

Report on progress achieved in 2013 towards implementing nation energy efficiency targets for the year 2020

pursuant to Article 24(1) and Section 1 of Annex XIV to Directive 2012/27/EU

Indicative national energy efficiency target

Pursuant to Article 3 of Directive 2012/27/EU, Latvia's indicative national energy efficiency target, based on primary energy savings in 2020, is 0.670 Mtoe (28 PJ), which corresponds to final energy savings of 0.457 Mtoe (19 PJ).

Impact of the target on energy consumption in 2020

By implementing energy efficiency measures and achieving the savings in line with the indicative national energy efficiency target, primary and final energy consumption in Latvia in 2020 will be as shown in the following table (see Table 1):

Table 1.
Latvia's indicative national energy efficiency target, expressed as the absolute level of primary and final energy consumption in 2020

	2010	2015	2020
Consumption of primary energy resources, PJ	200.5	223	225
Final energy consumption, PJ	178.5	185	187

Progress towards achieving the national energy efficiency targets for 2020

Pursuant to point (a) of Annex XIV to Directive 2012/27/EU, the indicators for the years 2012 and 2013 are set out and compared in Table 2.

Table 2.
Comparative table of indicators for the years 2012 and 2013, pursuant to Annex XIV to Directive 2012/27/EC

No	Name of indicator	Indicator, 2012	Indicator, 2013	Increase/decrease in indicator	Unit of measurement	Source of data
1.	Primary energy consumption	4.41	4.31	-0.10	Mtoe	Central Statistical Bureau of the Republic of Latvia (CSP)
2.	Total final energy consumption	4.03	3.86	-0.17	Mtoe	CSP
3.	Final energy consumption by	4.03	3.86	-0.17	Mtoe	CSP

	sector:					
	industry (including construction)	0.83	0.77	-0.06	Mtoe	CSP
	transport	1.05	1.06	+0.01	Mtoe	CSP
	households	1.38	1.27	-0.11	Mtoe	CSP
	services	0.62	0.60	-0.02	Mtoe	CSP
	agriculture and forestry	0.15	0.15	0	Mtoe	CSP
4.	Gross value added by sector					
	a) at current prices:					
	total value added	19901.4	20877.1	+975.7	million EUR	Eurostat
	industry (excluding construction)	3890.7	3901.1	+10.4	million EUR	Eurostat
	construction	1224.0	1334.3	+110.3	million EUR	Eurostat
	agriculture and forestry	995.3	1020.5	+25.2	million EUR	Eurostat
	services	13791.4	14621.2	+829.8	million EUR	Eurostat
	b) at constant 2005 prices:					
	total value added	12480.3	12945.5	+465.2	million EUR	Eurostat
	industry (excluding construction)	2144.0	2126.5	-17.5	million EUR	Eurostat
	construction	690.2	741.6	+51.4	million EUR	Eurostat
	agriculture and forestry	493.3	489.8	-3.5	million EUR	Eurostat
	services	9171.1	9622.6	+451.5	million EUR	Eurostat
5.	Disposable income of households:					
	average per household	768.83	837.31	+68.48	EUR/month	CSP

	average per member of household	319.90	354.68	+34.78	EUR/month	CSP
	average per equivalent consumer	477.63	527.84	+50.21	EUR/month	CSP
6.	Gross domestic product (GDP):					
	- at current prices	22257.0	23372.1	+1115.1	million EUR	Eurostat
	- at constant 2005 prices:	13809.30	14376.80	+567.5	million EUR	Eurostat
7.	Electricity generation from thermal power generation	-	-	-		
8.	Electricity generation from combined heat and power	2341	3170	+829	GWh	CSP
9.	Electricity generated in power plants (in the transformation sector)	6	7	+1	GWh	CSP
10.	Heat generation from thermal power generation (boiler houses)	2765	2251	-514	GWh	CSP
11.	Heat generation from combined heat and power plants, including industrial waste heat	4695	5040	+345	GWh	CSP
12.	Fuel input for thermal power generation (boiler houses)	0.30	0.25	-0.05	Mtoe	CSP
13.	Fuel input for combined heat and power plants	0.73	0.91	+0.18	Mtoe	CSP
14.	Fuel input for power plants (in the transformation sector)	0.0030	0.0034	+0.0004	Mtoe	CSP

