, which can be used as fuel for energy production.

The amount of biodegradable waste and residues used for biogas production in Energy Statistics can be obtained by analyzing statistical data on the amount of biodegradable waste recycled in a given year that according to the type of recovery (R3D-Biogas extraction (excluding biogas from waste disposal)) is used for deriving biogas in production.

No measures were taken during the reporting period to improve or verify the estimates of the share of biodegradable waste in the waste for energy production.

13. Provide information on the volume of biofuels and other bioliquids in energy units (thousand tonnes of oil equivalent) corresponding to each group of feedstock categories listed in Part A of Annex VIII taken into account by respective Member State for the purposes to meet targets set in Article 3 (1) and (2), and first paragraph of Article 3 (4).

Feedstock group	Year n-2*	Year n-1
Cereals and other starch-rich crops	-	4.25
Sugars	-	0.34
Oil seed crops	-	23.60
Others	-	0.16

* Not available. *Fuel suppliers shall report from 2018 onwards.*

Sources: State Environmental Department