



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA INFRASTRUKTURO

REPORT ON IMPLEMENTATION OF THE NEEAP 2020

Ljubljana, July 2015

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1. SUMMARY

This report analyses the effects of implementing the NEEAP and, specifically, the final energy savings achieved for 2013 and 2014. For 2013 all data were available, while for 2014 we analysed only the data available at the time this report was compiled. In accordance with the Energy Efficiency Directive (EED)¹ Member States are required to report in 2015 on progress in achieving the targets set for 2013.

Pursuant to Article 3 of the EED, under the National Energy Efficiency Action Plan 2014-2020 (NEEAP 2020)² Slovenia set itself the target of improving energy efficiency by 2020 such that primary energy consumption in 2020 does not exceed 7.125 million tons (82.86 TWh). With 79 TWh of primary energy consumption in 2013 Slovenia is currently at a satisfactory level in terms of the 2020 target; however, final energy consumption for now remains problematic in the household sector, where consumption – although falling – is still much in excess of the target for 2020, and in the service sector, where consumption is growing, although the cause of the growth cannot be identified on account of the method of calculating final energy consumption in that sector. The target of renovating 3 % of the floor area of central government buildings, as set in Article 5 of the EED, was not achieved in 2014, as the energy rehabilitation of these buildings has not even begun. Savings under the final energy savings obligation scheme for companies that sell energy, and under the alternative measure, i.e. incentives allocated for efficient energy use (EEU) and renewable energy sources (RES) by the Eco Fund out of funds collected via the energy use fee to increase energy efficiency, amounted in 2013 to 268.1 GWh, 23.2 % under the 2014 target of 349 GWh (Article 7 of the EED) GWh %.

The objective of the National Energy Efficiency Action Plan 2008-2016 (NEEAP 1)³ complies with Article 4 of the Energy end-use efficiency and energy services directive (ESD)⁴ in setting a target for 2016 of a 9 % saving of end-use energy, or 4 261 GWh, while the indicative interim target end-use energy saving⁵ in the 2008-2013 period amounted to 2 841 GWh.

Up to and including 2013 an end-use energy saving of 3 304 GWh was achieved, which was 16.3 % higher than the indicative target saving up to 2013. In the industry and transport sectors the value of the savings was estimated using the TD⁶ method, while other calculated savings of end-use energy, as the direct consequence of implementing active policies and measures, were calculated using the BU⁷ method. In order to avoid double counting of savings, the measures carried out in the industry and transport sectors were excluded. In other cases of possible double counting the calculations took into account the relevant correction factors.

In calculating savings using the BU method we took into account the relevant methods from the Rules on the methods for determining energy savings at final customers⁸ and the Methods for calculating energy savings in implementing measures to increase energy efficiency and the use of renewable energy sources.⁹ The Methods were also applied in calculating savings using the TD method. The calculations of electricity savings used a factor of 2.5.

¹ 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, [OJ L 315 of 14.11.2012. p. 1, consolidated version \(2013-07-01\)](#).

² http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/an_ure/an_ure_2020_sprejet_maj_2015.pdf.

³ http://www.energetika-portal.si/fileadmin/dokumenti/publikacije/AN_URE/AN_UREI.pdf.

⁴ Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC, [OJ L 114 of 27.4.2006 p. 64](#).

⁵ The interim target saving of end-use energy for 2013 was determined through linear interpolation.

⁶ Top-down.

⁷ Bottom-up.

⁸ Official Gazette of the Republic of Slovenia, No [4/2010](#), [62/2013](#) and [17/2014](#) - EZ-1.

⁹ Proposed National Energy Efficiency Action Plan 2011–2016; draft, Annex 2: Methods for calculating energy savings in implementing measures to increase energy efficiency and the use of renewable energy sources, October 2011, <http://www.energetika-portal.si/dokumenti/strateski-razvojni-dokumenti/aksiiski-naact-za-energetske-ucinkovitost/>.

The objective of the NEEAP 1 is not the only objective in the area of EEU, and reduced final energy consumption is also important for achieving the ambitious targets of reducing greenhouse gas (GHG) emissions and use of RES. For this reason the necessary end-use energy saving to achieve these targets was recalculated in 2011. The recalculated end-use energy saving requirement amounts to 6 872 GWh by 2016 or 10 281 GWh by 2020, and so 3 617 GWh by 2013¹⁰. Thus, despite the fact that the end-use energy saving achieved up to and including 2013 exceeds the NEEAP 1 target, for the moment it lags 313 GWh or 8.7 % behind the target in the areas of EEU associated with the goals for use of RES and reduction of GHG emissions. The lag was evident in particular in transport and industry, but also in the service sector.

In view of the new NEEAP 2020 objective for improving energy efficiency by 2020, as from 2014 reporting on the achievement of the target set out in the NEEAP 1 and of the more ambitious targets in the area of EEU aimed at reducing GHG emissions and increasing the share of RES in gross final energy consumption by 2020 will no longer be necessary, but it will still be important to monitor the implementation of measures envisaged in the NEEAP 2020, specifically in terms of monitoring the effectiveness of national schemes for EEU and RES use as well as in terms of determining the causes of possible divergences from the envisaged NEEAP 2020 target with regard to primary energy consumption.

¹⁰ The target energy saving by 2013 is calculated through linear interpolation between the anticipated saving by 2016 and the corrected saving achieved by 2012, without taking into account early activities, both in the proposed National Energy Efficiency Action Plan 2011 - 2016, draft; October 2011.

2. ENERGY CONSUMPTION AND SAVING UP TO 2013

2.1. Targets for increasing energy efficiency

At the beginning of 2008 the Slovenian Government adopted the National Energy Efficiency Action Plan 2008-2016 (NEEAP 1), which was drawn up in accordance with the Directive on energy end-use efficiency and energy services (ESD). Its objective was to implement planned instruments in 2016 that would achieve a 9 % energy end-use saving relative to final energy consumption in the reference period 2001–2005 or 4 261 GWh. Then the proposed National Energy Efficiency Action Plan 2011–2016 was drafted in 2011. This action plan with targeted energy savings went further than the NEEAP 1 targets and, taking account of other, more ambitious targets Slovenia had in the area of EEU, reducing GHG emissions and use of RES, proposed more ambitious energy efficiency targets. The envisaged measures set a requirement for achieving 6 872 GWh by 2016 and 10 281 GWh by 2020 in end-use energy savings each year. Under the new National Energy Efficiency Action Plan 2014-2020 (NEEAP 2020), which was drawn up in accordance with the Energy Efficiency Directive (EED) and adopted in May 2015, Slovenia set itself the target of improving energy efficiency by 2020 so as to achieve a level of primary energy consumption in 2020 of no more than 7.125 million tons (82.86 TWh).

Owing to the specific characteristics of the reporting year 2013, which does not match the EED timetable, in this report the savings achieved up to 2013 have been evaluated from several aspects, in terms of the target pursuant to the ESD and in terms of the target in the proposed National Energy Efficiency Action Plan 2011 - 2016 and the EED. The indicative interim targets for end-use energy savings up to 2013 in accordance with the ESD were estimated at 2 841 GWh⁵ a year, compared with 3 617 GWh¹⁰ a year in accordance with the targets for EEU, GHG and RES.

2.2. Primary and final energy consumption up to 2013 – achieving EED targets

On 30 April 2015 EU Member States had to report for the first time on the attainment of energy efficiency targets pursuant to Article 24 and Annex XIV of the EED. As agreed, the reports refer to the situation in the year before last (n-2), because, in April of the current year, the data for the previous year (n-1) are not available in full. Consequently, in 2015 the reports are for 2013, a year in which Member States did not yet have set targets in line with the EED (Annex 1).

Pursuant to Article 3 of the EED, in the NEEAP 2020 Slovenia has set itself the target of improving energy efficiency by 2020 in terms of primary energy consumption. In 2013 primary energy consumption fell relative to 2012 from 81.2 to 79 TWh (Table 1), while preliminary data from the Statistical Office of the Republic of Slovenia (SORS) indicate a similar trend continuing in 2014, with 77.1 TWh. In 2013 final energy consumption dropped in all sectors, with the exception of the service sector, which showed a 5 % increase. Owing to the method of calculating final energy consumption in the service sector, this constitutes a balance sheet remainder and not a statistical monitoring value, and the factors behind increase cannot be identified. Overall, in 2013 final energy consumption fell by 2 % relative to the previous year and, for the moment, only household sector final energy consumption exceeds the target for 2020.

Table 1: Achievement of NEEAP 2020 targets in 2013

Energy consumption [GWh]	2012	2013	2013 – 2012	2020
Primary energy consumption	81 204	79 046	-2.66 %	82 864
Final energy consumption	57 601	56 421	-2.05 %	59 525

Final energy consumption – industry ¹¹	14 001	13 893	-0.77 %	15 206
Final energy consumption – transport	22 725	21 650	-4.73 %	25 593
Final energy consumption – households	13 730	13 457	-1.99 %	12 103
Final energy consumption – services sector	5 594	5 875	5.02 %	6 624

There is an additional requirement to report on the floor area of central government buildings, where at the beginning of the year for submitting a report no renovation had yet taken place, and on the floor area of central government energy-rehabilitated buildings and thereby the energy savings achieved in the previous year. Article 5 of the EED provides that each Member State must ensure that, as from 1 January 2014, 3 % of the total floor area of buildings owned and occupied by its central government is renovated each year, or they should adopt alternative cost-effective measures that serve to achieve the same improvement in the energy performance of government buildings. According to the record of buildings owned and occupied by the central government,¹² which is not yet complete, the floor area of central government buildings amounts to 708 296 m² (as at 18 April 2014), while for 2014 there is no information indicating that the energy renovation of these buildings has begun. The envisaged goal for 2014 of renovation of 21 250 m² of building floor area has therefore not been achieved.

The EED also lays down a requirement to report on the achievement of goals in energy efficiency obligation schemes and alternative policy measures under Article 7 of the EED. In line with the NEEAP 2020, in 2014, pursuant to Article 7 of the EED, Slovenia should have succeeded in reducing final energy consumption by 349 GWh, of which 87 GWh would have been in the programme for large liable entities¹³ to ensure energy savings for final customers, and 262 GWh through alternative measures, i.e. incentives allocated by the Eco Fund for EEU and use of RES through funds collected via the energy use fee to increase energy efficiency, [...]

