

## Public funding for energy efficiency in the EU

Monitor 2016



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# ECOFYS



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# ECOFYS



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# 1 Introduction

## Background and objective

The Energy Efficiency Directive (EED), adopted in 2012, intends to trigger new energy efficiency policies and financial support mechanisms across the EU to reduce energy consumption in several economic sectors. It is important to monitor progress of the implementation of the EED, to be able to assess if the EU is on track to reach the 20% energy efficiency target for 2020, and to assess whether additional policies are needed.

To monitor Member State activity and progress towards the 2020 energy efficiency target and to identify increase, stagnation or even set-backs in government support, it is necessary to keep track of dedicated public funding for energy efficiency. Public funding for energy efficiency can be seen as one indicator of how EU Member States implement the EED.

Public funding takes a supporting role to trigger and leverage private capital investments in energy efficiency projects to increase take up and impact of energy efficiency policies. Public funding can be implemented as subsidies, grants, loan schemes or fiscal schemes.

The European Climate Foundation asked Ecofys to provide insight into trends in public funding for energy efficiency in the EU-28 Member States. This report presents the outcome of this research. As part of the study a monitoring tool has been developed to facilitate tracking of energy efficiency public funding in future years.

## Methodology and scope of the study

Data-gathering for this study was based on the analysis of the 2014 National Energy Efficiency Action plans (NEEAPs) and 2015 Annual Reports in accordance with Article 24(1) of Directive 2012/27/EU submitted by Member States to the European Commission and published on the Commission website<sup>1</sup>.

The EU-28 NEEAPs and Annual Reports were scanned for information about policy instruments providing public funding for energy efficiency. Information was classified and stored in a structured database. Public funding instruments were classified according to the targeted sector (energy supply, buildings, industry, transport, agriculture, overarching) and type of policy instrument used (grants and subsidies, loans, fiscal measures). On the basis of the information gathered from the NEEAPs and Annual Reports, factsheets describing the programmes identified, their classification, as well as the level of funding were prepared for each EU Member State.

The NEEAPs and Annual Reports do not always have the latest funding information. Nor do they cover all schemes or provide all the data required to monitor public funding to energy efficiency. In many

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<sup>1</sup> <https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive/national-energy-efficiency-action-plans>

cases the reports are also not fully clear e.g. on the specific timeline for a programme, the exact sectors targeted, or the actual amount of funds available. For this reason, information obtained from the desk research was complemented, corrected and refined to the extent possible by means of a survey with national experts.

The research team contacted national experts<sup>2</sup> from the network of the European Climate Foundation, covering 24 EU Member States. Twenty-one national experts replied to the survey contributing to complete the information obtained from the NEEAPs and Annual Reports. Quantitative information about public funding for energy efficiency could be found – either from NEEAPs, Annual Reports, feedback from national experts or other public sources – for 22 Member States<sup>3</sup>, which represent around 96% of the population of the EU and 94% of its GDP.

A total of 223 instruments providing public funding for energy efficiency over the period from 2012 to 2014 were identified. Quantitative information could be found for 163 of them.

The present study covers a period of three years, from 2012 - when the EED was adopted - until 2014.

## Data availability, assumptions and interpretation of results

The data obtained for this study is subject to large uncertainties and therefore should be interpreted carefully. Below we discuss the main sources of uncertainty, assumptions made and other considerations to be taken into account when interpreting the results of this study:

- In many cases available funding may be actually larger than identified by this study if policy instruments were only partially reported (e.g. with insufficient detail about funding available) or not reported at all in NEEAPs and/or Annual Reports. For this reason, results should be interpreted as low-end estimations of public funding available, as identified in the NEEAPs and Annual Reports.
- In several EU Member States, regional or local institutions provide and/or manage a sizeable part of the total funding for energy efficiency in the country. Since the main source of information for this study are NEEAPs or national Annual Reports to the European Commission, public funding provided or managed at regional or local level is only captured in this study to the extent that these funds were included in the abovementioned documents by national authorities.
- EU structural funds provide economic resources to finance energy efficiency measures in several EU Member States. EU funds dedicated to energy efficiency are included in this study to the extent that the actual energy efficiency programmes that they support were identified in NEEAPs, Annual Reports, or by the national experts contacted; however, a detailed analysis of the allocation of EU structural funds to energy efficiency in the EU fell outside the scope of this study.

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<sup>2</sup> Four EU countries could not be covered in the survey: Cyprus, Estonia, Lithuania and Luxembourg.

<sup>3</sup> No information on public funding could be obtained for Denmark and Sweden.

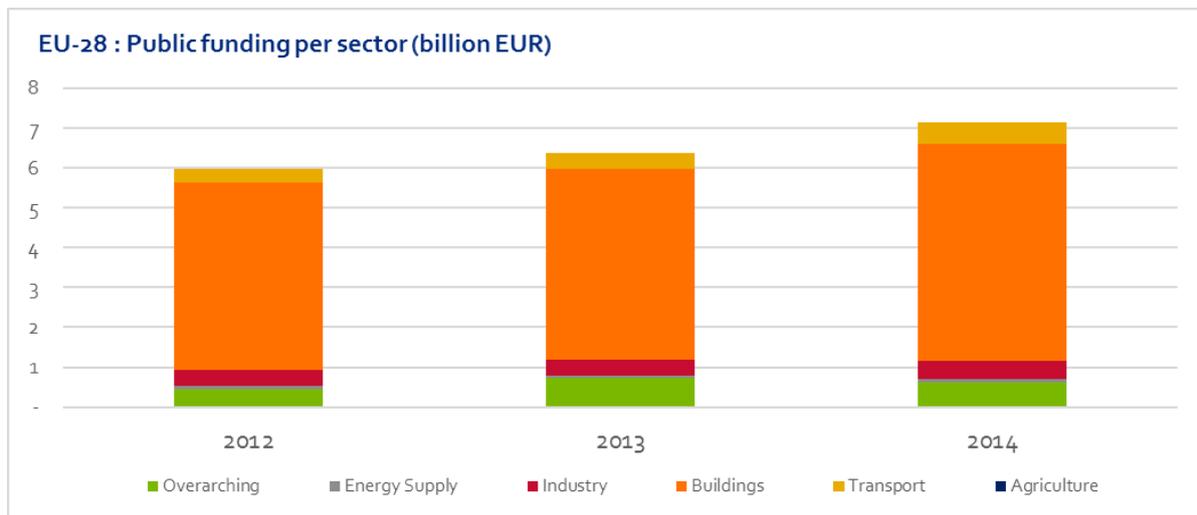
- Information about public funding for a particular support instrument is usually available only as lump sums for a whole programme duration. In these cases, the total funding available in each year (2012, 2013 and 2014) has been estimated by distributing proportionally and homogeneously the total available amount of the programme along its duration.
- Funding for energy efficiency is often embedded in programmes with broader objectives, e.g. climate mitigation objectives. For those programmes targeting simultaneously renewable energy and energy efficiency projects, the assumption was made that 50% of the available funds could be allocated to energy efficiency.
- In some cases, Member States may report in their NEEAPs programmes for which the purpose of the funds or the energy efficiency benefit is unclear. An example of this are large investment programmes in e.g. road infrastructure. Those programmes for which a clear link between investment and improved energy efficiency cannot be reasonably established have been excluded from our analysis.
- In most cases, the information available from NEEAPs or Annual Reports provides budgeted figures. These may or may not be actually realised over the duration of the programmes. Figures included in this report reflect available budgeted amounts, rather than realised investments.
- Finally, the amount of public funding available is one indicator of a country's commitment towards improving energy efficiency; however, public funding alone does not provide the full picture of the strength of a country's energy efficiency policy. Measures that do not require direct public funding e.g. energy efficiency obligations, energy taxation, can be very successful to deliver substantial savings. For this reason, strong conclusions about the level of commitment of specific Member States towards energy efficiency should only be taken on the basis of a wider set of indicators.

