Ministry of Climate

Annual Report on the basis of Article 24(1) of Directive 2012/27/EU on energy efficiency

Warsaw, April 2020

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1. INTRODUCTION

This report was drawn up on the basis of Article 8(10) of the Energy Efficiency Act of 20 May 2016 (Journal of Laws 2020, item 264). In accordance with Article 24(1) of and Part I of Annex XIV to Directive 2012/27/EU on energy efficiency (OJ L 315, 14.11.2012, p. 1), EU Member States are required to send the European Commission an annual report on progress towards achieving the national energy efficiency target.

This document was drawn up at the Ministry of Climate with input from the Ministry of Development and Statistics Poland (*Główny Urząd Statystyczny, GUS*).

The Minister for Development is responsible for reporting on the exemplary role of public bodies' buildings (Article 5 of Directive 2012/27/EU).

2. Data on energy consumption pursuant to Part I of Annex XIV to Directive 2012/27/EU

Table 1. Data for 2018 (under Part I of Annex XIV to Directive 2012/27/EU)

Information	Unit	2018	Remarks
(i) primary energy consumption	ktoe	100940	as defined in Directive 2012/27/EU
(ii) total final energy consumption	ktoe	76396	includes non-energy consumption
(iii) final energy consumption by sector:			
- industry	ktoe	16261	
- transport	ktoe	22444	
- households	ktoe	19283	
- services	ktoe	7861	
(iv) gross value added by sector:			
- industry	PLN million, 2010 prices	566038	total value added for industry and construction (sections B-F)
- services	PLN million, 2010 prices	1085525	total value added of sections G-T
(v) disposable income of households	PLN million, current prices	1202372	net
(vi) gross domestic product (GDP)	PLN million, 2010 prices	1906348	
(vii) electricity generation from thermal power generation	GWh	3974	
(viii) electricity generation from combined heat and power	GWh	150578	
(ix) heat generation from thermal power generation	TJ		
(x) heat production from combined heat and power plants, including industrial waste heat		193464	
(xi) fuel input for thermal power generation	ktoe	36692	includes CHP plants
(xii) passenger kilometres (pkm), if available	Mpkm	65025	excluding passenger cars
(xiii) tonne kilometres (tkm), if available	Mtkm	467194	includes rail, road, pipeline, sea, inland waterway and air transport
(xiv) combined transport kilometres (pkm + tkm), in case (xii) and (xiii) are not available			
(xv) population	thousands	38411	

3. Additional information under Part I, point (a) of Annex XIV to Directive 2012/27/EU

For the final energy consumption sectors mentioned in item (iii) of Table 1 (industry, transport, households, services) where energy consumption remains stable or is growing, Member States are to analyse the reasons and attach their appraisal to the estimates. In 2018, no sector saw an increase in final energy consumption as compared with previous years.

In the preceding years, the transport sector's share in final energy consumption increased and those of industry and agriculture fell. Between 2006 and 2016 the transport sector's share in final energy consumption increased from 23% to 29%. Households continue to be significant consumers of energy. Industry's share fell from 24% to 23% and that of agriculture from 6% to 5%. These changes reflect trends in economic development (e.g. an increase in foreign trade), as well as measures taken in the industrial sector (rationalisation of energy consumption linked with the growing cost of energy products). For many years, industry has been showing improved energy efficiency, and energy savings have been achieved primarily in the most energy-intensive industrial activities. This trend has also continued in the recent period.