[*Translator's note: The sentence is unfinished and there is an Error message at this point in the original text.*]

Table 2: Analysis of end-use energy savings pursuant to Article 7 of the EED, 2013 - 2014

End-use energy savings by item [MWh]	2013	2014	2014 target
Eco Fund			
Grants for citizens	197 257	129 024 ¹⁴	-
Grants for the public sector	845	1 786	-
Grants for vehicles	121	85	-
Energy advice for citizens (ENSVET)	18 336	18 557	-
Total end-use energy savings	216 559	149 452	262 000
Programmes for large liable entities bound to ensure energy savings for final customers			
Total end-use energy savings	51 567	n/a	87 000
Total energy savings under Article 7 of the EED			
Total end-use energy savings	268 126	149 452	349 000

In 2013 the programme of large liable entities achieved a reduction in final energy consumption of 51.6 GWh¹⁵, and Eco Fund incentives contributed to reducing final energy consumption by 216.6 GWh. In

¹¹ Manufacturing and construction

¹² http://www.energetika-portal.si/fileadmin/dokumenti/podrocja/energetika/ivne_stavbe/evidenca_iavnostavbe_jun_2014.htm

¹³ Distributors of energy and/or companies providing retail sale of energy identified as liable entities pursuant to the Decree on Guaranteeing End-Use Energy Savings (Official Gazette of the Republic of Slovenia, No [114/2009](#), [57/2011](#), [17/2014](#) - EZ-1 and [96/2014](#)).

¹⁴ The effects of grants from the energy use fee to increase energy efficiency and the Climate Fund together.

total end-use energy savings of 268.1 GWh were made. This meant that Slovenia lagged 23.2 % behind the 2014 target, with large liable entities 40.7 % behind their target and the Eco Fund lagging by 17.3 %. Not all data for 2014 are available yet, but for the Eco Fund we may already observe that relative to 2013 there was a notable, 31 % reduction in the savings achieved, which pushed the Eco Fund some considerable way from the target of 262 GWh in end-use energy savings per year in the 2014 - 2020 period. Moreover these savings for the moment also take into account the effects achieved through Climate Fund assistance, which cannot be claimed as the effects of an alternative measure, so the actual end-use energy saving achieved through the funds from the fee is even smaller.

For the moment therefore it appears that **on the level of primary energy consumption Slovenia is currently on track to meet the 2020 target**, but final energy consumption for now remains problematic in households, where consumption is indeed falling, but it is still far beyond the target for 2020, and in the service sector, where consumption is growing, but given the actual method of calculating this data the cause of this growth cannot be precisely investigated. **For the moment we are not achieving the targets set out in Articles 5 and 7 of the EED.**

2.3. End-use energy savings up to 2013 – achieving the targets in line with the ESD

The end-use energy savings achieved up to 2013 are calculated as the sum of corrected savings¹⁶ up to 2012 in the report “Assessment of the implementation of the NEEAP 1 and achievement of the obligations under Directive 2006/32/EC up to 2012”,¹⁷ and the savings achieved in 2013. **The end-use energy savings achieved up to 2013 amount to 3 304 GWh per year (Table 3), which is 16.3 % more than the indicative target savings up to 2013 under the ESD, and at the same time 8.7 % less than the more ambitious targets¹⁰** directed towards meeting Slovenia’s targets in the area of EEU, reducing GHG emissions and increased use of RES up to 2020. Reporting on the achievement of these targets will no longer be necessary starting in 2014, but it will still be important to monitor the implementation of measures envisaged in the NEEAP 2020, specifically from the viewpoint of monitoring the effectiveness of national schemes for EEU and RES use as well as from the perspective of determining the causes of possible divergences from the envisaged NEEAP 2020 target with regard to primary energy consumption.

Multi-sectoral measures accounted for the greatest share of overall end-use energy savings, 28.9 % or 955.2 GWh per year, primarily through the measure of the support scheme for electricity generated from RES and high efficiency CHP (Measure V.3). Households come next with a 26.5 % share (or 877 GWh per year), mostly a result of the financial incentives for the energy-efficient renovation and sustainable construction of buildings (Measure G.1) and financial incentives for energy-efficient heating systems (Measure G.2). The savings achieved in multi-sectoral measures and households exceeded the indicative target savings up to 2013. A similar situation applies to savings achieved in the public sector, where there was a marked increase over the previous year. Savings in the service sector and transport, and especially in industry, continued to lag behind the target savings.

The measures that delivered the greatest share of end-use energy savings estimated using the BU methods were financial incentives for the energy-efficient renovation and sustainable construction of residential buildings (Measure G.1) and financial incentives for energy-efficient heating systems (Measure G.2), which together contributed 632.8 GWh/year or 30 %, the support scheme (Measure V.3) with 539.9 GWh/year or 25.6 %, and the energy-labelling of household and other appliances and the minimum requirements (Measure V.2) with 245.3 GWh/year (or 11.6 %).¹⁰

¹⁵ This takes account only of the effects of investment measures, while the effects of carrying out energy inspections and providing information and awareness-raising are not taken into account.

A correction was made to the savings owing to the changing of certain input data used in the calculation. In the report up to 2012, savings up to 2012 were estimated at 2 488.8 GWh, and the corrected value of savings up to 2012 in this report is 2 532.2 GWh.

IJS CEU, Ljubljana, September 2014, IJS-DP-11698

Table 3: End-use energy savings up to and including 2013, by measure and sector

Name of measure	Code	End-use energy savings [GWh]			Target savings up to 2013 [GWh]
		up to 2012	2013	up to 2013	
HOUSEHOLD SECTOR		632.5	244.5	877.0	863.9
Financial incentives for the energy-efficient renovation and sustainable construction of residential buildings	G.1	406.6	226.2	632.8	572.2
Financial incentives for energy-efficient heating systems	G.2				
Energy efficiency scheme for low-income households	G.3	0	0	0	16.0
Division and billing of heating costs in multi-apartment and other buildings according to actual consumption	G.4	137.4	0	137.4	125.1
Energy advice for citizens (ENSVET)	G.5	88.5	18.3	106.8	150.6
SERVICE SECTOR		44.3	51.1	95.4	107.5
Financial incentives for efficient electricity consumption	1.1	9.3	31.0	40.3	14.7
Financial incentives to raise energy efficiency in industry and the service sector and significantly increase the scope of environmentally friendly electricity generation from RES and CHP systems	1.2	33.0	20.1	53.1	91.3
GHG emissions reduction scheme	1.4	2.0	0	2.0	1.5 ¹⁸
INDUSTRY (using the TD method)		559.3		488.8	827.9
TRANSPORT (using the TD method)		640.0		704.0	912.8
PUBLIC SECTOR		25.8	157.6	183.3	122.3
Green public procurement	J.1	/	/	/	/
Financial incentives for energy-efficient renovation and sustainable construction of buildings in the public sector	J.2	21.4	127.4	148.8	45.1
Introducing an energy management system in the public sector	J.3	0	0	0	55.5
Financial incentives for efficient electricity consumption in the public sector	J.4	4.4	30.2	34.6	21.8
MULTISECTORAL MEASURES		630.4	324.8	955.2	782.8
Regulations on the energy performance of buildings	V.1	152.7	17.3	170.0	184.8
Energy labelling of household appliances and other devices, and the minimum requirements	V.2	213.4	32.0	245.3	288.5
Support scheme for electricity generated from RES and high-efficiency CHP	V.3	264.3	275.5	539.9	309.5
HORIZONTAL MEASURES		/	/	/	/
Energy contracting	H.1	/	/	/	/
Exemption from payment of the environmental tax for polluting the air with CO ₂	H.2	/	/	/	/
Informational and awareness-raising activities	H.3	/	/	/	/
Education and training	H.4	/	/	/	/

¹⁸ The effect of the measure has not been estimated for the 2011–2016 period. When calculating the total target savings for 2013, the value of 1.5 GWh was used for the sake of consistency.

TOTAL MEASURES	2 532.3	777.9	3 303.8	3 617.2
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In the industrial and transport sectors, the value of the end-use energy savings was estimated using the TD method. The other savings calculated resulted directly from the implementation of active policies and measures and were calculated using the BU method. When calculating savings using the BU method, the appropriate methodologies in the Rules on the Methods of Determining Energy Savings at Final Customers⁸ and the Methods for Calculating Energy Savings in Implementing Measures to Increase Energy Efficiency and Promote the Greater use of Renewable Energy Sources⁹ were used. The Methods were also applied in calculating savings using the TD method. The calculations of electricity savings used a factor of 2.5. In order to avoid counting savings twice, the effects of measures implemented in the industrial and transport sectors and assessed using BU methods were omitted from the total savings. In other cases of possible double counting the calculations took into account the relevant correction factors.

3. END-USE ENERGY SAVINGS IN HOUSEHOLDS

The implementation of five measures was envisaged for households in the 2010 - 2016 period: financial incentives for the energy-efficient renovation and sustainable construction of residential buildings (Measure G.1), financial incentives for energy-efficient heating systems (Measure G.2), energy-efficiency scheme for low-income households (Measure G.3), the division and billing of heating costs in multi-apartment and other buildings according to actual consumption (Measure G.4) and the citizens' energy advice network (Measure G.5). The savings for Measures G.1, G.2 and G.5 have been determined on the basis of the available data. For Measure G.4 the savings have been estimated. The savings resulting from the implementation of Measure G.3 are taken into account in the savings resulting from Measures G.1 and G.2. All savings relating to households are assessed using the BU method.

In accordance with the ESD, the total end-use energy savings resulting from EEU measures and the use of RES in households and achieved up to 2013 amount to 877 GWh (Table 4). The savings achieved up to 2012 (632.5 GWh) and those achieved in 2013 (244.5 GWh) are factored into the calculation of the savings. Given the cumulative value of the savings up to 2016, i.e. 1 558 GWh, or 863.9 GWh up to 2013, this means that the end-use energy savings in households achieved up to 2013 slightly exceed those planned (by 1.5 %, or 13.1 GWh).