## 2 Overview of public funding for energy efficiency in the EU

### Public funding trends EU-wide

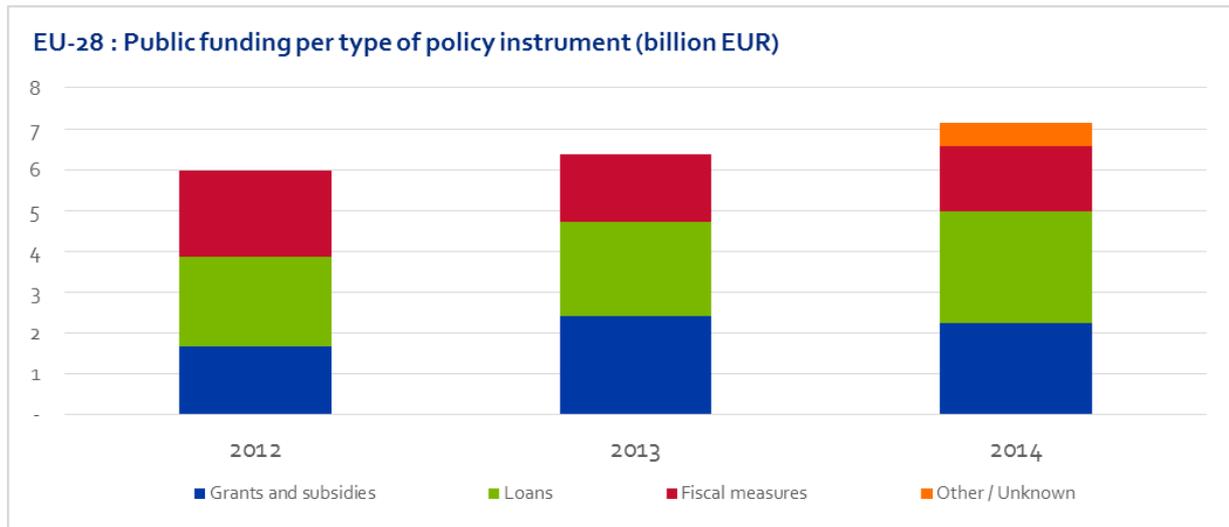
Total identified public funding for energy efficiency in the EU grew from just below €6 billion in 2012 - when the Energy Efficiency Directive (2012/27/EU) was approved - to about €7.1 billion in 2014.

Figure 1 below shows the breakdown of public funding available by targeted sector. Most identified funds went to the buildings sector (€5.4 billion in 2014), followed by transport (€535 million in 2014) and industry (€456 million in 2014). Identified overarching programmes – targeting cross-cutting efficiency measures – provided around €624 million of funding in 2014.



**Figure 1: EU-28 - Available public funding by targeted sector for the years 2012-2014**

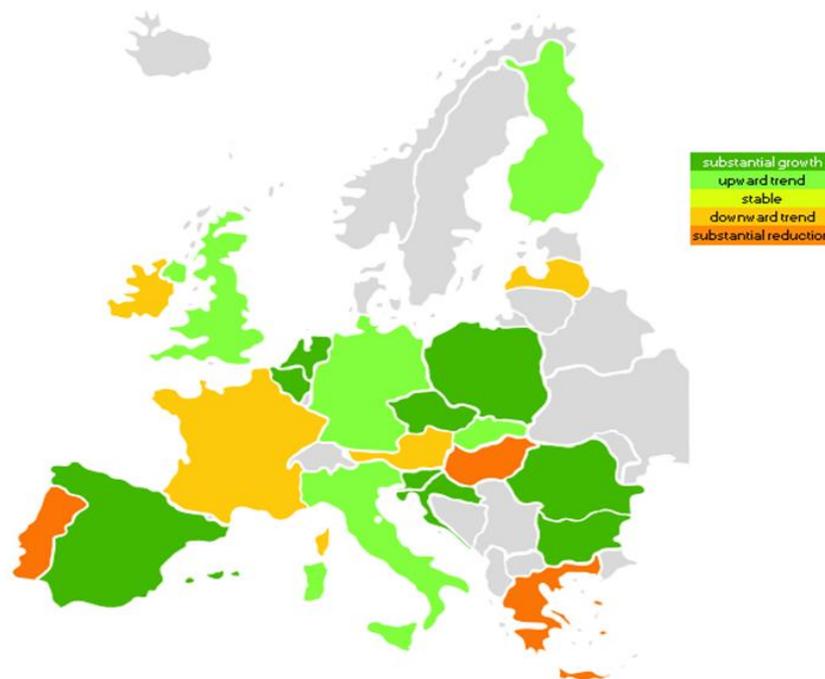
Figure 2 below shows the breakdown of public funding available by type of support instrument applied. Most funds were made available by means of loans (€2.7 billion in 2014), followed by grants and subsidies (€2.2 billion in 2014), and fiscal incentives (€1.6 billion in 2014).



**Figure 2: EU-28 - Available public funding per type of policy instrument applied**

## Public funding trends across Member States

When the EU trend is broken down and analysed<sup>4</sup> at Member State level (Figure 3), different degrees of growth in public funding for energy efficiency are observed for 14 Member States. Five Member States show an upward trend and for another 9 substantial growth in funding was observed. On the other hand, 5 Member States show a downward trend and for another 3 very substantial reductions are observed:

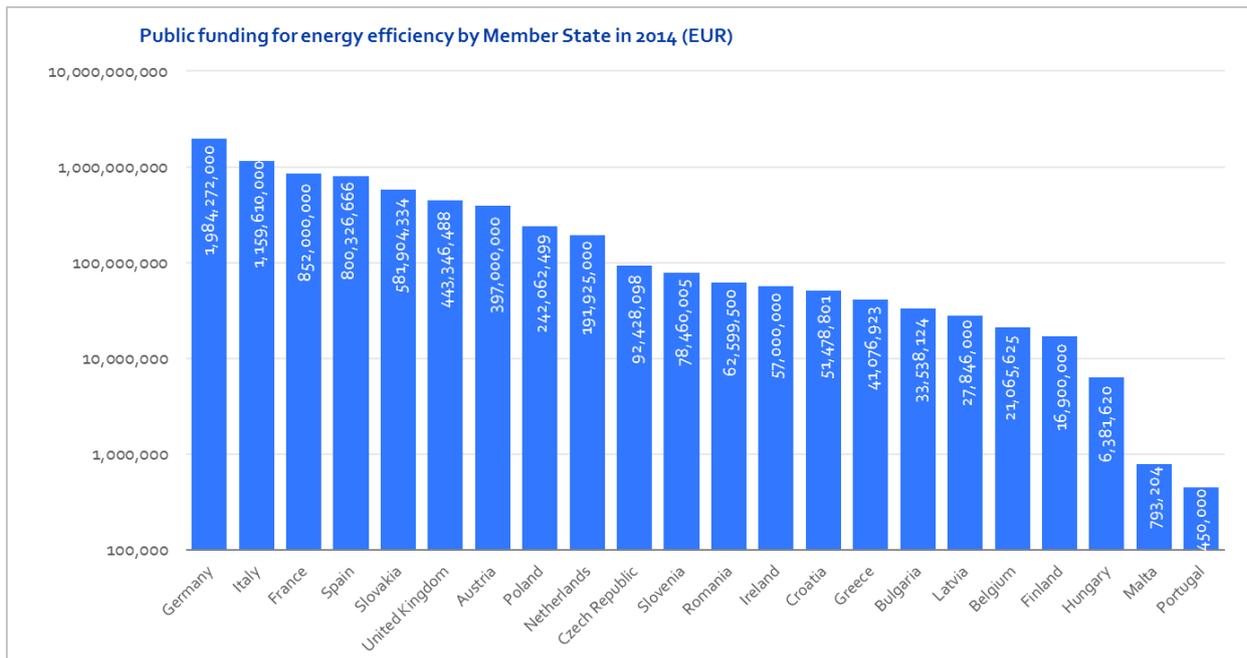


**Figure 3: EU-28 – Public funding growth trends by Member State over the period 2012-2014**

<sup>4</sup> Substantial growth (>50%); upward trend (>=15%); stable (>-15%; <15%); downward trend (<=-15%); substantial reduction (<=-50%)

In absolute terms, a EU-wide comparison of public funding dedicated to energy efficiency shows very large differences – of orders of magnitude - across Member States. Amounts of available funding range from a hundreds of thousands for some Member States to several billion Euro in others.

Figure 4 below shows<sup>5</sup> total amounts of identified public funding available per EU Member State in the year 2014.



**Figure 4: Overview of funding available for energy efficiency per EU Member State in 2014 (EUR)**

<sup>5</sup> Vertical axis of the graph is presented in logarithmic scale.