4. Information under Part I, point (b) of Annex XIV to Directive 2012/27/EU

The following legislative and non-legislative measures which contribute towards the national energy efficiency target were adopted in 2019:

1. Act of 12 April 2019 amending the Act on the provision of information on energy consumption by energy-using products and on monitoring the implementation of the labelling programme for office equipment and certain other acts (Journal of Laws 2019, item 1030);
2. Act of 13 June 2019 amending the Act amending the Excise Duty Act and certain other acts, the Energy Efficiency Act and the Biocomponents and Liquid Biofuels Act (Journal of Laws 2019, item 1210);
3. Act of 19 July 2019 amending the Renewable Energy Act and certain other acts (Journal of Laws 2019, item 1524);
4. Act of 20 January 2020 amending the Thermal Modernisation and Renovation of Buildings Support Act (Journal of Laws 2020, item 412);
5. Regulation of the Minister for Energy of 6 March 2019 laying down detailed rules for setting and calculating tariffs and billing in trade in electricity (Journal of Laws 2019, item 503);

5. Information under Part I, points (c) and (d) of Annex XIV to Directive 2012/27/EU

In accordance with Article 5(1) of Directive 2012/27/EU, it must be ensured that, as from 1 January 2014, 3% of the total floor area of heated and/or cooled buildings owned and occupied by central government bodies is renovated each year to meet at least the minimum energy performance requirements that Member States have set in application of Article 4 of Directive 2010/31/EU on the energy performance of buildings. Article 5(6) of Directive 2012/27/EU allows an alternative approach to implementation of Article 5(1)-(5). In this connection, a report on the adoption of that approach in Poland is set out below.

Lists of data on buildings not meeting the minimum energy performance requirements set in accordance with Article 4 of Directive 2010/31/EU, taken into account in the context of the alternative approach to implementation of Article 5(1)-(5) of Directive 2012/27/EU

Table 2 shows a list of data for the buildings with a useful floor area over 500 m^2 owned and occupied by central government that, on 1 January 2015, did not meet the minimum energy performance requirements laid down in the Regulation of the Minister for Infrastructure of 12 April 2002 on technical criteria for buildings and the siting thereof (Journal of Laws 2015, item 1422), and for the buildings with a useful floor area over 250 m^2 owned and occupied by central government that, on 9 July 2015, did not meet the minimum energy performance requirements laid down in the aforementioned Regulation, in accordance with Article 4 of Directive 2010/31/EU.

Table 2. List of data for the buildings with a useful floor area over 500 m² owned and occupied by central government that, on 1 January 2015, did not meet the minimum energy performance requirements laid down in accordance with Article 4 of Directive 2010/31/EU (buildings which did not comply with the maximum permissible value for the heat transfer coefficient*)) and for the buildings with a useful floor area over 250 m² owned and occupied by central government that, on 9 July 2015, did not meet the minimum energy performance requirements laid down in accordance with Article 4 of Directive 2010/31/EU (buildings which did not comply with the maximum permissible value for the heat transfer coefficient*))

Building use	Number of buildings	Building cooled? YES/NO	Total useful floor area	Indicator of demand for non-renewable primary energy		Energy savings
				Average	under the rules on new buildings*) **)	
-	Buildings		m²	kWh/(m²·year)	kWh/(m²·year)	MWh/year
Collective residential	6	YES	16080.20	431.95	220.00	3408.20
	15	NO	38494.31	304.78	195.00	4225.91
Multi-family residential	4	YES	3271.15	155.41	115.00	132.19
	15	NO	16628.56	160.98	105.00	930.87
	9	No data available	2577.36	No data available	No data available	No data available
Public building	98	YES	615551.68	276.98	190.00	53540.69
	68	NO	278032.37	459.03	165.00	77667.00
	38	No data available	51756.99	No data available	No data available	No data available
Storage, industrial, outbuildings	2	YES	1932.50	371.68	235.00	264.13
	21	NO	73644.50	272.89	210.00	4631.50
	5	No data available	3880.35	No data available	No data available	No data available
TOTAL	**281**	-	**1087964.1**	-	-	**144800.49**

*) The maximum values of the heat transfer coefficient and the indicator of demand for non-renewable primary energy are defined in the Regulation of the Minister for Infrastructure on technical criteria for buildings and the siting thereof. This requirement was set in accordance with Article 4 of Directive 2010/31/EU.
**) The requirements on the maximum value of the indicator of demand for non-renewable primary energy differ according to the type of building, how long buildings are lit for (except for residential buildings) and whether they are cooled.