Table 4: End-use energy savings in households up to and including 2013

Code	Name of measure	Savings achieved up to 2013 [GWh]	Target savings up to 2013 [GWh]
G.1	Financial incentives for the energy-efficient renovation and sustainable construction of residential buildings	632.8	572.2
G.2	Financial incentives for energy-efficient heating systems		
G.3	Energy efficiency scheme for low-income households	/	16.0
G.4	Division and billing of heating costs in multi-apartment and other buildings according to actual consumption	137.4	125.1
G.5	Energy advice for citizens (ENSVET)	106.8	150.6
Total end-use energy savings in households		877.0	863.9

3.1. Financial incentives for the energy-efficient renovation and sustainable construction of buildings (Measure G.1) and financial incentives for energy-efficient heating systems (Measure G.2).

Eco Fund resources were also available in 2013 and 2014 to individuals for investments in EEU measures and the use of RES in single-family houses, two-family households or multi-apartment buildings¹⁹ in the form of grants and loans at favourable interest rates, while citizens could also obtain in this period grants under the large liable entities programme. Grants could also be obtained for investments in RES within the Rural Development Programme (RDP),²⁰ but data on the effects of these investments are not available.

In 2013 and 2014, grants totalling almost EUR 42.7 million supported 24 255 investments with a total value of EUR 252.7 million. The largest proportion of these investments (41.5 %) and 49 % of all the grants were intended for the renovation of individual elements of the envelope, which also contributed the largest share of

¹⁹ <http://www.ekosklad.si/>

²⁰ The RDP is the programming basis for the utilisation of resources of the European Agricultural Fund for Rural Development (EAFRD).

energy savings (44.4 %) and reductions in CO₂ emissions (46.1 %, Figure 1). Total savings in final energy consumption of 326.3 GWh were achieved in 2013 and 2014, with CO₂ emissions falling by 47.1 kt (Table 5).

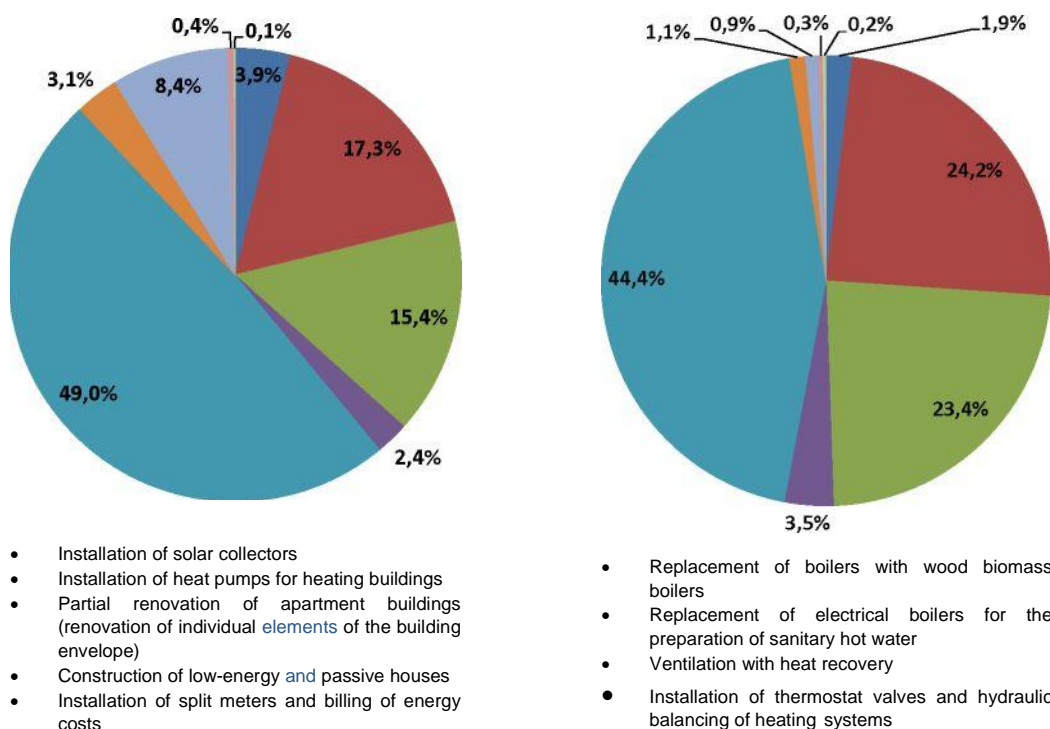


Figure 1: Distribution of Eco Fund incentives allocated to individuals for investments in residential buildings (left) and the energy savings achieved (right), by individual measure 2013–2014

Data on energy savings and the reduction in CO₂ emissions are calculated for an individual measure in accordance with the methodology prescribed under the Rules on the Methods for Determining Energy Savings at Final Customers⁸. The data collected relates to projects that have already been implemented.

When determining end-use energy savings under the ESD, the savings achieved through the installation of split heating meters are not taken into account in the Eco Fund’s grants, as these savings are assessed within the framework of Measure G.4 (Chapter 3.3). In the measure of replacement of electric boilers for the preparation of sanitary hot water with heat pumps, a factor of 2.5 was used for the calculation of the savings since this involves a reduction in electricity consumption. The end-use energy savings achieved under the ESD by the Eco Fund’s grants were therefore 208.2 GWh in 2013, and 134.6 GWh in 2014. In 2014 the Eco Fund showed a considerable drop in the amount of grants paid out compared to the previous year (EUR 24.7 million in 2013, EUR 18 million in 2014) and consequently in the end-use energy savings achieved.

In addition to grants, individuals were also able to obtain loans at a favourable interest rate from the Eco Fund in 2013 and 2014 for investments in EEU and the use of RES. A total of 1 477 loans were given, the largest proportion being for the renovation of individual elements of the envelope (516 loans, 34.9 %). Allocated loans resulted in EUR 12.3 million in investments, plus a reduction in end-use energy of 16.8 GWh and in CO₂ emissions of 2 kt (Table 5). The effects of the Eco Fund loans are growing from year to year, but they are significantly less than the effects of grants – in 2013 and 2014 loans accounted for just 5.1 % of the effects of grants.

Table 5: End-use energy savings achieved through financial incentives from the Eco Fund, 2011 - 2014

Item	End-use energy savings [MWh]				
	2011	2012	2013	2014	Total
Grants					
RES measures ²¹	39 278	84 240	112 672	60 230	296 420
EEU measures ²²	55 680	66 551	84 585	68 794	275 610
Total end-use energy savings	94 958	150 791	197 257	129 024	572 030
End-use energy savings under the ESD	97 691	155 384	208 161	134 600	595 835
Loans					
Measures for RES ¹⁹	578	3 077	5 469	5 660	14 784
Measures for EEU ¹⁹	2 187	1 742	2 660	3 094	9 683
Total end-use energy savings	2 765	4 819	8 129	8 754	24 467
End-use energy savings under the ESD	2 734	4 812	8 041	8 753	24 340
Total financial incentives from the Eco Fund for households					
Total end-use energy savings	97 723	155 610	205 386	137 778	596 497
End-use energy savings under the ESD	100 425	160 196	216 202	143 353	620 176

As with the grants, data on energy savings and the reduction in CO₂ emissions resulting from loans are calculated for an individual measure in accordance with the methodology prescribed under the Rules on the Methods for Determining End-Use Energy Savings. The data collected relates to projects that have already been implemented.

When determining end-use energy savings under the ESD, the Eco Fund loans did not take account of electricity generation using photovoltaic modules (this was taken into account in devices included in the support scheme for electricity generated from RES and high-efficiency CHP, Chapter 8.3). The savings achieved through the purchase of more environment-friendly means of transport were taken into account in the energy savings in transport (Chapter 6). With the purchase of energy-efficient household appliances, the savings were assessed on the basis of data on the sale of new household appliances in Slovenia (Chapter 8.2). In the measure of replacement of electric boilers for the preparation of sanitary hot water with heat pumps, a factor of 2.5 was used for the calculation of the savings since this involves a reduction in electricity consumption. The end-use energy savings achieved under the ESD through Eco Fund loans were therefore 8 GWh in 2013, and 8.8 GWh in 2014.

In 2013 and 2014 citizens could also obtain grants for EEU and RES measures under the large liable entities programme²³. According to estimates, in 2013 just over half a million euros in grants served to support almost EUR 2.5 million in investments, specifically for upgrading shared heating systems, including heat stations, for connecting buildings to the district heating system and replacement of existing boilers with high-efficiency natural gas boilers. Reductions in end-use energy of 10 GWh were achieved, along with reductions in CO₂ emissions of 3.1 kt per year. Data on the effects of the large liable entities programme in 2014 are not yet available.

²¹ RES measures involve installation of solar collectors, wood biomass boilers and heat pumps, and connections to district heating using wood biomass.

²² EEU measures cover the installation of natural gas energy efficient boilers, the renovation of individual elements of a building envelope, ventilation with heat recovery, the construction of low-energy and passive houses, the purchase of passive construction apartments, installation of thermostat valves, split heating meters and hydraulic balancing.

²³ Decree on Guaranteeing End-Use Energy Savings (Official Gazette of the Republic of Slovenia, No [114/2009](#), [22/2010](#) - EZ-D, [57/2011](#), [17/2014](#) - EZ-1 and [96/2014](#)). Up to 2014 the incentives under this programme were allocated from public funds.

The financial incentives for energy efficient renovation and sustainable construction of residential buildings as well as energy efficient heating systems brought about reduced final energy consumption of 215.4 GWh in 2013 (or 226.2 GWh under the ESD).

3.2. Energy efficiency scheme for low-income households (Measure G.3)

The energy efficiency scheme for low-income households was also implemented in 2013 and 2014 as part of tenders for new investments in the use of RES and the increased energy performance of multi-apartment buildings. Under these tenders, socially vulnerable individuals were entitled to a higher grant percentage, i.e. covering 100 % of the costs of the investment relative to their pertaining share of the financing of the investment, while the level of the financial incentive grants for all other investors was up to 25 % of the investment costs granted. Forty socially vulnerable individuals were among the applicants in 2013 and 2014. The effects of the grants they received are evaluated within the framework of the financial incentives for the energy-efficient renovation and sustainable construction of buildings (Measure G.1) and the financial incentives for energy-efficient heating systems (Measure G.2) in Chapter 3.1.