Table 1 below provides an overview for each Member State, including the total funding identified in the years 2012 and 2014, the funding per capita, as well as the growth rate observed over the period 2012 – 2014.

**Table 1 Overview of public funding by Member State over the period 2012-2014**

Member State	Identified funding in 2012 (EUR)	Identified funding in 2014 (EUR)	Funding per capita in 2014 (EUR/capita)	Growth over the period 2012 - 2014
Austria	519,900,000	397,000,000	46.7	-24%
Belgium	3,565,625	21,065,625	1.9	491%
Bulgaria	6,330,000	33,538,124	4.6	430%
Croatia	-	51,478,801	12.1	N/A
Cyprus	No info	No info	No info	No info
Czech Republic	-	92,428,098	8.8	N/A
Denmark	No info	No info	No info	No info
Estonia	No info	No info	No info	No info
Finland	11,700,000	16,900,000	3.1	44%
France	1,417,000,000	852,000,000	12.9	-40%
Germany	1,600,000,000	1,984,272,000	24.6	24%
Greece	150,823,372	41,076,923	3.8	-73%
Hungary	37,243,079	6,381,620	0.6	-83%
Ireland	71,320,000	57,000,000	12.4	-20%
Italy	870,500,000	1,159,610,000	19.1	33%
Latvia	35,026,000	27,846,000	13.9	-20%
Lithuania	No info	No info	No info	No info
Luxembourg	No info	No info	No info	No info
Malta	1,156,798	793,204	1.9	-31%
Netherlands	75,500,000	191,925,000	11.4	154%
Poland	131,011,229	242,062,499	6.4	85%
Portugal	3,500,000	450,000	0.0	-87%
Romania	26,408,000	62,599,500	3.1	137%
Slovakia	426,000,667	581,904,334	107.4	37%
Slovenia	25,573,333	78,460,005	38.1	207%
Spain	236,166,666	800,326,666	17.2	239%
Sweden	No info	No info	No info	No info
United Kingdom	328,396,849	443,346,488	6.9	35%

### 3 Conclusions

This study constitutes a first attempt to provide a comprehensive quantification of the public funding available to support energy efficiency in the EU after the implementation of the Energy Efficiency Directive in 2012.

The evolution of the total amount of public funding shows an upward trend at EU level during the period 2012-2014. When this trend is analysed at Member State level, increases in funding are observed in 14 countries and 8 countries show downward trends or very substantial reductions in public funding.

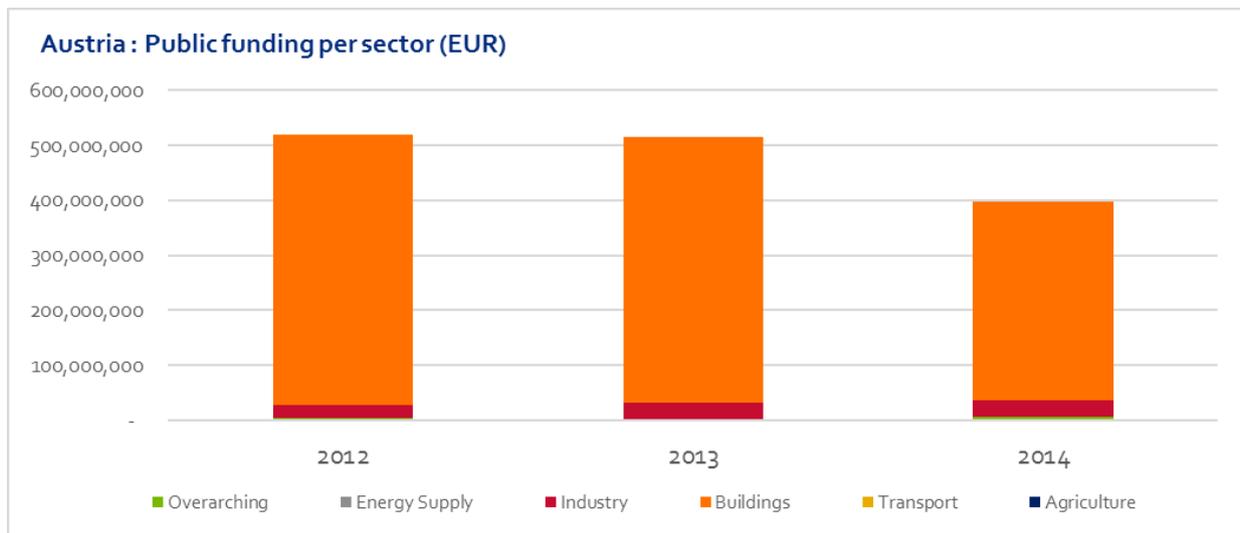
The data obtained for this study is subject to significant uncertainties. For this reason, the results of this analysis should be interpreted only as indicative – rather than conclusive - of a positive evolution of public funding for energy efficiency in the EU.

Further efforts need to be made in the near future to refine the dataset gathered under this study and monitor more closely the evolution of public funding in the EU. In future reports, information that was missing for this analysis can be incorporated to improve the accuracy of the figures and the level of assurance on the results.

In this regard it is critical to rely on high quality data provided by Member States. The information made available by national authorities in their NEEAPs and Annual Reports was in many cases insufficient to obtain a complete picture of the public funding available in the country. Reporting by national authorities could be improved if the disclosure of public funding commitments or expenditures was requested in a standardised format. This format should include at least the type of funding mechanism used (subsidies or grants, loans, fiscal measures), and the amounts committed or disbursed by programme and year.

## Appendix 1: Public funding by Member State

### Austria



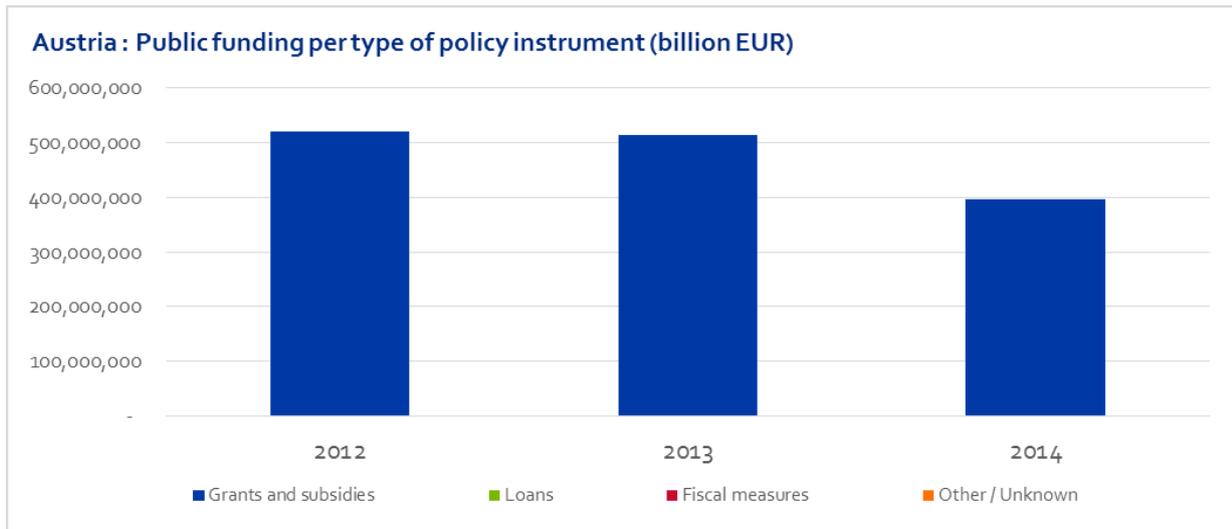
**Figure 5: Austria - Available public funding by sector for the years 2012-2014**

Four programmes were identified in Austria. The overall amount of identified public funding for energy efficiency was about €500 million in 2012 and 2013, decreasing to €400 million in 2014. Energy efficiency funding is directed mainly at the buildings sector. A much smaller share is directed towards industry. Programmes for energy efficiency in buildings have a long history in Austria due to the country's climatic conditions and are dating back to the 1990's. The drop in public spending on energy efficiency between 2013 and 2014 is due to the following two elements:

- A 23% decrease in subsidies for retrofitting of residential buildings. The amount of these subsidies is not capped. The reduction is linked to a decreasing number of applications since its peak in 2010;<sup>6</sup>
- A sharp decrease of the 'renovation cheque' for private homes and businesses from a spike in 2013.