15.	Passenger-kilometres (pkm):					
	carriage of passengers by car	14146	14514	+368	Mpkm	based on assumptions relating to the calculation of transport emissions
	carriage of passengers by public transport	2358	2325	-33	Mpkm	carriage of passengers by bus only
	carriage of passengers by rail (including by tram)	725	729	+4	Mpkm	CSP
	carriage of passengers by domestic and international air transport	3715	3537	-178	Mpkm	CSP
14.	Tonne-kilometres (tkm):					
	road haulage	12178	12816	+638	Mtkm	CSP
	carriage of goods by rail	21867	19532	-2335	Mtkm	CSP
	carriage of goods by air	13	11	-2	Mtkm	CSP
15.	Population (at the start of the year)	2 044 813	2 023 825	-20988	number of people	CSP
16.	Population (average)	2 034 319	2 012 647	-21672	number of people	CSP

Analysis of the increase in energy consumption in specific sectors

Subparagraph (a) of Part 1 of Annex XIV to Directive 2012/27/EU states that: In sectors where energy consumption remains stable or is growing, Member States must analyse the reasons for it and attach their appraisal to the estimates. In accordance with Annex A to the reporting guidelines, changes in energy end-use by

sector have been analysed by comparing statistical data on energy end-use in end-use sectors for the years 2012 and 2013.

In comparison to 2012, in 2013 **energy end-use in the transport sector has grown, but has remained the same in the agriculture and forestry sector.**

Transport

In the transport sector, fuel consumption has grown by 0.01 Mtoe or 1.3% in comparison to 2012. Road transport accounted for 91.1% of total fuel consumption in 2013. Rail transport accounted for 7.9% and the remainder was accounted for by inland waterways and domestic air transport. Divergent fuel consumption trends are evident in various transport subsectors. Fuel consumption by road transport increased by 1.9% in 2013 in comparison to the previous year, whereas fuel consumption by rail transport decreased by 8.8% over the same period. The main reason for these trends was changes in tonne-kilometres (tkm) for the cargoes carried. Fuel consumption by road transport increased by 5.2% in 2013 as compared to 2012, whereas fuel consumption by rail transport decreased by 10.6% over the same period.

The breakdown of fuel consumed by type also changed in 2013. Diesel and LPG accounted for an increased share of fuel consumed in 2013 as compared to the previous year (3.4% and 27.4% respectively), whereas the share of fuel consumption represented by petrol declined. The rapid rise in LPG consumption was attributable to the move from petrol- to LPG-powered passenger cars. This was caused by high petrol prices in 2013.

Agriculture and forestry

Energy end-use in the agriculture and forestry sector did not change significantly in 2013 in comparison with the previous year. The amount of added value produced in the sector declined, but factors leading to increased fuel consumption became more significant (the amount of land under spring crops increased by 7.7% in comparison to 2012, whereas the amount of land under rape grew by 9.1% over the same period). Despite the increase in the area under cultivation, a more rapid increase in fuel consumption has been averted by a more rational use of technology in farming.

Major legislative and non-legislative measures

In accordance with sub-paragraphs (b)-(d) of Annex XIV to Directive 2012/27/EU, information is provided herein on major legislative and non-legislative measures implemented in the previous year (2014).

1. Laws and regulations promoting improved energy efficiency

a) The **Law on construction** entered into force on 1 October 2014. The law aims to facilitate liveability by establishing an effective framework for construction processes which provides for sustainable national economic and social development, the preservation of cultural heritage and environmental values, and the rational use of energy sources.

b) A **draft Law on energy efficiency** has been drawn up and submitted to the Cabinet. The draft law aims to bring about a cost-effective increase in the energy efficiency of energy generation, transmission, distribution and end use, the

development of energy efficiency services and an energy efficiency services market, and strengthening of the exemplary role of the state in energy efficiency.

c) **A draft Law amending the Law on energy efficiency** has been drawn up and submitted to the Cabinet. The amending law essentially seeks to ensure that central government bodies acquire only highly energy-efficient buildings.

d) **A draft Law amending the Law on energy** has been drawn up and submitted to the Cabinet. The amending law aims to ensure that several of Directive 2012/27/EU's requirements relating to effective heating systems and co-generation are transposed by providing for the delegation of authority for implementing the Cabinet Regulation on the methodology for calculating the primary energy saving of co-generation, and by defining district heating, local heating and individual heating. These definitions are necessary to comprehensively evaluate the potential for high-quality co-generation and the effective use of district heating and cooling.