On the basis of the above, it has been estimated that the annual energy savings target should be **3% x 144,800.49 = 4,344.01 MWh**.

Total floor area of the buildings with a total useful floor area over 250 m^2 owned and occupied by central government that, on 1 January 2016, did not meet the energy performance requirements referred to in Article 5(1) of Directive 2012/27/EU

Table 3 shows a list of buildings with a total useful floor area over 250 m^2, owned and occupied by central government that, on 1 January 2016, did not meet the energy performance requirements referred to in Article 5(1) of Directive 2012/27/EU. These buildings did not meet the requirements as regards the heat transfer coefficient U_c[W/(m^2K)].

Table 3. List of buildings with a useful floor area over 250 m^2 owned and occupied by central government that, on 1 January 2016, did not meet the minimum energy performance requirements laid down in accordance with Article 4 of Directive 2010/31/EU (buildings which did not comply with the maximum permissible value for the heat transfer coefficient*))

Building use	Number of buildings	Total useful floor area
-	Buildings	m^2
Collective residential	21	54574.51
Multi-family residential	28	22477.07
Public building	204	931455.17
Storage, industrial, outbuildings	28	79457.35
TOTAL	**281**	**1087964.1**

*) The maximum value of the heat transfer coefficient is defined in the Annex to the Regulation of the Minister for Infrastructure on technical criteria for buildings and the siting thereof. This requirement was set in accordance with Article 4 of Directive 2010/31/EU.

Energy savings resulting from the measures taken in buildings owned and occupied by central government that have been achieved under the alternative approach referred to in Article 5(6) of Directive 2012/27/EU

The alternative approach adopted to implement Article 5 of Directive 2012/27/EU was published in December 2013, and an amended version was published in July 2014. It was decided that energy savings would be achieved through the energy renovation of buildings and information/educational activities to promote energy saving.

Table 4 lists the measures taken in 2019 and the energy savings achieved in buildings with a useful floor area over 250 m^2 owned and occupied by central government.

Table 4. List of measures taken in 2019 in respect of buildings with a total useful floor area over 250 m^2 owned and used by central government that, on 9 July 2015, did not meet the minimum energy performance requirements laid down pursuant to Article 4 of Directive 2010/31/EU

No	Type of building	Useful floor area m^2	Measure	Energy savings MWh/year
-	1	2	3	4
1	Complex of two public buildings	2674.48	Complete thermo-modernisation including, in particular, window and door frame replacement, wall and roof insulation. Replacing central heating and domestic hot water installations, including radiators and pumps. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	901.6
2	Public building	2440.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	43.3
3	Public building	4510.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	51.9
4	Public building	2769.22	Upgrading heating and domestic hot water system. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	17.5
5	Public building	255.9	Upgrading heating and domestic hot water system. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	23.2
6	Public building	2727.4	Upgrading heating and domestic hot water system. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	47.8
7	Public building	2727.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	12.45
8	Complex of five public buildings	5097.75	Upgrading power supply system. Installing a community battery for reactive power compensation. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	3.2
9	Public building	1100.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	24.4
10	Public building	5212.4	Window frame upgrade. Replacing lighting with energy-efficient lighting.	23.8

No	Type of building	Useful floor area m^2	Measure	Energy savings MWh/year
-	1	2	3	4
			Energy efficiency training for employees.	
11	Public building	8762.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	5.27
12	Public building	2003.0	Replacing radiator valves with thermostatic valves. Energy efficiency training for employees.	1.76
13	Public building	1096.5	Replacing radiator valves with thermostatic valves. Energy efficiency training for employees.	8.31
14	Public building	750.0	Replacing radiator valves with thermostatic valves. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	62.5
15	Public building	2694.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	61.1
16	Complex of five public buildings	5350.5	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	173.1
17	Complex of six public buildings	16560.42	Fitting installations with reactive power compensation device. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	107.6
18	Public building	17010.1	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	156.9
19	Public building	3562.0	Replacing radiator valves with thermostatic valves. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	128.5
20	Public building	1761.74	Installing mechanical ventilation system with recovery. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	59.1
21	Public building	1110.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	56.3
22	Public building	540.6	Energy efficiency training for employees.	4.5
23	Public building	3826.35	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	39.4