The funding for the other two programmes, the subsidies for businesses and the climate fund, slightly increased from 2012 to 2014.

<sup>6</sup> See Umweltbundesamt, Maßnahmen im Gebäudesektor 2014

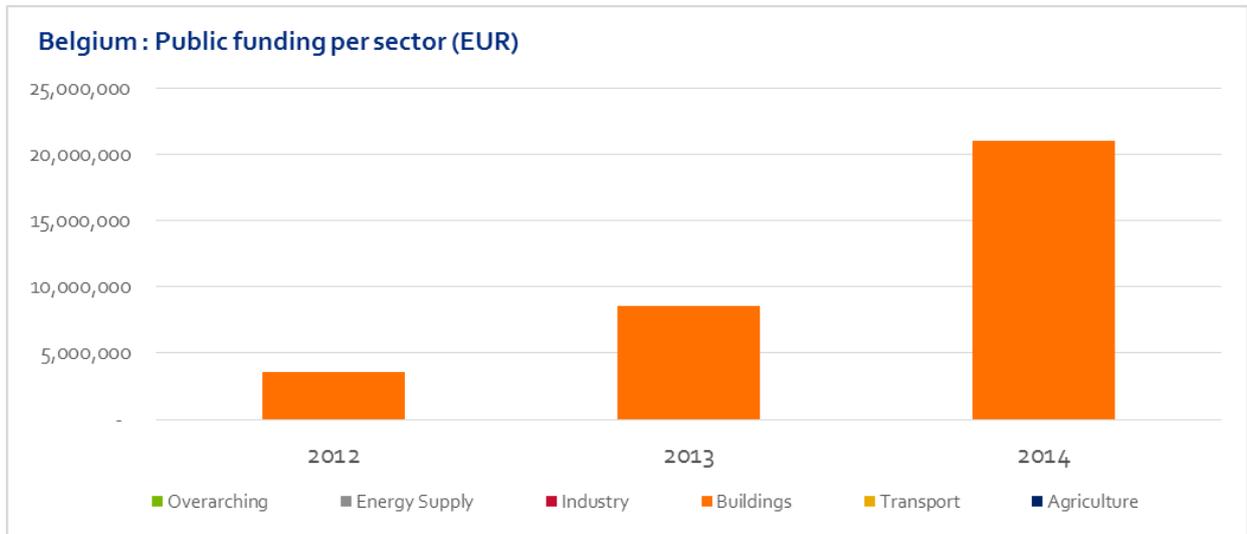


**Figure 6: Austria - Available public funding per type of policy instrument**

Grants and subsidies are the main policy instrument used to support energy efficiency in Austria. Identified funding comes from the federal and regional budgets. Municipal funding is also available, but there are no aggregated data about it.

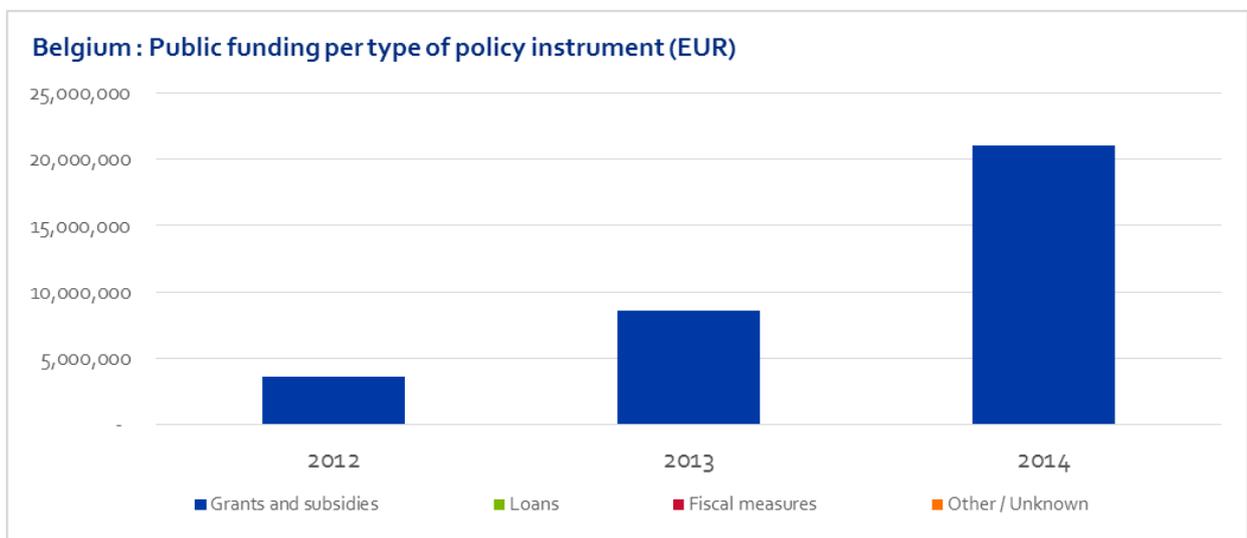
Quantitative data was provided by a national expert on the basis of official information from the Austrian Environmental Agency and from the Federal Ministry of Agriculture, Forestry, Environment and Water Management.

## Belgium



**Figure 7: Belgium - Available public funding by sector for the years 2012-2014**

In Belgium, four programmes providing funding for energy efficiency were identified. Three funding programmes were applicable for the Flanders region, while one covered the Brussels capital region. All identified programmes focused on the energy efficient renovation of the existing building stock. The programme in the Brussels region - the *energy bonus* scheme - provides funding also for the adoption of renewable energy technologies in buildings.

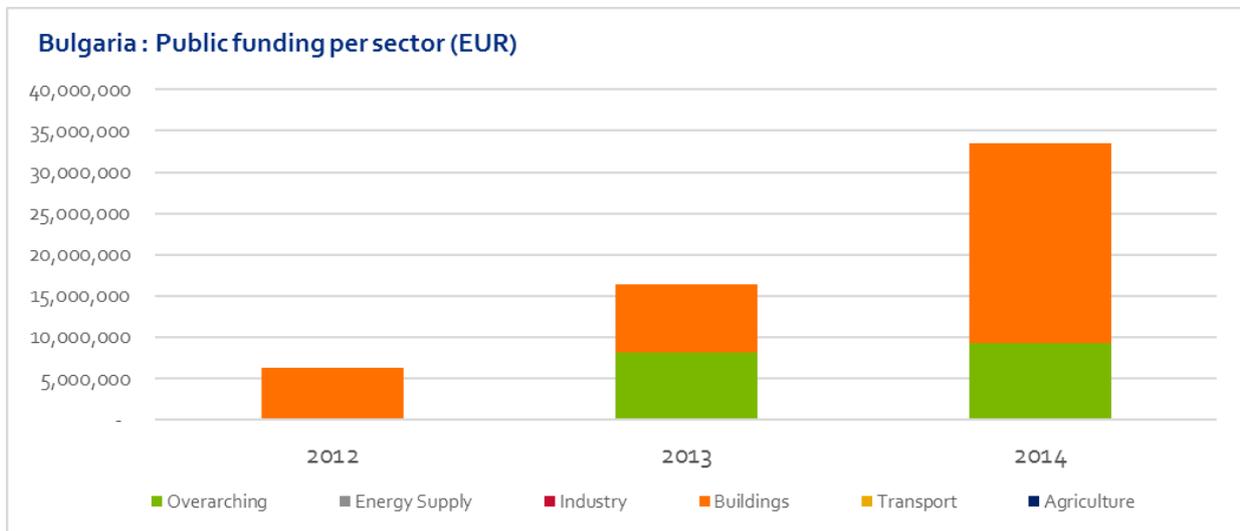


**Figure 8: Belgium - Available public funding per type of policy instrument.**

Grants and subsidies were the only mechanisms identified to channel public funds to energy efficiency projects in Belgium.