2. Implementation of energy efficiency measures

Public funding for projects aimed at improving energy efficiency is taken from the European Union Structural Funds (ERDF) and Cohesion Fund (CF), managed by the Ministry of the Economy, and the 'Climate change financial instrument' (KPF), a State budget programme managed by the Ministry of Environmental Protection and Regional Development (VARAM).

a) Implementation of ERDF and CF programmes

Implementation of **ERDF and CF projects managed by the Ministry of the Economy** continued in 2014 under the following 'Infrastructure and services' activities of the European Structural Fund Operational Programme:

- Activity 3.4.4.1 of the Programme Complement, 'Measures to improve the heat insulation of multi-apartment residential buildings'. Implementing these projects involves construction work in those parts of multi-apartment residential buildings jointly owned by the owners of the apartments in the building: this is done to ensure restoration of the structural components of the building, as provided for in the technical design or simplified renovation documentation, and to carry out works under the energy efficiency improvement measures referred to in the building's energy audit report;
- Activity 3.4.4.2 of the Programme Complement, 'Measures to improve the heat insulation of social housing'. The programme aims to increase the energy efficiency of social housing owned by local authorities, improve the quality and sustainability of social housing and ensure that groups in society at risk of social exclusion are provided with suitable housing.
- Sub-activity 3.5.2.1.1., 'Measures to increase the efficiency of heating supply systems'. The aim of the programme is to make producing heat energy more efficient, reduce heat energy losses in transmission and distribution systems and facilitate the replacement of fossil fuels with renewable fuels.

Table 3.
Overview of the implementation of ERDF and CF projects (as at 9 January 2015)

	Completed projects	Amount (as indicated in the financing plan) relating to	Contract concluded / decision taken	Amount (as indicated in the financing plan) relating to

		completed projects, in EUR		completed projects, in EUR
Activity 3.4.4.1.	499	39 602 926.98	360	35 909 684.86
Activity 3.4.4.2.	54	5 036 013.01	1	146 536.76
Activity 3.5.2.1.1.	54	40 729 305.2	49	25 461 198.46

Detailed information on the implementation of the ERDF and CF projects is available at <http://em.gov.lv/em/2nd/?cat=30252>

(b) Implementation of the KPFI State budget programme

KPFI aims to help prevent global climate change and help adapt to its effects, achieve a reduction in greenhouse gas emissions (for instance, by implementing measures in both the public and the private sectors aimed at improving the energy efficiency of buildings, developing and introducing technologies that make use of renewable energy sources, and implementing integrated solutions to reduce greenhouse gas emissions).

Projects subject to tender under the KPFI State budget programme managed by VARAM continued to be implemented in 2014:

- The call for tenders 'Complex solutions for the reduction of greenhouse gas emissions' supports investment projects aimed at improving the energy efficiency of buildings owned by the State and local authorities, registered traders and private individuals and investment in technological equipment for manufacturing and for utilising renewable sources of energy.
- The call for tenders 'Reducing greenhouse gas emissions in the transport sector: support for the introduction of electronic road vehicles and recharging infrastructure' supports the introduction of vehicles whose sole means of mechanical propulsion is electricity stored within the vehicle, and the establishment of publicly accessible recharging stations. The project proposers are bodies under direct or indirect government control, public entities with a person legally distinct from that entity (*atvasināta publiska persona*) or registered traders.
- The call for tenders 'Buildings with low energy consumption' supports the construction of buildings with low energy consumption and the reconstruction or simplified renovation of existing buildings. This enables energy consumption in those buildings to be reduced.
- The call for tenders 'Reduction of greenhouse gas emissions from lighting infrastructure in local authority public spaces' supports the reduction of greenhouse gas emissions from lighting infrastructure in local authority public spaces through the application of technology and environmentally friendly techniques that enable a reduction in electricity consumption.

More detailed information on calls for tenders under the KPFI is available at www.varam.gov.lv and www.lvif.gov.lv.

(c) Information campaign 'Let's live warmer!'