The upgrading of the energy efficiency scheme for low-income households was also envisaged in 2014 through the provision of advice on possible measures to reduce energy consumption among socially deprived groups and the allocation of EEU appliances, but has yet to be implemented in practice. The plan was for visits to be made by regional social work centres and advice provided by advisers from the network of energy advice offices under the ENSVET programme. In the area of energy poverty the Focus society was very active, and under the ACHIEVE²⁴ project it provided advice and distributed EEU appliances so as to achieve in 220 households an average annual reduction in energy costs of EUR 108.9 (274 kWh of electricity, 555 kWh of heat, 17.5 m³ of water), and of CO₂ emissions of 320.7 kg per household²⁵. Activities are now being continued as part of the REACH²⁶ project, specifically in the Zasavje and Pomurje regions, which face the acutest social and economic challenges.

3.3. Division and calculation of heating costs in multi-apartment and other buildings according to actual consumption (Measure G.4)

The compulsory division and calculation of heating costs according to actual consumption in multi-dwelling buildings and other buildings with at least four separate sections, which are supplied with heat from a common

heating system, was introduced in 2008 in the amendments to Article 94 of the Energy Act in force at the time.²⁷ Pursuant to this Article, the Rules on the Method of Dividing and Billing the Costs of Heating in Residential and Other Buildings with Several Individual Parts²⁸ were adopted in 2010. With this, the division and billing of heating costs according to actual consumption became compulsory on 1 October 2011. Despite this obligation, according to REUS 2012²⁹ ³⁰research data only 61 % of multi-apartment buildings had split heating meters in 2012. In the new Energy Act (EZ-1) this area is regulated by Article 357.

²⁴ IEE project ACHIEVE — Actions in low income Households to Improve energy efficiency through Visits and Energy diagnosis, May 2011 - April 2014 (<http://www.achieve-proiect.eu/>)

²⁵ Concluding report of the ACHIEVE project, May 2014 (<http://www.achieve-proiect.eu/index.php?lang=s/>)

²⁶ IEE project REACH - Reduce Energy Use and Change Habits, March 2014 - February 2017 (<http://reach-energy.eu/si/>)

²⁷ Official Gazette of the Republic of Slovenia, No [27/2007](#) – official consolidated text, [70/2008, 22/2010, 10/2012, 94/2012](#) - ZDoh-2L and [17/2014](#)- EZ-1

²⁸ Official Gazette of the Republic of Slovenia, No [7/2010](#) and [17/2014](#)- EZ-1

²⁹ http://www.pozitivnaenergija.si/sites/www.pozitivnaenergija.si/files/predstavitevrezultatov_reus_2012_gzs_3.pdf

³⁰ Owing to the delay in implementation, the end-use energy saving is calculated on the basis of advice given in the 2009 – 2012 period (number of advisory sessions: 5 159 in 2009, 6 381 in 2010, 5 797 in 2011 and 5 867 in 2012).

In 2013 citizens who owned individual parts of multi-apartment buildings could also receive for the last time, as part of Eco Fund public calls, grants for the installation of metering devices that enable the division and billing of heating costs. A total of 17 applicants received almost EUR 27 000 in grants for investments totalling over EUR 190 000 for this purpose. The end-use energy reductions achieved are estimated at 760 MWh/year and the CO₂ emissions at 144 kt/year. Owing to a lack of new data to calculate energy savings resulting from the introduction of the division and billing of heating costs according to actual consumption, the most recent data are from the REUS research in 2012 and the reduction of the effect of this measure over the time since its implementation, we estimate that the savings up to 2013 remain the same as they were in 2012.

3.4. Energy advice for citizens (Measure G.5)

The network of energy advice offices (ENSVET), which has been active since 1993, also continued to operate in 2013 and 2014. ENSVET is a Ministry of Infrastructure programme aimed at the provision of energy advice for citizens in relation to EEU and the use of RES, and is co-funded by the Eco Fund and its implementation managed by Gradbeni inštitut ZRMK.

A new assessment of the effect of the ENSVET programme was made in 2013 on the basis of a survey of municipal residents who have turned to ENSVET for advice. The results of the survey also formed the points of departure for updating the method of evaluating the effects of the ENSVET programme in October 2014. The assessment of effects took into account that the measure is implemented around two years after the advice is received. Using different correction factors negates the effect of these effects or measures being counted twice. The end-use energy savings attributable to the efforts of the ENSVET energy advice network in 2013 and 2014 are estimated at 36.9 GWh, and CO₂ emission reductions at 9.6 kt (Table 6).

Table 6: End-use energy savings resulting from the ENSVET programme 2011–2014

	Unit	2011	2012	2013	2014	Total
Number of advisory sessions	-	5 797	5 867	5 483	4 344	21 491
End-use energy savings ³⁰	MWh/year	16 318	20 183	18 336	18 557	73 395
Reduction in CO ₂ emissions	kt CO ₂ /year	4.25	5.26	4.78	4.84	19.14

4. TOTAL END-USE ENERGY SAVINGS IN THE SERVICE SECTOR

The implementation of three measures that are common to industry and the service sector, have been envisaged in the 2011 - 2016 period in the service sector, which covers trade, catering and hospitality, financial services, real estate brokerage, and recreational, cultural and sports activities: financial incentives for efficient electricity consumption (Measure I.1), financial incentives for raising energy efficiency in industry and the service sector and a significant increase in the scope of environment-friendly energy generation from RES and CHP systems (Measure I.2) and schemes to reduce GHG emissions (Measure I.4). For Measures I.1 and I.2, the savings were, on the basis of the available data, assessed using BU methods. The scheme of exemption from payment of the CO₂ tax for the implementation of measures to reduce GHG emissions was not implemented under Measure I.4 in 2013.

In accordance with the ESD, the total end-use energy savings resulting from EEU measures and the use of RES in the service sector and achieved up to 2013 amount to 95.4 GWh (Table 7). The savings achieved up to 2012 (44.3 GWh)³¹ and those achieved in 2013 (51.1 GWh) are factored into the calculation of the savings. In view of the target cumulative value of the savings up to 2016, i.e. 297 GWh, or 119.9 GWh up to 2013, this means that the end-use energy savings in the service sector achieved up to 2013 constitute 88.7 % of those planned and are therefore still lower than envisaged.

Table 7: End-use energy savings in the service sector up to and including 2013

Code	Name of measure	Savings achieved up to 2013 [GWh]	Target savings up to 2013 [GWh]
1.1	Financial incentives for efficient electricity consumption	40.3	14.7
1.2	Financial incentives to raise energy efficiency in industry and the service sector and significantly increase the scope of environmentally friendly electricity generation from RES and CHP systems	53.1	91.3
1.4	GHG emissions reduction scheme	2	0 ³²
Total end-use energy savings in the service sector		95.4	107.5

4.1. Financial incentives for efficient electricity consumption (Measure I.1)

A public call for cofinancing operations to raise the efficiency of electricity consumption in the commercial sector for the 2011–2013 period (UREE1) was published in 2010 as part of the ‘Sustainable energy’ development priority within the Operational Programme for Environmental and Transport Infrastructure Development (OP ROPI) 2007–2013. In the service sector six projects were carried out in 2013 and 2014, which served to reduce electricity consumption by 4.2 GWh or 10.5 GWh under the ESD (Table 8), while CO₂ emissions were reduced by 2.1 kt a year.

In 2012 grants also began to be allocated as part of the programme of large liable entities for investments in EEU and RES. The measures under which incentives could be obtained included

the installation of energy-efficient lighting systems, the installation of energy-efficient electric motor drives and raising the efficiency of systems for the preparation of compressed air. In 2013 a total of 51 projects were supported, involving grants of EUR 1.1 million given towards investments of EUR 3.1 million, with the

³¹ Savings differ somewhat from the savings set out in the report ‘Assessment of the implementation of the NEEAP 1 and achievement of the obligations under Directive 2006/32/EC up to 2012’, which amount to 60.8 GWh, which is a consequence of the corrected estimate of savings achieved in 2011 and 2012.

³² The effect of the measure has not been estimated for the 2011–2016 period. When calculating the total target savings for 2013, the value of 1.5 GWh was used for the sake of consistency.

annual savings amounting to 18 GWh of electricity (44.9 GWh under the ESD) and reductions in CO₂ emissions of 5.1 kt. A more precise sectoral breakdown of fund recipients is not known, but we estimate that savings were made in the service sector amounting to 10.2 GWh or 25.4 GWh under the ESD (Table 8). A better estimate of the end-use energy savings in the future will require separate data by sector and measure.

Table 8: End-use energy savings resulting from financial incentives for efficient electricity consumption in the service sector 2012 - 2014³³

Item	End-use energy savings [MWh]			Total
	2012	2013 - 2014		
Cohesion Fund				
Electricity savings	3 681	1 973	2 216	7 870
Electricity savings under the ESD	9 203	4 933	5 540	19 676
Large liable entities programme				
Electricity savings	0	10 170	n/a	10 170
Electricity savings under the ESD	0	25 426	n/a	25 426
Eco Fund loans				
Electricity savings	31	250	190	471
Electricity savings under the ESD	78	625	474	1 177
Total				
Electricity savings	3 712	12 394	2 216	18 322
Electricity savings under the ESD	9 280	30 984	5 540	45 805

Applicants from the public and service sector and industry were also able to obtain Eco Fund loans at a favourable interest rate for the implementation of measures to reduce electricity consumption. The majority of these measures were expressed in savings in heat, which are taken into account in Measure I.2 (Chapter 4.2). A reduction in electricity consumption was also achieved, specifically 0.4 GWh or 1.1 GWh under the ESD in 2013 and 2014.

The financial incentives for efficient electricity consumption brought about savings in end-use electricity consumption of 12.4 GWh in 2013 (or 31 GWh under the ESD). Figures on the effect of projects supported by the European Regional Development Fund (ERDF) in this area are not available.

4.2. Financial incentives to raise energy efficiency in industry and the service sector and significantly increase the scope of environmentally friendly electricity generation from RES and CHP systems (Measure I.2)

In order to increase the scope of the environment-friendly generation of heat in the service sector and in industry, public calls for the co-financing of individual wood biomass heating systems³⁴ and the co-financing of district heating using wood biomass³⁵ were issued as part of the 'Sustainable energy' development priority under the OP ROPI.

In 2013 and 2014 a total of 19 projects were carried out in the service sector under the KNLB 3 call and 8 projects under the DOLB 3 call. EUR 8.3 million in investments were stimulated through the EUR 2.7 million

³³ In 2011 no savings were made through these measures.