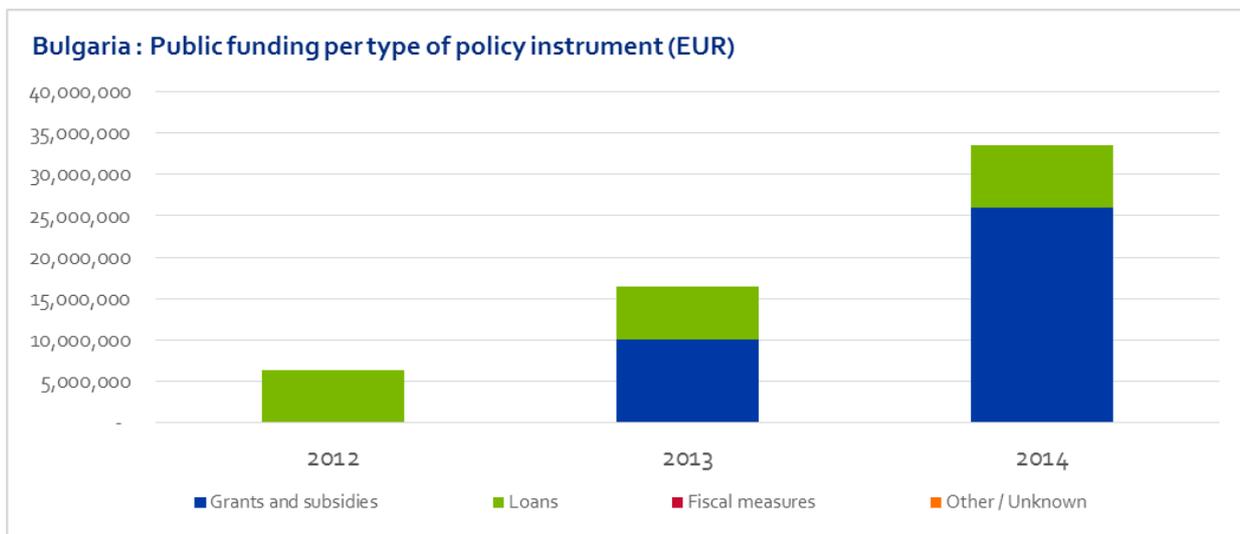
The Belgium NEEAP and Annual Report include limited data on the public budgets allocated to energy efficiency. The national expert contacted provided information to form a basis for allocation of identified total budgets of the schemes for the period 2012-2014 for the Flanders region.

## Bulgaria



**Figure 9: Bulgaria - Available public funding by sector for the years 2012-2014**

Ten funding programmes were identified supporting energy efficiency activities in Bulgaria. Data on the level of funding was available for 9 of them. The data shows a substantial increase in public funding from above €6 million in 2012 to €33 million in 2014. Figure 9 shows that the focus has been on the renovation of the existing building stock. There are also two overarching schemes – targeting multiple sectors - with significant allocated budgets in 2013 and 2014.



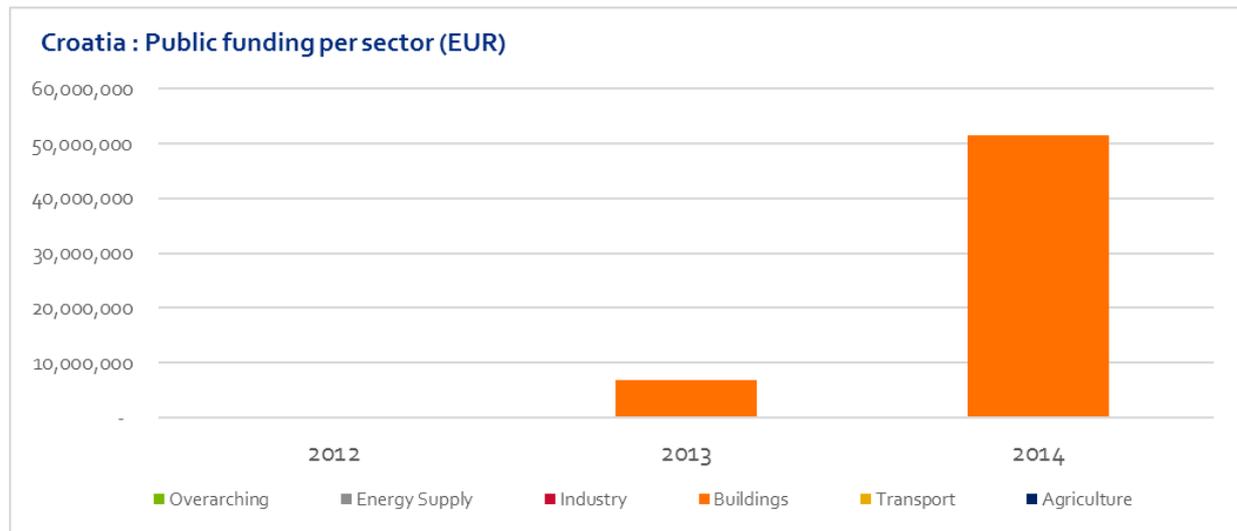
**Figure 10: Bulgaria - Available public funding per type of policy instrument**

Figure 10 shows that most available funding was allocated by means of grants and subsidies over the period 2012-2014. There is also a large soft loan scheme, *The Energy Efficiency Credit Line for Households*, which is a joint initiative of the Bulgarian Government, the EBRD and the Kozloduy

International Decommissioning Support Fund (KIDSF). The initiative provided loans to households and ran from 2005 to 2014.

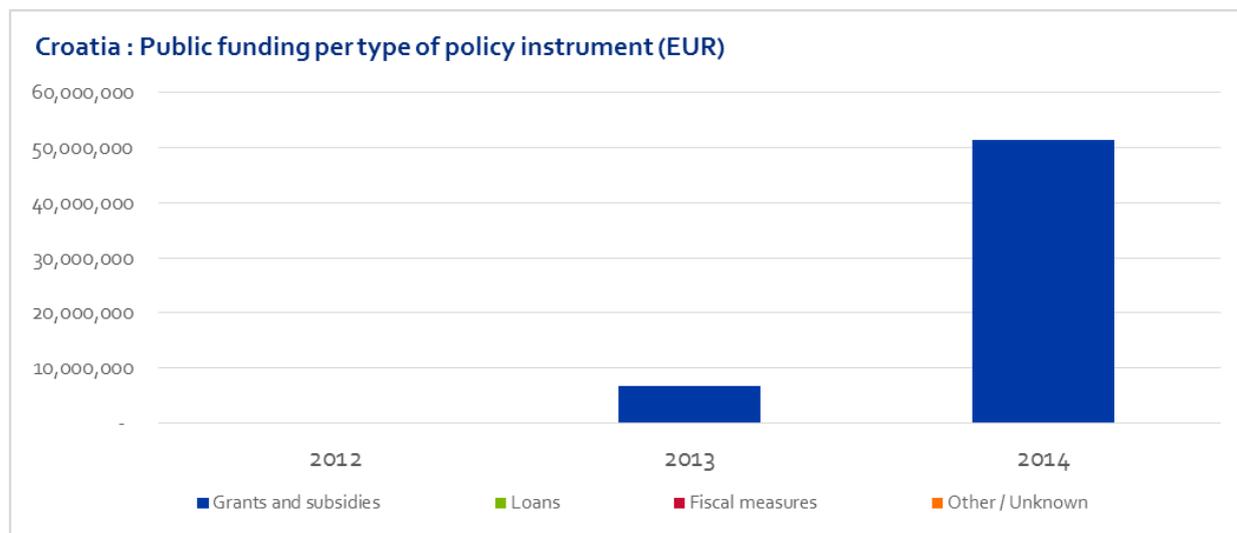
Data was obtained from the information available in the Bulgarian NEEAP and Annual Report and complemented with inputs from a national expert.

## Croatia



**Figure 11: Croatia - Available public funding by sector for the years 2012-2014**

Seven programmes were identified providing funding for energy efficiency activities in Croatia. Identified available public funding has increased significantly from no support in 2012 to more than €50 million in 2014. The data presented in the NEEAP includes funding mainly directed to the energy renovation of residential and non-residential buildings, efficient public lighting as well as one minor programme targeting efficiency in industry.