No	Type of building	Useful floor area m^2	Measure	Energy savings MWh/year
-	1	2	3	4
24	Public building	664.78	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	7.84
25	Public building	2094.1	Fitting installations with reactive power compensation device. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	48.8
26	Public building	5491.66	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	108.8
27	Public building	22210.0	Full roof thermal insulation, repositioning ventilation chimneys above roof, raising flat roof above staircase, and insulating external walls of staircase and chimneys above roof. Replacing lighting with energy-efficient lighting. Energy efficiency training for users.	No data available on energy savings achieved.
28	Public building	4605.2	Rebuilding RG-1 and RG-2 distribution boards and fitting installations with reactive power compensation device. Replacing lighting with energy-efficient lighting. Energy efficiency training for users.	88.6
29	Public building	3015.0	Full thermo-modernisation of building. Energy efficiency training for employees.	77.1
30	Public building	25183.4	Full thermo-modernisation of building. Energy efficiency training for employees.	306.8
31	Public building	7198.7	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	18.45
32	Public building	4813	Upgrading low voltage switchboard. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	71.3
33	Public building	589.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	9.4
34	Complex of two public buildings	4655.98	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	203.8
35	Complex of two public buildings	2689.2	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	35.8
36	Complex of three public buildings	9745.6	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	71.8

No	Type of building	Useful floor area m^2	Measure	Energy savings MWh/year
-	1	2	3	4
37	Public building	3370.81	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	22.58
38	Public building	12600.0	Upgrading lighting system. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	69.74
39	Public building	6445.6	Upgrading lighting system. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	87.2
40	Public building	4061.56	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	47.8
41	Public building	3560.1	Upgrading central heating system. Thermal insulation of external walls. Replacing lighting with energy-efficient lighting.	No data available on energy savings achieved.
42	Public building	2489.6	Complete thermo-modernisation including, in particular, window and door frame replacement, wall and roof insulation. Replacing lighting with energy-efficient lighting.	No data available on energy savings achieved.
43	Public building	11415.9	Upgrading central heating system, including replacement of radiators in all rooms of the building and replacement of thermostatic valves on hot water installations. Energy efficiency training for users.	135.6
44	Complex of two public buildings	22060.0	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	323.06
45	Public building	20890.0	Connecting building to district central heating network. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	78.75
46	Public building	20856.4	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	279.39
47	Complex of three public buildings	5103.0	Thermal insulation of external walls. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	133.16
48	Public building	936.1	Complete thermo-modernisation including, in particular, window and door frame replacement, wall and roof insulation. Replacing central heating and domestic hot water installations, including radiators and	No data available on energy savings achieved.

No	Type of building	Useful floor area m^2	Measure	Energy savings MWh/year
-	1	2	3	4
			pumps. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	
49	Public building	6295.1	Complete thermo-modernisation including, in particular, window and door frame replacement, wall and roof insulation. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	311.6
50	Public building	2186.7	Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	No data available on energy savings achieved.
51	Public building	7118.8	Fitting installations with reactive power compensation device. Upgrading heating and domestic hot water system. Replacing lighting with energy-efficient lighting. Energy efficiency training for employees.	No data available on energy savings achieved.
52	Collective residential	2197.7	Fitting installations with reactive power compensation device. Upgrading mechanical ventilation system. Replacing lighting with energy-efficient lighting. Energy efficiency training for users.	54.6
TOTAL				**4605.46**

This part of the report was drawn up on the basis of data submitted by the central government bodies referred to in Article 5(1) of Directive 2012/27/EU.