³⁴ KNLB 1 (2009), KNLB 2 (2010) and KNLB 3 (2011)

³⁵ DOLB 1 (2009), DOLB 2 (2010) and DOLB 3 (2011)

in grants, and this served to achieve reductions in final energy consumption of 6.6 GWh (Table 9) and in CO₂ emissions of 6.3 kt per year. Under the large liable entities programme no detailed sectoral distribution of fund recipients is known, but estimates for 2013 show that the service sector achieved a reduction in energy consumption of 15.1 GWh, and in CO₂ emissions of 5.1 kt per year, while data for 2014 is not yet available.

Applicants from the service sector and industry were also able to obtain Eco Fund loans at a favourable interest rate for the implementation of EEU and RES measures. The reduction in heat consumption achieved by these measures was estimated at 0.7 GWh in 2013 and 31.8 GWh in 2014, giving a total of 32.5 GWh. The sectoral distribution of loan recipients is not known; therefore, the savings achieved in the public sector and industry are also factored into the savings even though their respective shares are unknown. However, given that these savings account for only 0.1 % of the overall savings achieved up to 2013, we conclude that any double counting of savings have a negligible effect on their total value. There is also the possibility that some of the loan recipients also received grants from the Cohesion Fund or large liable entities' programme for the same purpose; however, no data is available on this.

Financial incentives to raise energy efficiency in industry and the service sector and the significant increase in the scope of environment-friendly electricity generation from RES and high-efficiency CHP systems led to reductions in energy consumption of 20.1 GWh in 2013. Figures on the effect of possible projects supported by the ERDF in this area are not available.

Table 9: End-use energy savings resulting from financial incentives to increase energy efficiency in the service sector 2011 - 2014

Item	End-use energy savings [MWh]				Total
	2011	2012	2013	2014	
Cohesion Fund					
End-use energy savings (including under the ESD)	10 150	3 524	4 310	2 254	20 238
Large liable entities programme					
End-use energy savings (including under the ESD)	0	0	15 100	n/a	15 100
Eco Fund loans					
End-use energy savings (including under the ESD)	3 966	2 363	704	31 776	38 808
Total					
End-use energy savings (including under the ESD)	14 116	5 887	20 114	34 029	74 146

5. END-USE ENERGY SAVINGS IN INDUSTRY

The implementation of five measures has been envisaged in industry in the 2011 - 2016 period: financial incentives for efficient electricity consumption (Measure I.1), financial incentives for raising energy efficiency in industry and the service sector and a significant increase in the scope of environment-friendly energy generation from RES and CHP systems (Measure I.2), incentives to introduce energy management systems in industry (Measure I.3), the scheme to reduce GHG emissions (Measure I.4) and the development scheme and other incentives for the commercial sector in the entry of green energy products onto the market (Measure I.5).

The total end-use energy savings resulting from the implementation of EEU measures and the use of RES in industry, achieved up to and including 2013, and which could be assessed using bottom up methods, amount to 166.9 GWh (Table 10). The savings achieved up to 2012 (128.5 GWh)^{36 37 38} and those achieved in 2013 (38.4 GWh) are factored into the calculation of the savings. The target end-use energy savings for industry therefore amount to 1 634 GWh by 2016, or 827.9 GWh by 2013. Under the TD method, the estimated end-use energy savings in industry achieved up to 2013 amount to 488.8 GWh, which is 339.1 GWh or 41 % less than the expected reduction in end-use energy consumption for that year.

Table 10: End-use energy savings in industry up to and including 2013

Code	Name of measure	Savings achieved up to 2013 [GWh]	Target savings up to 2013 [GWh]
1.1	Financial incentives for efficient electricity consumption	69.3	/
1.2	Financial incentives to raise energy efficiency in industry and the service sector and significantly increase the scope of environmentally friendly electricity generation from RES and CHP systems	84.6	/
1.3	Incentives for introducing energy management systems in industry	/	/
1.4	GHG emissions reduction scheme	13.0	/
1.5	Development scheme and other incentives for the commercial sector in the entry of green energy products into the market	/	/
Total end-use energy savings in industry (BU)³⁷		166.9	/
Total end-use energy savings in industry (TD)³⁸		488.8	827.9

5.1. End-use energy savings in industry determined using the BU method

In order to increase the efficient electricity consumption (Measure I.1), industrial enterprises could also receive grants in 2013 from the Cohesion Fund³⁹ and the large liable entities' programme, as well as Eco Fund loans. Reductions in electricity consumption in industry achieved through Cohesion Fund resources amounted to 6.9 GWh under the ESD. Savings achieved through funds from the large liable entities' programme were estimated at 16 GWh, and a more precise sectoral distribution of fund recipients is not known. The public call for Cohesion Fund resources ended in 2013, and data on the effects of the large

³⁶ Earlier activities not taken into account. Savings differ somewhat from the savings set out in the report on achieving savings up to 2012, which amount to 133.6 GWh, which is a consequence of the corrected estimate of savings achieved in 2011 and 2012.

³⁷ Energy savings determined using the BU method.

³⁸ Energy savings determined using the TD method.

³⁹ Public call for co-financing operations to raise the efficiency of electricity consumption in the commercial sector for the 2011–2013 period (UREE1).

liable entities programme in 2014 are not yet available. Eco Fund loans brought about a reduction in electricity consumption of 0.8 MWh in 2013, or 2.1 MWh under the ESD.

Grants from the Cohesion Fund⁴⁰ and the large liable entities' programme, as well as Eco Fund loans, were likewise earmarked for the implementation of Measure I.2. Reductions in final energy consumption of 3.6 GWh in industry in 2013 and 14.2 GWh in 2014 were achieved through Cohesion Fund resources. Savings achieved through funds under the large liable entities programme amounted to 12.9 GWh in 2013, but the effects are not known for 2014. A reduction in final energy consumption of 5.5 GWh was achieved in 2013 and 2014 through Eco Fund loans.

For energy management systems under Measure I.3, grants were earmarked from the large liable entities programme.⁴¹ In 2013 a total of 22 projects were supported, with the annual energy savings estimated at 5.9 GWh and the reductions in CO₂ emissions at 1.6 kt. These savings have already been included in the savings achieved through funds from the large liable entities programme as part of Measure I.2

The reduction in final energy consumption resulting from the implementation of EEU measures and the use of RES in industry that can be assessed using bottom up methods amounted to 38.4 GWh in 2013 (Table 11).

Table 11: End-use energy savings in industry resulting from financial incentives from the Cohesion Fund and the large liable entities programme 2011 - 2014

Item	End-use energy savings [MWh]				Total
	2011	2012	2013	2014	
Cohesion Fund					
UREE1 call	3 213	15 375	2 754	0	21 343
KNLB and DOLB calls	7 490	7 520	3 601	14 215	32 826
Total end-use energy savings	10 703	22 895	6 356	14 215	54 169
End-use energy savings under the ESD	15 523	45 957	10 488	14 215	86 183
Large liable entities programme					
Reduced electricity consumption	0	0	6 393	n/a	6 393
Reduced heat consumption	0	0	6 472	n/a	6 472
Total end-use energy savings	0	0	12 865	n/a	12 865
End-use energy savings under the ESD	0	0	22 454	n/a	22 454
Eco Fund loans					
Reduced electricity consumption	0	0	1	0	1
Reduced heat consumption	5 419	0	5 454	0	10 874
Total end-use energy savings	5 419	0	5 455	0	10 874
End-use energy savings under the ESD	5 419	0	5 456	0	10 876
Total financial incentives for industry					
Total end-use energy savings	16 122	22 895	24 675	14 215	77 908
End-use energy savings under the ESD	20 942	45 957	38 398	14 215	119 512

The scheme of exemption from payment of the CO₂ tax for the implementation of measures to reduce GHG emissions under Measure I.4 expired in 2012, and a new scheme has not yet been drawn up. Measure I.5

⁴⁰ Public calls for co-financing individual wood biomass heating systems (KNLB) and co-financing district heating using wood biomass (DOLB).

⁴¹ The measure of equipment for the operational monitoring and management of energy at customer locations.

aims to promote commercial sector development projects in all phases of developing energy-efficient products, production processes and services, and is especially geared towards providing incentives for businesses in demonstration projects and in introducing these products to the market. In 2013 the implementation of this measure with co-financing of strategic research and development projects at enterprises⁴² and financing centres of excellence and centres of competence expired, but the measure is being continued through implementation of the EUREKA programme and certain other programmes.

5.2. End-use energy savings in industry determined using the TD method

The method for calculating end-use energy savings in the manufacturing sector is based on the indicator of energy consumption relative to the index of industrial output of specific branches of manufacturing (method A – P14).⁸ End-use energy savings are determined on the basis of the difference in the specific energy consumption in the base year (2007) and in the observed year (t), the index of industrial output in the observed year (t) and the share of energy consumption of the specific sector in 2007 that was not included in the Emissions Trading System. Final energy consumption by enterprises included in the Emissions Trading System (ETS) is not taken into account in final energy consumption. End-use energy savings are determined separately for each branch of manufacturing, while the total savings are calculated as the sum of savings of individual branches.

In accordance with the Standard Classification of Activities⁴³ (SKD 2008), manufacturing activities (Area C) are divided into Sections C10 to C33, where Section C19 (Manufacture of coke and petroleum derivatives) does not fall under the ESD.

In 2013 end-use energy savings of 804 GWh relative to 2007 were achieved in 13 branches of the manufacturing sector (Table 12). The largest energy savings, which together represented 68 % of all savings, were achieved once again in branches of the manufacture of fabricated metal products, except machinery and equipment (C25, 223 GWh), the manufacture of chemicals and chemical products (C20, 207 GWh) and the manufacture of computer, electronic and optical products (C26, 117 GWh). In the other ten branches, the average energy savings achieved were 26 GWh per branch.

Table 12: Energy savings in industry in 2011 - 2013 relative to 2007, determined using the TD method

Item	End-use energy savings [MWh]		
	2011	2012	2013
Reduced energy consumption in 13 branches	786.2	825.1	804.0
Increased energy consumption in 9 branches	-260.1	-265.80	-315.2
Total energy savings in industry	526.1	559.3	488.8

In nine branches energy savings were negative (increased specific energy consumption), amounting to -315 GWh. Energy consumption increased the most in the manufacture of basic metals (C24, -159 GWh) and the manufacture of rubber and plastic products (C22, -72 GWh). The other seven branches accounted for 27 % of the total increase in energy consumption. End-use energy savings in manufacturing activities up to 2013, estimated using the TD method, therefore amount to 489 GWh, which is slightly less than the year before. There is therefore currently an unfavourable trend in reducing final energy consumption in industry.