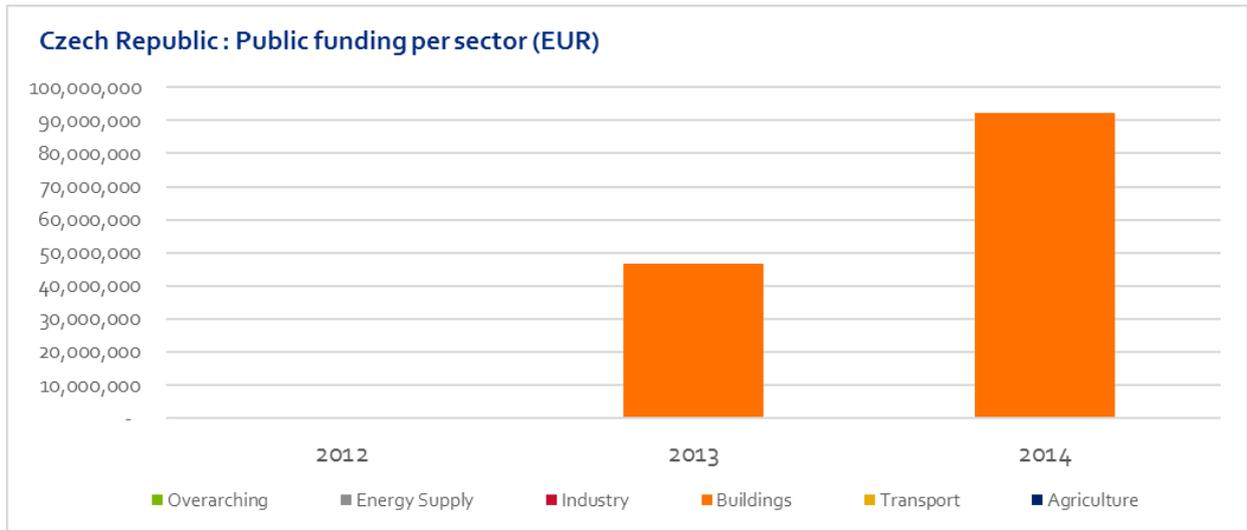


**Figure 12: Croatia - Available public funding per type of policy instrument.**

All available funding for energy efficiency activities in Croatia was provided as grants and subsidies.

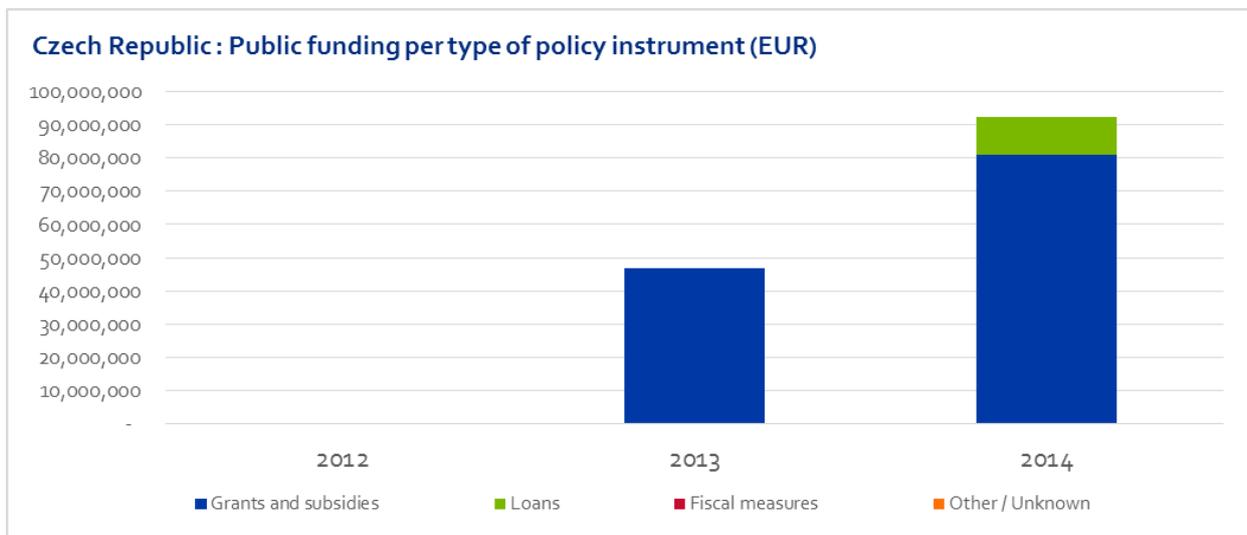
Quantitative funding data was obtained from the Croatian NEEAP and Annual Report and complemented with inputs from a national expert.

## Czech Republic



**Figure 13: Czech Republic - Available public funding by sector for the years 2012-2014**

Six programmes were identified providing funding for energy efficiency in the Czech Republic. Two programmes accounted for all funding available in 2013: The *New Green Savings Programme 2013* with a funding more than €36 million, and *Joint Boiler Replacement Promotion Scheme* with a funding close to €10 million. In 2014 the available funding increased considerably to over €92 million. In the period 2012-2014 all the available funding was allocated for the improvement of energy performance of single family and multi-family buildings.



**Figure 14: Czech Republic - Available public funding per type of policy instrument**

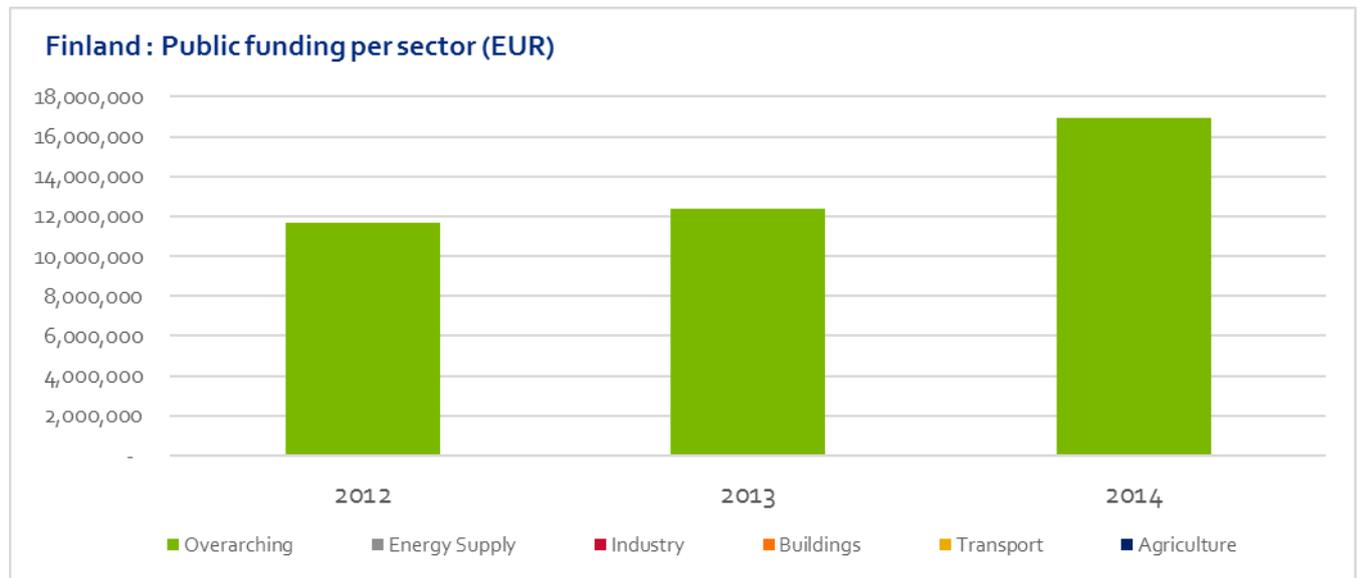
Grants and subsidies are the main instruments to support energy efficiency activities in Czech Republic. Long-term low-interest loans for the reconstruction and upgrading of multi-family buildings were also available in 2014 under the JESSICA framework.<sup>7</sup>

Data was retrieved from expected allocated budgets as reported in the NEEAP. A national expert provided information about additional schemes for which no information had been found in the NEEAP.

## Denmark

No data were found in the Danish NEEAP and latest Annual Report in accordance with Article 24(1) of Directive 2012/27/EU with regards to public funds for energy efficiency. Since the Danish Energy Efficiency Obligation scheme is expected to deliver 100% of the mandatory EED target, there was no obligation to provide information on public funding in the NEEAP.