At the initiative of the Ministry of the Economy, 18 public entities, non-government organisations and banks signed a memorandum of understanding on establishing

effective and open cooperation when providing information about housing renovations on 25 February 2010. To date, the memorandum has been signed by 31 organisations. The memorandum's main purpose is considered to be ensuring that information on housing renovations is generally available. This involves:

- fostering cooperation / mutual learning among sectoral associations to ensure the dissemination of the latest sector-relevant information;
- ensuring the availability of information on issues relating to the management and operation of multi-apartment residential buildings;
- ensuring that apartment owners have access to information on sources of funding for housing renovations;
- providing information on the benefits of housing renovation;
- educating people about the conditions that need to be fulfilled to ensure that renovations are carried out at a high standard;
- informing people of quality standards for building materials and of the technology for applying those materials;
- facilitating access to high-quality services by providing the public with the latest sector-relevant information.

As part of the 'Let's live warmer!' campaign, 9 rounds of workshops were held from 2010 to 2014 in regions across Latvia. These involved various public discussions, workshops, conferences and exhibitions. More than 6 460 people attended the events in person, whereas nearly 3 000 followed them online.

(d) Competition to determine the most energy-efficient building in Latvia in 2013

The competition 'Latvia's most energy-efficient building' has been held by the Ministry of the Economy as part of VARAM's 'Let's live warmer!' information campaign for the third successive year. This year, the competition is being organised in cooperation with *Būvinženieris* magazine.

The aim of the competition is to foster good energy efficiency practices through the construction of energy-efficient buildings or the renovation and reconstruction of buildings to make them so and, in so doing, reduce the amount of carbon dioxide in the atmosphere, raise public awareness of building heat insulation and the importance of and opportunities for reducing greenhouse gas emissions to create a high-quality and architecturally expressive living environment.

The most important non-government organisations in the building sector (the Latvian Union of Construction Engineers, Latvian Consulting Engineers' Association, Latvian Builders' Association, Latvian Building Material Traders' Association, Latvian Building Managers' and Operators' Association, Technical Experts' Association, Latvian Union of Thermal, Gas and Water Engineers, Latvian Door and Window Manufacturers' Association, Kurzeme Regional Energy and Development Agency, Riga Technical University, Building Material Producers' Association, and a number of individual firms) have been involved in establishing the rules of the competition and evaluating submissions.

The results of the competition can be found at www.energoefektivakaeka.lv; video: <http://www.youtube.com/watch?v=2NjQqAxO9ew>.

List of buildings owned, managed or used by the State

In accordance with Article 5(5) of Directive 2012/27/EU, every year the Ministry of the Economy draws up a list of buildings owned, managed or used by the State and publishes it on its website¹. According to the list for 2013, the 3% renovation target for 2014 corresponded to an area covering 77 679.66 m². 53 buildings on the list for 2013 were removed from the list for 2014, as these had been renovated under the KPFI State budget programme. The total surface area covered by these renovated buildings is 232 635.36 m². At the time of writing this report, no information is available on energy savings obtained through the application of alternative measures, including energy savings obtained by renovating buildings owned, managed or used by the State in 2014.

The area renovated is greater than the 3% renovation target calculated for 2014:

$$232\,635.36\text{ m}^2 - 77\,679.66\text{ m}^2 (\text{target}) = 154\,955.7\text{ m}^2$$

According to the list for 2014, the 3% renovation target for 2015 corresponds to an area covering 74 908.67 m². Pursuant to Article 5(3) of Directive 2012/27/EU, this excess renovated area has been counted towards the renovation targets for 2015 and 2016.

Energy savings achieved through the application of the national energy efficiency obligation scheme or alternative measures

In accordance with Article 7 of Directive 2012/27/EU, the cumulative energy savings target set for Latvia for the period up to 2020 is 9 896 GWh.

No energy efficiency obligation scheme or element thereof had been introduced in Latvia in 2014, so it is not possible to show any energy saving achieved under an energy efficiency obligation scheme in this report.

According to the Report on compliance with Article 7 of Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, the following alternative measures are planned:

Table 5.