⁴² Operational Programme for Strengthening Regional Development Potentials 2007 - 2013, development priority: Competitiveness and Research Excellence.

⁴² Decree on the Standard Classification of Activities, Official Gazette of the Republic of Slovenia, No [69/2007](#) and [17/2008](#)

⁴³ Decree on the Standard Classification of Activities, Official Gazette of the Republic of Slovenia, No [69/2007](#) and [17/2008](#)

6. END-USE ENERGY SAVINGS IN TRANSPORT

The implementation of four measures has been envisaged in transport in the 2011 - 2016 period: Promotion and competitiveness of public transport (Measure P.1), Promoting sustainable freight transport (Measure P.2), Increasing the energy efficiency of road vehicles (Measure P.3) and Building cycle paths and support structures and promoting cycling (Measure P.4).

The total energy savings resulting from the reduction in final energy consumption in transport that were achieved up to 2013 and that could be assessed using BU methods amount to 45.4 GWh (Table 13). The savings achieved up to 2012 (45.24 GWh) and those achieved in 2013 (0.16 GWh) are factored into the calculation of the savings. The target end-use energy savings for transport therefore amount to 1 731 GWh by 2016, or 912.8 GWh by 2013. Under the TD method, the estimated savings achieved up to 2013 amount to 704 GWh, which is 77.1 % of the expected reduction in final energy consumption in transport for that year.

Table 13: End-use energy savings in transport up to and including 2013

Code	Name of measure	Savings achieved up to 2013 [GWh]	Target savings up to 2013 [GWh]
P.1	Promotion and competitiveness of public transport	/	/
P.2	Promoting sustainable freight transport	/	/
P.3	Increasing the energy efficiency of road vehicles	45.4	/
P.4	Building cycle paths and support structures and promoting cycling	/	/
Total end-use energy savings in transport (BU)⁴⁴		45.4	/
Total end-use energy savings in transport (TD)⁴⁵		704.0	912.8

6.1. End-use energy savings in transport determined using the BU method

In 2013 and 2014 individuals were again able to obtain loans as part of Eco Fund calls for the purchase of environment-friendly vehicles (purchase of private cars, motor cycles, mopeds using electric or hybrid drives) as well as grants for the purchase of electric vehicles. This served as an incentive to purchase 37 vehicles in 2013 and 67 in 2014, which in turn achieved a total reduction in energy consumption in 2013 and 2014 of 172.4 MWh (Table 14), and in CO₂ emissions of 54 tons per year. In the same period, Eco Fund grants could also be received for the purchase of electric vehicles by legal entities (70 vehicles, energy savings of 119 MWh, reductions in CO₂ emissions of 43 t). These entities were also able to receive incentives for the purchase of public transport vehicles running on natural gas or biogas (7 vehicles). Energy savings resulting from the measure to raise the energy efficiency of road vehicles therefore totalled 158.4 MWh in 2013 and 132.9 MWh in 2014. In 2013 the Eco Fund published a call for lorries and buses⁴⁶ as part of which 1 221 vehicles received almost EUR 4 million in grants from the Climate Fund, but no data on the effects of that call are available.

Table 14: End-use energy savings in transport resulting from financial incentives from the Eco Fund for the purchase of hybrid and electric vehicles 2011 - 2014

Item	2011	2012	2013	2014	Total
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⁴⁴ Energy savings determined using the BU method.

⁴⁵ Energy savings determined using the TD method.

⁴⁶ Public call for grants to assist in the purchase of environment-friendly heavy goods vehicles and buses

	Number of vehicles [-]	Energy savings [MWh]	Number of vehicles [-]	Energy savings [MWh]	Number of vehicles [-]	Energy savings [MWh]	Number of vehicles [-]	Energy savings [MWh]	Number of vehicles [-]	Energy savings [MWh]
Individuals										
Subsidies	3	12.0	35	117.0	18	57	29	30	85	216.0
Loans	12	21	19	35.2	19	37.4	38	47.9	88	141.5
Total	15	33.0	54	152.2	37	94.4	67	77.9	173	357.5
Legal persons										
Subsidies	0	0.0	17	54.0	21	64.0	49	55.0	87	173.0
Total										
Total	15	33.0	71	206.2	58	158.4	116	132.9	260	530.5

The energy savings achieved as a result of implementation of the other measures in the transport sector, which were only partly carried out in 2013 and 2014, cannot be assessed using bottom up methods.

6.2. End-use energy savings in transport determined using the TD method

End-use energy savings in transport are calculated on the basis of four indicators: final energy consumption in road transport for private and goods vehicles and final energy consumption in goods and passenger rail transport.

The method for calculating end-use energy savings in road transport for private vehicles (P8-A1)⁸ is based on the indicator of the average energy consumption of private vehicles relative to kilometres travelled. The method determines end-use energy savings based on the difference in the average specific consumption of energy by private vehicles in the base year (2007) and the observed year (t) and the annual number of kilometres travelled in private vehicles in the observed year (t). The end-use energy savings estimated in this way in road transport for private vehicles up to 2013 amounted to 180 GWh (Table 15).

The method for calculating end-use energy savings in road transport for goods vehicles (P9)⁴⁷ is based on the indicator of the average energy consumption of goods vehicles in terms of transport of goods in ton-km. The method determines end-use energy savings based on the difference in the average specific consumption of energy by goods vehicles relative to ton-km in the base year (2007) and the observed year (t) and the annual transport of goods in ton-km in the observed year (t). End-use energy savings for road freight vehicles up to 2013 amounted to 455 GWh, accounting for 64.6 % of all savings in the transport sector (Table 15).

The method for calculating energy savings in rail passenger transport (PIO)⁴⁸ is based on the indicator of energy consumption in terms of the scope of transport in passenger km. Energy savings are determined based on the difference in the specific consumption of energy for rail passenger transport in the base year (2007) and the observed year (t) and total transport in passenger km in the observed year (t). Up to 2013 energy savings in rail passenger transport amounted to 8 GWh.

⁴⁷ Proposed National Energy Efficiency Action Plan 2011 - 2016; draft; October 2011, Annex 2: Methods for calculating energy savings in implementing measures to increase energy efficiency and the use of renewable energy sources, equation 154 (<http://www.energetika-portal.si/dokumenti/strateski-razvojni-dokumenti/akcijski-nactr-za-energetsko-ucinkovitost/>)

⁴⁸ Equation 156 – Annex 2:

The method for calculating energy savings in rail freight transport (Pil)⁴⁹ is based on the indicator of energy consumption in terms of the scope of goods transport in ton-km. Energy savings are determined based on the difference in the specific consumption of energy for rail freight in the base year (2007) and the observed year (t) and the total transport of goods in ton-km in the observed year (t). Under this method, energy savings in rail freight transport amounted to 61 GWh up to 2013.

Total end-use energy savings up to 2013, estimated using the top down method, therefore amount to 704 GWh. This is a little more than the previous year, chiefly attributable to the increased energy savings in private car use on the roads. There is therefore currently a favourable trend in reducing final energy consumption in transport.

Table 15: Energy savings in transport in the 2011 - 2013 period relative to 2007

	[GWh]	2011	2012	2013
P8-A1	Private road vehicles	-23	91	180
P9	Road freight vehicles	323	506	455
PIO	Rail passenger transport	4	2	8
Pil	Rail freight	49	41	61
Total		353	640	704

The data needed to calculate the end-use energy savings was obtained from various sources. Energy consumption in road transport, distances travelled by type of vehicle and the number of vehicles by types were obtained from the Slovenian Environment Agency (ARSO), where as part of compiling records on greenhouse gas and atmospheric pollutant emissions, fuel consumption in road transport is divided by type of vehicle with the help of COPERT model data. In calculating emissions, ARSO must capture the entire quantity of fuel sold in Slovenian territory, so their data is not ideal for calculating end-use energy savings owing to measures affecting freight transport by domestic vehicles. Data on ton kilometres travelled by freight vehicles and trains and rail passenger kilometres were obtained from the Statistical Office of the Republic of Slovenia (SURSTAT) via the SI-STAT application. Data on the energy consumption of passenger and freight trains was obtained from Slovenske železnice.

⁴⁹ Equation 157 – Annex 2:

7. END-USE ENERGY SAVINGS IN THE PUBLIC SECTOR

The implementation of four measures has been envisaged in the public sector in the 2011 - 2016 period: Green public procurement (Measure J.1), Financial incentives for the energy-efficient renovation and sustainable construction of public sector buildings (Measure J.2), Introducing an energy management system in the public sector (Measure J.3) and Financial incentives for efficient electricity consumption in the public sector (Measure J.4). For Measures J.2 and J.4, the end-use energy savings are determined on the basis of the available data using BU methods. The necessary data is not available for determining the savings resulting from the implementation of Measure J.3, while savings have not been envisaged as resulting from the green public procurement measure.

Under the ESD methodology, the total end-use energy savings resulting from the implementation of EEU measures and the use of RES in the public sector and achieved up to 2013 amount to 183.3 GWh (Table 16). The savings achieved up to 2012 (25.8 GWh) and those achieved in 2013 (157.1 GWh) are factored into the calculation of the savings. Given the target cumulative value of the savings up to 2016, i.e. 412 GWh, or 122.3 GWh up to 2013, this means that the energy savings resulting from the implementation of measures in the public sector achieved up to 2013 exceeded the anticipated savings by almost a half.

Table 16: End-use energy savings in the public sector up to and including 2013

Measure	Name of measure	Savings achieved up to 2013 [GWh]	Target savings up to 2013 [GWh]
J.1	Green public procurement	/	/
J.2	Financial incentives for the energy-efficient renovation and sustainable construction of buildings in the public sector	148.8	45.1
J.3	Introducing an energy management system in the public sector	/	55.5
J.4	Financial incentives for efficient electricity consumption in the public sector	34.5	21.8
Total savings in end-use energy consumption in the public sector		183.3	122.3

7.1. Green public procurement (Measure J.1)

Energy efficiency is economically a very important segment of green public procurement in terms of both the volume of contracts and the energy savings made. The decree governing this field⁵⁰ was adopted in 2011. It envisages the adding of new products and services. At the end of 2014 the decree was amended to incorporate requirements for green public procurement for drying machines, vacuum cleaners, electric bulbs and lamps. Despite these amendments the decree still does not cover all the originally envisaged products and services, so additional amendments will be required in 2016.