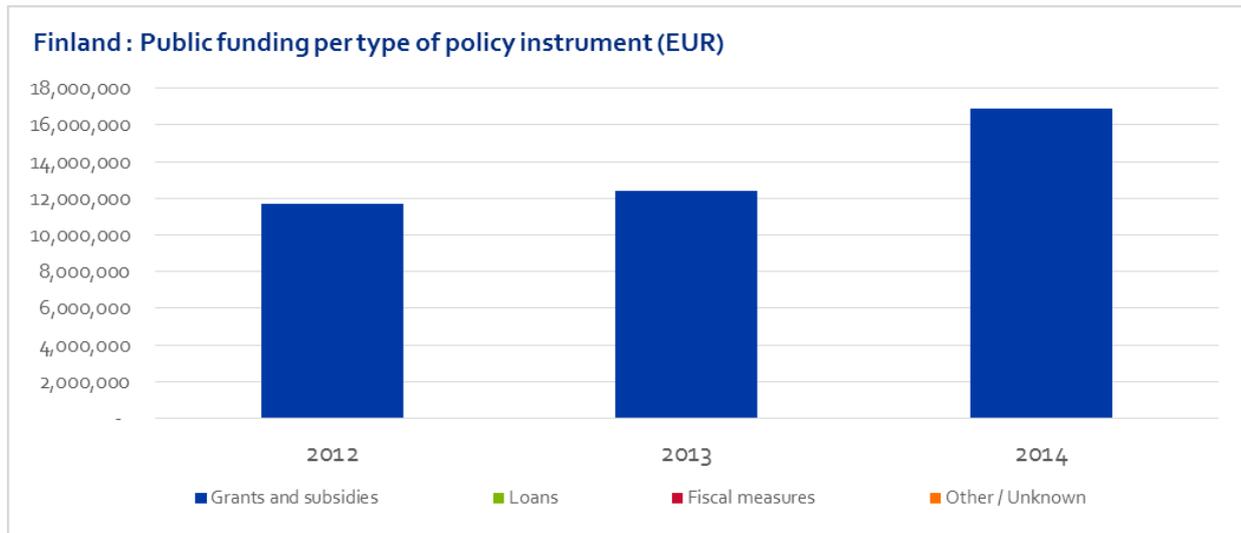
## Finland



**Figure 15: Finland - Available public funding by sector for the years 2012-2014**

Two programmes were identified as the source of public funding for energy efficiency activities in Finland. Both programmes are cross-sectoral. The overall amount of identified public funding was around €12 million in 2012 and 2013, increasing to €17 million in 2014.

<sup>7</sup> <http://www.eib.org/products/blending/jessica/background/index.htm>

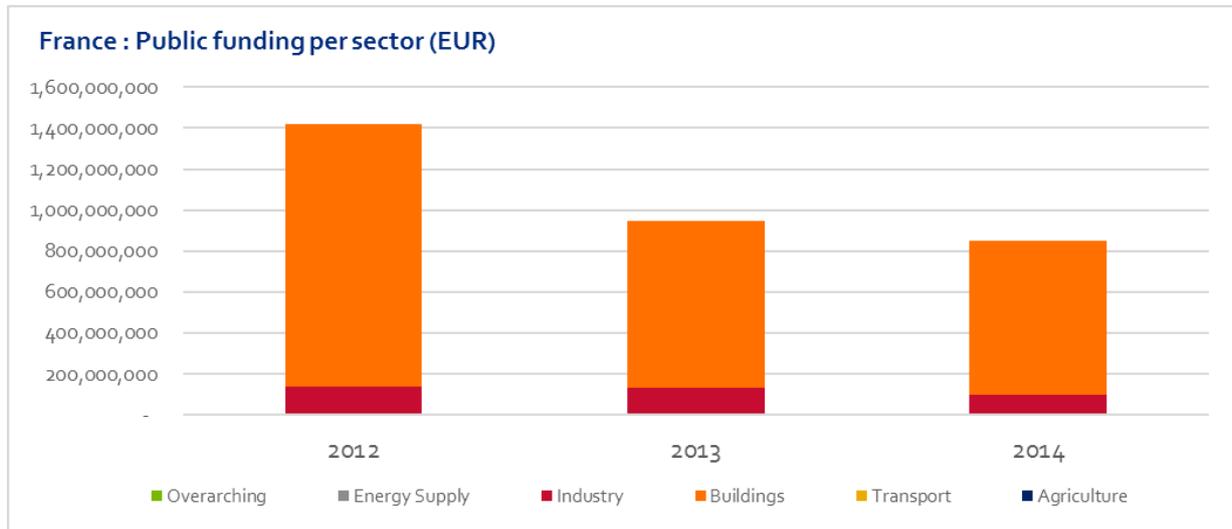


**Figure 16: Finland - Available public funding per type of policy instrument**

Subsidies were the only type of policy measures identified in Finland. The annual energy subsidy budget is divided into *subsidies towards energy audits* and *subsidies towards energy saving investments*. Subsidies towards energy audits have been available since 1992. The *subsidies for investments in energy efficiency* scheme launched in 2008 has had considerable impact on the number of energy efficiency projects. Both schemes aim at various sectors, therefore they are identified to be overarching funding schemes. Subsidies for conventional energy saving investments are only available to businesses that have signed an energy efficiency agreement, and the subsidies normally cover 20% of the investment costs. The subsidies are granted by the Energy Department of the Ministry of Employment and the Economy as well as 15 regional Centres for Economic Development, Transport and the Environment.

The NEEAP and the Annual Report included limited data on the level of available funding. Funding figures were provided by a national expert.

## France

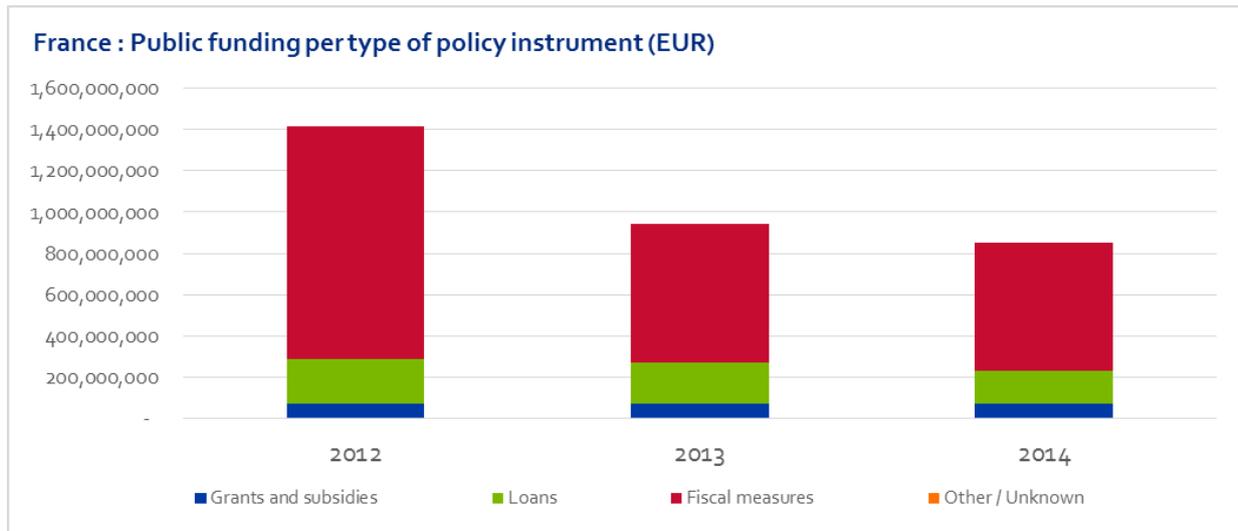


**Figure 17: France - Available public funding by sector for the years 2012-2014**

Six programmes were identified providing funding for energy efficiency in France. The overall amount of identified public funding for energy efficiency has decreased substantially from above €1.4 billion in 2012 to around €850 million in 2014. Energy efficiency funding is mostly directed at the buildings sector, and industry to a much smaller extent.

The decrease in spending in 2013 was mainly due to a large drop in the CIDD/CITE programme that gives tax exemptions to support homeowners' investments in energy efficiency. Funding dropped from over €1.1 billion in 2012 to less than 700 million in 2013 and 2014.

Funding for green loans for industries (*Prêts verts*) decreased from an average of €125 million per year in 2012, to €85 million per year in 2014. The interest-free loan programme for energy efficient buildings renovation (*Prêt à taux Zero, PTZ*) received slightly decreasing amounts of public funding over this period (€85 million in 2012 vs €70 million in 2014). Two smaller programmes providing soft loans to the industry retained a constant level of funding, of around €10 million per year in total.