It should be noted that the energy savings indicated in the table above have been achieved both through the measures indicated (those listed in the table refer to measures taken in 2019) and through measures carried out in previous years which are continuing to save energy and whose effect can now be measured and verified.

The public authorities submitting reports explained the lack of data available on energy savings achieved despite measures having been carried out by the fact that employment in the unit concerned had increased as compared with the previous year and that the energy renovation (thermal modernisation) work was completed by the end of 2019, which meant that the energy savings achieved as a result of these measures would be visible only in a few years' time. Where 'no data available' is stated in the 'Energy savings' column of the table, this is due to the bodies completing the survey having failed to supply the relevant information.

6. Information under Part 1, point (e) of Annex XIV to Directive 2012/27/EU

An energy efficiency obligation scheme (white certificate scheme) was introduced on the basis of the Energy Efficiency Act of 15 April 2011 (Journal of Laws 2015, items 2167 and 2359; Journal of Laws 2016, item 266) and was operated in accordance with that Act from 1 January 2013 until 30 September 2016. A new act was passed in 2016, namely the Energy Efficiency Act of 20 May 2016 (Journal of Laws 2019, item 545), which extended operation of the scheme and fully implemented Article 7 of Directive 2012/27/EU.

The Act requires energy companies selling electricity, heat or natural gas to final consumers to obtain energy efficiency certificates (white certificates) and submit them to the President of the Energy Regulatory Office (URE) for redemption, or to pay a substitution charge.

Under the energy efficiency certificate scheme, five tender procedures have been carried out to select projects improving energy efficiency. The value of the energy efficiency certificates for which successful tenderers applied has increased. In the most recent (fifth) tender procedure, a significant rise in interest in obtaining an energy efficiency certificate was noted, which was reflected in the considerable increase in the number of bids submitted (2,425) and bids selected, i.e. bids for which an energy efficiency certificate could be issued (2,065).

The results of all the tender procedures are set out in Table 5.

Table 5. Results of the tender procedures

Public tender	Value of the energy efficiency certificates for which successful tenderers applied (toe)
First	20,698
Second	57,180
Third	149,886
Fourth	495,023
Fifth	806,743
Total	**1,529,530**

Since 2017, it has not been necessary to carry out a tender procedure for selecting projects to improve energy efficiency for which an energy efficiency certificate may be issued. This simplification of the rules should help to increase the number of certificates issued.

Under the new Energy Efficiency Act of 20 May 2016, the President of the Energy Regulatory Office (URE) issues certificates at the request of the body on whose premises the project to increase energy efficiency will be carried out or a body authorised by it.

Table 6 presents data on the number and value of the energy efficiency certificates issued by the end of 2019.

Table 6. Data on energy efficiency certificates issued

Cumulative data at year-end	Number of energy efficiency certificates issued	Value of energy efficiency certificates issued (toe)
2016	1,842	702,742
2017	3,853	1,317,855
2018	4,432	1,487,258
2019	4,979	1,710,918

Table 7 shows the cumulative final energy savings achieved under the white certificate scheme up to the end of 2018.

Table 7. Final energy savings achieved under the white certificate scheme

Year	2014	2015	2016	2017	2018
Cumulative final energy savings [toe]	213,184	1,660,662	3,268,126	5,914,158	8,890,869

The data in the above table concerning the cumulative energy savings achieved under the white certificate scheme were calculated using the database of the National Energy Conservation Agency (KAPE) and then verified on the basis of data from the Energy Regulatory Office (URE). The final energy saving calculated for 2018 is based on energy efficiency certificates issued by the URE up to the end of 2019 (according to the database), with calculations only taking into account certificates for projects completed by the end of 2018. The data were obtained from the record sheets of energy efficiency audits, which are available from the Public Information Bulletin on the URE website. The database currently has 4,979 entries for energy efficiency certificates issued up to the end of 2019 and will in future be updated as and when new certificates are issued.