⁵⁰ Decree on Green Public Procurement (Official Gazette of the Republic of Slovenia, No [102/2011](#), [18/2012](#), [24/2012](#), [64/2012](#), [2/2013](#) and [89/2014](#)).

7.2. Financial incentives for energy-efficient renovation and sustainable construction of buildings in the public sector (measure J.2)

In 2013 most of the financial incentives for the energy-efficient renovation and sustainable construction of buildings in the public sector were again available as part of the ‘Sustainable energy’ development priority within the Operational Programme for Environmental and Transport Infrastructure Development (OP ROPI) 2007 - 2013. Six tenders⁵¹ for the allocation of grants from the Cohesion Fund were published: one each in 2010 and 2013 and two each in 2011 and 2012. As part of the tenders published by the end of 2014, a total of 249 projects were carried out for the energy renovation of public buildings, accounting for EUR 123.2 million in grants and almost EUR 160 million in investments. The annual end-use energy savings were estimated at 125.8 GWh of energy or 183.4 under the ESD (Table 17) and 36.5 kt of CO₂. Of this a total of 77.6 GWh in savings were achieved in 2013, or 124.4 GWh under the ESD, and 34.3 GWh or 38.3 GWh under the ESD in 2014. The leverage of projects co-financed from the Cohesion Fund is relatively high, and in the 2012 - 2014 period for each 1 euro invested, 77 euro cents were required on average in subsidy.

An Eco Fund tender for EEU subsidies for municipalities⁵² was published in 2012 under which in 2013 and 2014 applicants received grants of EUR 3.2 million for EUR 17 million in investments. This resulted in annual end-use energy savings of 2.6 GWh and reductions in CO₂ emissions of 0.6 kt (Table 17). Since these are only savings in heat, the savings under the ESD amount to 2.6 GWh.

In order to carry out various EEU projects, in the 2012 - 2014 period investors in the public sector could also obtain grants under the large liable entities programme. In 2013 these projects are estimated to have achieved a reduction in heat consumption of 2.1 GWh and in CO₂ emissions of 0.7 kt. Data on the effects of the large liable entities programme in 2014 are not yet available.

The data that forms the basis for the calculation of energy savings relate, in the Cohesion Fund, to the contracts signed, and in the Eco Fund and large liable entities programme to the projects implemented. The figures on end-use energy savings and reductions in CO₂ emissions are taken from the figures stated by project applicants.⁵³

The financial incentives for energy efficient renovation and sustainable construction of public sector buildings brought about reduced final energy consumption of 80.5 GWh in 2013 (or 127.4 GWh under the ESD). The reduction in CO₂ emissions is estimated at 25 kt per year. Data are not yet available for 2013 and 2014 on the effects of low-interest Eco Fund loans, for which no sectoral distribution of recipients is known either. The savings achieved by projects supported by European Regional Development Fund resources have also not been factored into the calculation (data on these savings is not available).

Table 17: End-use energy savings resulting from financial incentives for energy-efficient renovation and sustainable construction of buildings in the public sector 2012 - 2014⁵⁴

[MWh]	2012	2013	2014	Total
Cohesion Fund				
End-use energy savings	13 974	77 577	34 279	125 830

⁵¹ Public tenders for buildings of legal entities of public law founded by the Republic of Slovenia and under the responsibility of the MZ which perform healthcare activities at the secondary and/or tertiary level, for public institutes in the areas of schooling and education founded by the Republic of Slovenia and under the responsibility of the MŠŠ, for retirement homes, for buildings owned by local communities (LS1), for public institutes in the areas of higher education and science and for primary schools, nursery schools, health centres and libraries owned by local communities (LS2). Under the LS2 tender, grants could only be obtained for the implementation of EEU measures on building envelopes (thermal insulation of the facade and loft space, replacement or installation of fittings). Under all the other tenders, grants could only be obtained for complete energy renovation, which, in addition to the implementation of EEU measures on the building envelope, also includes the implementation of EEU measures on energy systems and measures for the use of RES.

⁵² Public call 14SUB-VIS12: Financial incentive grants for the low-energy or passive construction or renovation of buildings owned by municipalities in which education and training activities are being carried out.

⁵³ The applicants have taken these figures from the expanded energy audits and from projects to implement the envisaged measures.

⁵⁴ In 2011 no savings were made through this measure.

End-use energy savings under the ESD	20 684	124 442	38 304	183 429
Eco Fund				
End-use energy savings (including under the ESD)	726	845	1 786	3 357
Large liable entities programme				
End-use energy savings (including under the ESD)	0	2 070	n/a	2 070
Total				
End-use energy savings	14 700	80 493	36 065	131 258
End-use energy savings under the ESD	21 410	127 357	40 090	188 857

7.3. Introducing an energy management system in the public sector (Measure J.3)

The measure of introducing an energy management system in the public sector was aimed at the implementation of several key activities, from the introduction of an energy management system in all ministries and urban municipalities by 2015 and mandatory energy accounting for all buildings with a useful floor area of over 500 m² to the obligation to conduct energy manager tasks within public sector organisations and the upgrading of the energy audit methodology so as to support the preparation of tenders for the contractual lowering of energy costs (energy performance contracting). The measure was partly implemented again in 2013, most actively in the introduction of energy accounting and energy management in local self-governing communities, which lies within the remit of local energy agencies. The data required to determine end-use energy savings through the introduction of an energy management system in the public sector is not available.

7.4. Financial incentives for efficient electricity consumption in the public sector (Measure J.4)

In the area of efficient electricity consumption in the public sector, a public call for the co-financing of operations for the energy-efficient renovation of street lighting for the 2011 - 2013 period was issued in 2011 within the OP ROPI. Under this call, 22 contracts were signed and EUR 9.6 million in investments were made with the support of EUR 2.8 million in grants. A total of 20 projects were implemented in 2013. These served to achieve reductions in electricity consumption of 10.7 GWh, or 26.7 GWh under the ESD, per year (Table 18). CO₂ emissions fell by 5.34 kt/year.

Public sector investors were also able to receive grants under the large liable entities programme for the implementation of measures to reduce electricity consumption. In 2013 these incentives are estimated to have achieved a reduction in electricity consumption of 1.4 GWh or 3.5 GWh under the ESD. The figures on the effects of this programme for 2014 are not yet available. Data are not yet available for 2013 and 2014 on the effects of low-interest Eco Fund loans, for which no sectoral distribution of recipients is known either.

Table 18: Energy savings resulting from financial incentives for efficient electricity consumption in the public sector 2012 - 2014⁵⁵

[MWh]	2012	2013	2014	Total
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⁵⁵ In 2011 no savings were made through this measure.

Cohesion Fund				
Electricity savings	1 746	10 684	0	12 430
Electricity savings under the ESD	4 366	26 710	0	31 076
Large liable entities programme				
Electricity savings	0	1 394	n/a	1 394
Electricity savings under the ESD	0	3 486	n/a	3 486
Total				
Electricity savings	1 746	12 078	n/a	13 825
Electricity savings under the ESD	4 366	30 196	n/a	34 562

8. END-USE ENERGY SAVINGS THROUGH MULTI-SECTORAL MEASURES

Multi-sectoral measures to improve energy efficiency have an effect on the level of at least two sectors. Their activities target broad consumption (household, service and public sectors) and industry, but do not cover the transport sector. The implementation of three measures is envisaged: regulations on the energy performance of buildings (Measure V.1), the energy labelling of household and other appliances and the minimum requirements (Measure V.2) and the support scheme for electricity generated from RES and CHP (Measure V.3). For all three measures, the end-use energy savings are determined on the basis of the available BU data.

Under the ESD methodology, the total end-use energy savings resulting from the implementation of multi-sectoral measures and achieved up to 2013 amount to 955.4 GWh (Table 19). The savings achieved up to 2012 (630.4 GWh)^{56 57} and those achieved in 2013 (324.8 GWh) are factored into the calculation of the savings. Given the target cumulative value of the end-use energy savings up to 2016, i.e. 1 240 GWh, or 782.8 GWh up to 2013, this means that the energy savings resulting from the implementation of multi-sectoral measures achieved up to 2013 exceeded those planned by 22 %, primarily owing to the support scheme.

Table 19: End-use energy savings through multi-sectoral measures up to and including 2013

Measure	Name of measure	Savings achieved up to 2013 ⁵⁷ [GWh]	Target savings up to 2013 [GWh]
V.1	Regulations on the energy performance of buildings	170.0	184.8
V.2	Energy labelling of household appliances and other devices, and the minimum requirements	245.3	288.5
V.3	Support scheme for electricity generated from RES and CHP	539.9	309.5
Total end-use energy savings through multi-sectoral measures		955.2	782.8

8.1. Regulations on the energy performance of buildings (Measure V.1)

The new Rules on the Energy Performance of Buildings (PURES),⁵⁸ adopted in 2010, had the greatest impact on reducing final energy consumption as a result of the implementation of Measure V.1 once again in 2013. The savings resulting from the implementation of PURES in relation to new-builds in 2013 were estimated at 17.3 GWh. Taking account of the savings up to 2012, which amounted to 152.9 GWh,⁵⁹ the total end-use energy savings achieved up to 2013 and resulting from the implementation of buildings energy performance regulations amounted to 170 GWh.

⁵⁶ Savings differ somewhat from the savings set out in the report on achieving savings up to 2012, which amount to 636.6 GWh, which is a consequence of the corrected estimate of savings achieved in 2011 and 2012.

⁵⁷ The savings achieved up to 2012 are calculated for Measures V.1 and V.2 as the sum of the savings up to 2010 and the savings achieved in 2011 and 2012.

⁵⁸ Official Gazette of the Republic of Slovenia, No 52/2010, PURES-2.

⁵⁹ Savings differ somewhat from the savings set out in the report on achieving savings up to 2012, which amount to 159.5 GWh, which is a consequence of the corrected estimate of savings achieved in 2011 and 2012.