Planned energy saving from alternative measures and funding scheduled under support programmes

No.	Name of alternative measure	Implementation period	Planned funding (million LVL)	Cumulative energy savings (GWh)
1.	Programmes, financed from the EU funds and scheduled for 2014-	2014-2020	227.0 (EUR 323 million)	1690

¹ https://www.em.gov.lv/files/buvnieciba/29042015_1.pdf

	2020 planning period, for the purpose of improving the energy efficiency of multi-apartment residential dwellings, central and local government buildings and small- and medium-sized enterprises			
2.	Activity 3.4.4.1. 'Measures to improve the heat insulation of multi-apartment residential buildings', implemented under Measure 3.4.4. 'Energy efficiency of housing' of the Complement to the EU Structural Funds Operational Programme 'Infrastructure and services' for 2007-2013	2014-2015	0.418 (EUR 0.595 million) (funding requested for projects currently being evaluated)	1050
3.	Agreement between the local authority and registered traders on improving energy efficiency in accordance with Cabinet Regulation No 555 of 12 July 2011 on procedures for concluding and monitoring agreements on improving energy efficiency	2014-2020	In accordance with local authority development plans	150
4.	Modernisation of AS Pasažieru vilciens rolling stock	2014-2020	108.0 (EUR 153.67 million) (indicative amount)	31
5.	Complex solutions for the reduction of greenhouse gas emissions, round 3	2014-2015	13.607 (EUR 19.361 million)	386
6.	'Reduction of greenhouse gas emissions from lighting	2014.	0.729 (EUR 19.361 million)	130

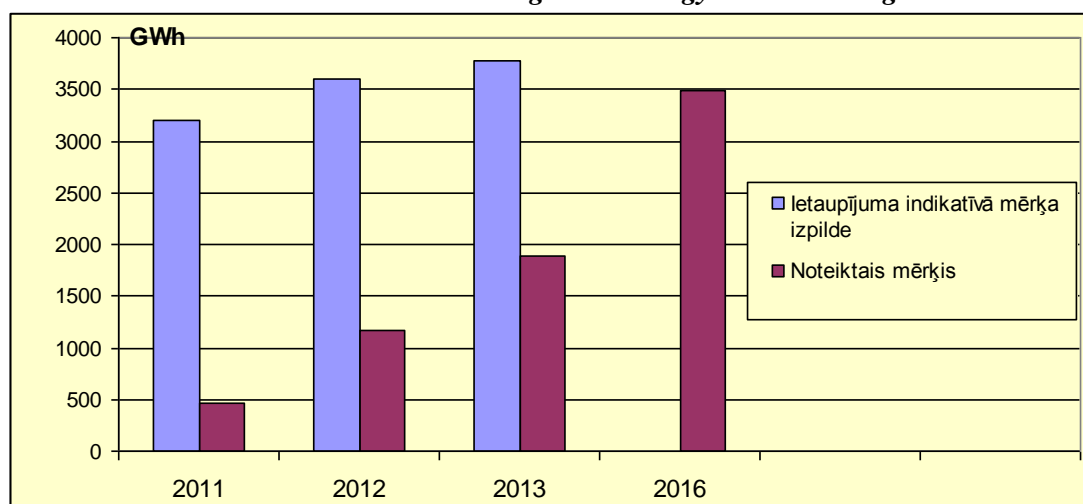
	infrastructure in local authority public spaces', round 3			
	TOTAL:		349.755 (EUR 497.657 million)	3437

At the time of compiling this report, no information is available on energy savings from the application of alternative measures in 2014.

Energy savings in order to achieve the 9% indicative savings target for 2016

An indicative 9% energy end-use saving of 3 483 GWh was calculated and set in Latvia's First Energy Efficiency Action Plan for 2008-2010.

Figure 1. Energy end-use saving achieved in 2013



Key:

Ietaupījuma indikatīvā mērķa izpilde – Achievement of the indicative savings target

Noteiktais mērķis – Target set

Calculations show that the indicative energy savings target of 9% was achieved in 2013.

Table 6.
Energy end-use savings achieved in 2013

Sector/subsector	Method of calculation	Energy savings achieved in GWh (ktoe)	Remarks
Households	top-down and bottom-up	2801 (241)	Energy saving calculated using a top-down method This saving also

			includes a saving of 37.08 GWh calculated using a bottom-up method
Services sector	bottom-up	105.6 (9.08)	Calculation using the top-down method resulted in a negative saving, so the result obtained using the bottom-up method is used in the overall calculation
Manufacturing	top-down	- 795 (-68)	No energy saving achieved in the sector
Transport	top-down	1662 (143)	energy saving calculated using a top-down method
Total		3773 (325.0)	