8.2. Energy labelling of household appliances and other devices, and the minimum requirements (Measure V.2)

The energy labelling of products intended for household use continues to constitute one of the main measures to reduce electricity consumption in households, as the energy-efficiency class has become an important criterion in the purchase of new appliances. Appliances of the A+++ class came onto the market for the first time in 2011. Sales of these appliances have been growing year on year. According to figures from GfK Slovenija, a total of 177 238 new household appliances were purchased in 2013; of these, 61.4 % were washing machines and refrigerators, the remainder were freezers, dishwashers and drying machines. Reductions in electricity consumption resulting from the use of new household appliances in 2013 is estimated at 12.8 GWh (Table 20) and reductions in CO₂ emissions at 6.5 kt. The calculation of energy savings took into account the proportions of new appliances that replaced old appliances. These proportions depend on the type of appliance, and change from year to year. They are highest for freezers (99–100 %), and lowest for dryers (39–58 %).

End-use energy savings under the ESD amounted to 32.0 GWh in 2013, using a factor of 2.5 for electricity. Relative to savings in 2012, which amounted to 213.4 GWh, total end-use energy savings under the ESD resulting from the purchase of energy-efficient household appliances up to 2013 are estimated at 245.4 GWh. Figures for the purchase of household appliances in 2014 are not yet available.

Table 20: Number of household appliances bought in 2011 - 2013, and the effects of replacing old with new appliances

Type of household appliance	2011		2012		2013		Total	
	Number of newly purchased appliances	Energy savings [GWh/year]	Number of newly purchased appliances	Energy savings [GWh/year]	Number of newly purchased appliances	Energy savings [GWh/year]	Number of newly purchased appliances	Energy savings G Wh/year
Refrigerators	51 916	3.7	52 082	4.1	49 525	3.5	153 523	11.3
Freezers	23 587	4.7	23 140	4.6	23 158	4.5	69 885	13.9
Washing machines	29 495	0.8	29 080	0.8	30 087	0.9	88 663	2.4
Drying machines	57 904	3.3	58 579	2.9	59 238	3.2	175 721	9.4
Dishwashing machines	13 133	0.4	13 740	0.5	15 230	0.7	42 104	1.6
Total	179 034	12.9	176 621	12.9	177 238	12.8	532 893	38.6
End-use energy savings under the ESD		32.2		32.1		32.0		96.4

In addition to refrigerators, freezers and washing, drying and dishwashing machines, energy labelling is required for several other household appliances, but owing to a lack of data, the savings resulting from the purchase of these appliances and equipment have not been taken into account in the savings calculation.

8.3. Support scheme for electricity generated from RES and CHP (Measure V.3)

The new support scheme for electricity generated from RES and high-efficiency CHP was introduced in 2009 and replaced the system of incentives introduced in 2002 (the old scheme), which expired at the end of 2011. The operation and organisational structure of the scheme is regulated by two decrees: Decree on

Support for Electricity Generated from Renewable Energy Sources⁶⁰ and the Decree on Support for Electricity Produced from High-Efficiency Cogeneration of Heat and Power.⁶¹ Other implementing regulations also regulated the area, particularly with regard to the competencies and tasks of the institutions charged with operating the scheme. The legal foundation for the scheme is provided by the Energy Act (EZ-1)⁶², which principally in order to control costs re-establishes the overhaul of the support scheme for the generation of electricity from RES and CHP.

Under the Commission's interpretation, the framework of the ESD only includes diffuse electricity generation facilities that are located at the end-use energy consumer, and that reduce the consumer's take-off of electricity, as energy efficiency measures. With due regard to these criteria, the following types of electricity-generating installations were taken into account when calculating the savings:

- solar installations on buildings up to 1 000 kW (Categories SE11⁶³ and SE12);
- wind-power installations of up to 50 kW (Category VE01);
- installations for the high-efficiency cogeneration of heat and power (CHP) in industry and broad consumption (Categories SF and SL).

The calculation of energy savings resulting from operation of the support scheme for 2013 and 2014 is based on the values of the electricity generated. A factor of 2.5 was used to determine the end-use energy savings under the ESD for solar and wind-power installations. For CHP units, the primary energy savings factors were used per individual installation. Total end-use energy savings under the ESD resulting from the operation of installations included in the support scheme were estimated at 539.8 GWh in 2013 and 621.2 GWh in 2014. Savings resulting from the operation of solar and wind-power installations accounted for 92.3 % of the total savings made in 2013. In 2014 that share was a little lower, at 88.3 %, which is primarily a result of the greater number of entries into the scheme for new and smaller natural gas-powered CHP units, especially in services, but also in industry.

⁶⁰ Official Gazette of the Republic of Slovenia, No [37/2009](#), [53/2009](#), [68/2009](#), [76/2009](#), [17/2010](#), [94/2010](#), [43/2011](#), [105/2011](#), [43/2012](#), [90/2012](#) and [17/2014](#)- EZ-1

⁶¹ Official Gazette of the Republic of Slovenia, No [37/2009](#), [53/2009](#), [68/2009](#), [76/2009](#), [17/2010](#), [81/2010](#) and [17/2014](#)- EZ-1

⁶² Official Gazette of the Republic of Slovenia, No [17/2014](#)

⁶³ The category codes are in line with the code table of resources for the new support system: <https://www.borzen.si/Portals/0/SL/CP/Sifrant%20virov%20nova%20shema.pdf>.

9. END-USE ENERGY SAVINGS THROUGH HORIZONTAL MEASURES

Horizontal measures to raise energy efficiency have an effect at the level of all sectors: in broad consumption (household, service and public sectors), industry and transport. The implementation of four horizontal measures has been envisaged: Energy performance contracting (Measure H.1), Environmental tax for polluting the air with CO₂ (Measure H.2), Information and awareness-raising activities (Measure H.3) and Education and training (Measure H.4). The scheme of exemption from payment of the CO₂ tax for the implementation of measures to reduce GHG emissions was not implemented in 2013 and 2014. The other three measures were implemented at least in part, and in a similar scope to the 2011 - 2012 period; however, measurement of the effects in the form of the end-use energy savings achieved was not envisaged.

9.1. Energy performance contracting (Measure H.1)

In the 2012 - 2014 period the greatest contribution to the development of energy performance contracting came from the large liable entities programme, under which it was possible to obtain stimulus grants for such projects. The share of contract-based energy saving consequently rose from 10 to 40 %, and there was also growth in the number of such projects from two to three a year up to 2012 to 15 projects a year in 2013.⁶⁴ Nevertheless the energy performance contracting market remains relatively poorly developed, with only a number of domestic providers present.⁶⁵ An important step that should spur the further development of energy performance contracting in Slovenia was the drafting of the Guidelines for implementing measures to improve energy efficiency in public sector buildings under the energy performance contracting principle,⁶⁶ which sets out the explanations, instructions and recommendations for implementing energy performance contracting projects in the public sector. The guidelines were published in December 2014.

9.2. Information and awareness-raising activities (Measure H.3)

The preparation and implementation of long-term communications programmes for households, the public sector and SMEs were envisaged as part of Measure H.3. These programmes were not in fact prepared, but pursuant to Article 351 of the EZ-1 the Support Centre is entrusted with designing and implementing information, awareness-raising and training programmes for various target groups regarding the benefits and practicalities of developing and using EEU and RES technologies. To this end Borzen has already put in place the [Portal Trajnostna energija \(Sustainable Energy Portal\)](#). The provision of information is continuing via the ENSVET network of energy advice offices (Chapter 3.4), with information on EEU and use of RES measures continuing to be sent to consumers by other entities on the energy services market, such as energy companies (e.g. the [Energy Solutions Centre](#), the [Positive Energy](#) EEU and RES website, including the [PORABImanj](#) web application). Eco Fund, local energy agencies and other providers. These activities are also currently being implemented within large liable entities programmes for final customer energy saving schemes – 63 contracts were signed for the provision of awareness-raising and information programmes in 2013, with almost EUR 428 000 in grants being earmarked for this.

⁶⁴ IEE project TRANSPARENSE, Country Report on Identified Barriers and Success Factors for EPC Project Implementation - Slovenia: http://www.transparense.eu/tmce/D2-04_CountryReportonBarriersSuccessFactorsSI_JSI_2013-11-11_v02.pdf

⁶⁵ There is no official list of available providers and their qualifications, although an overview of the situation on the energy performance contracting market has been compiled as part of the Intelligent Energy – Europe projects. The latest information is available on the IEE TRANSPARENSE project website <http://www.transparense.eu/si/trg-energetskega-pogodbenstva/podietia-za-energetske-storitve>.

⁶⁶ Ministry of Infrastructure: http://www.energetika-portal.si/fileadmin/dokumenti/podrocja/energetika/iavne_stavbe/smernice_za_energetsko_pogodbenstvo-web.pdf.

9.3. Education and training (Measure H.4)

In formal education settings, EEU issues are also addressed in various education programmes (e.g. the 'Energy' course at the Faculty of Energy at the University of Maribor, the [Eco School](#) programme for nursery, primary and secondary schools, optional subjects in environmental protection, which include energy efficiency, in grammar schools and primary schools, etc.). The 2011 White Paper on Education in the Republic of Slovenia⁶⁷ also mentions sustainable development, part of which includes energy efficiency, as one of the strategic challenges and policies of the national education system.

Since 2012 Slovenia has been providing training to those drawing up energy performance certificates for buildings. This training includes four days of lectures and the individual production and presentation of two certificates (calculated and metered). By the end of 2014 the Energy Ministry had issued 268 licences to independent experts able to provide energy certificates.⁶⁸ Training programmes for independent specialists conducting inspections of air-conditioning or heating systems did not yet get under way in 2013 and 2014.

Education and training has taken place or is still ongoing within various projects and programmes, e.g. '[European Energy Manager – EUREM](#)' (annually), training for green professions in the construction sector as part of the IEE⁶⁹ project [BUILD UP SKILLS Slovenija \(2011 - 2013\)](#), and the training of engineers and architects in the fields of sustainable construction, energy efficiency and green public procurement at the Chamber of Engineers of Slovenia, the Chamber of Architecture and Environmental Planning and the Slovenian Association for Sustainable Construction – GBC Slovenija.

http://www.belakniiga2011.si/pdf/bela_knjiga_2011.pdf

<http://energetskaizkaznica.si/seznam-izvajalcev/>

Intelligent Energy Europe Programme

10. ANNEX 1 - Article 24 (1) and Annex XIV Energy Efficiency Directive 2012/27/EU