**Figure 18: France - Available public funding per type of policy instrument**

Most public funding for energy efficiency in France is channelled through fiscal measures, although their overall weight decreased over the period 2012-2014, as a direct consequence of the decrease of funding from the tax exemption scheme for residential energy efficiency investments. Soft loans programmes also received a sizeable part of funds (around 20% in 2014), mainly for energy efficiency investments in residential buildings, as well as to the industry. Grants and subsidies accounted for about €70 million (below 10% of total funding) in 2014.

Data on funding in France could be gathered from different sources: The French NEEAP and Annual Report, impact assessments of the French government’s budget, documents from the Energy Agency (ADEME), as well as additional inputs from a national expert.

## Germany

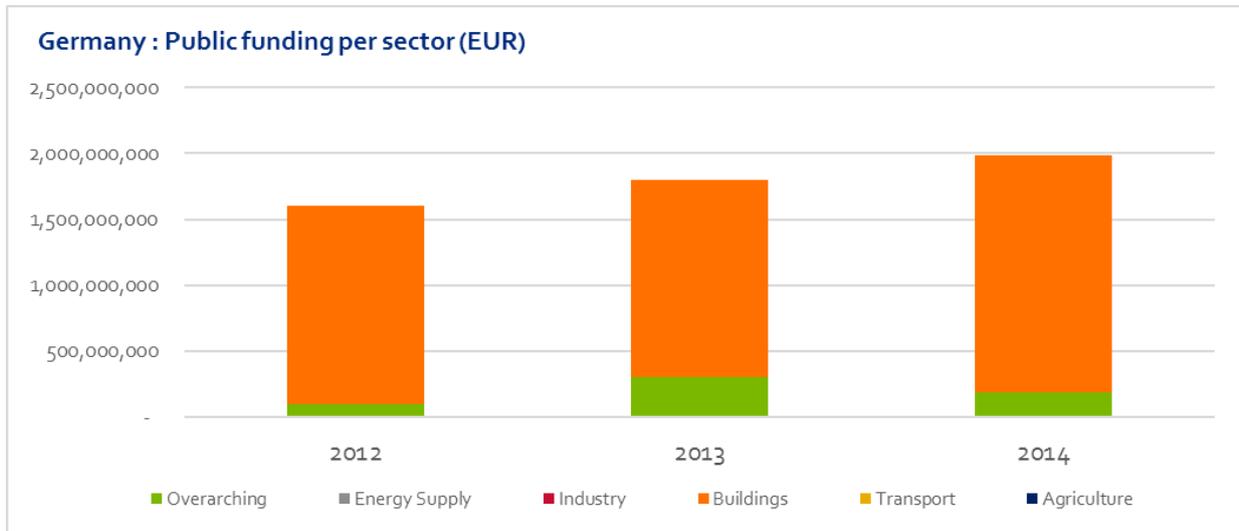


Figure 19: Germany - Available public funding by sector for the years 2012-2014

Five programmes were identified providing funding for energy efficiency activities in Germany. Quantitative information was available for three of them. The overall amount of identified public funding for energy efficiency in Germany was around €1.6 billion in 2012, increasing to around €2 billion in 2014. The buildings sector received the largest share of public funding. The KfW funding programmes for energy-efficient construction and renovation established under the *CO<sub>2</sub> building renovation programme* support comprehensive renovation work on the existing stock and new buildings.

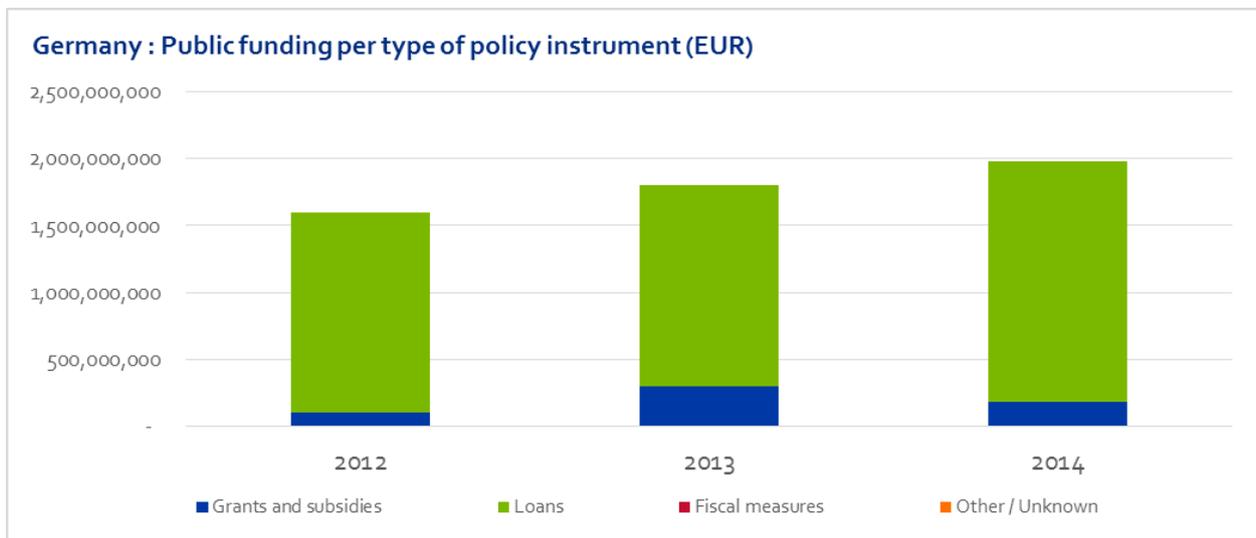
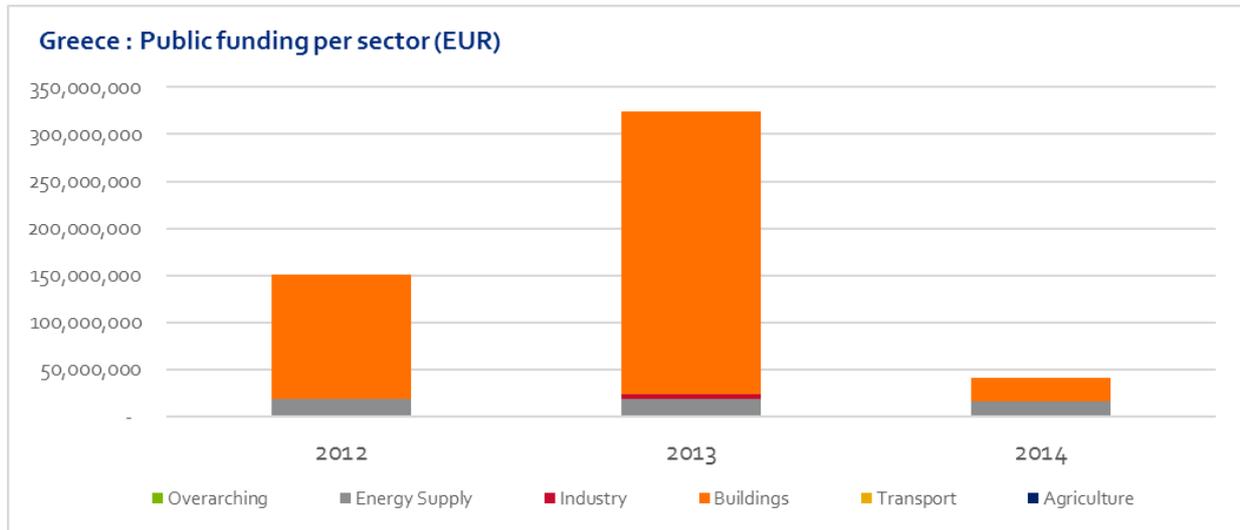


Figure 20: Germany - Available public funding per type of policy instrument

Soft loans are the main tool to support energy efficiency in Germany. The largest identified programme - the KfW *CO<sub>2</sub> building renovation programme* - accounted for €1.8 billion in 2014. It takes the form of low-interest loans, repayment grants or investment grants. Since the respective shares could not be found, all the available funding under this programme was categorised here as loans. For this reason, the actual share of grants out of the total funding may in practice be higher than reported here.

Information about funding programmes was obtained partially from the NEEAP with additional input from a national expert. Figures were obtained researching official sources of information, including KfW funding reports and the German federal budget.

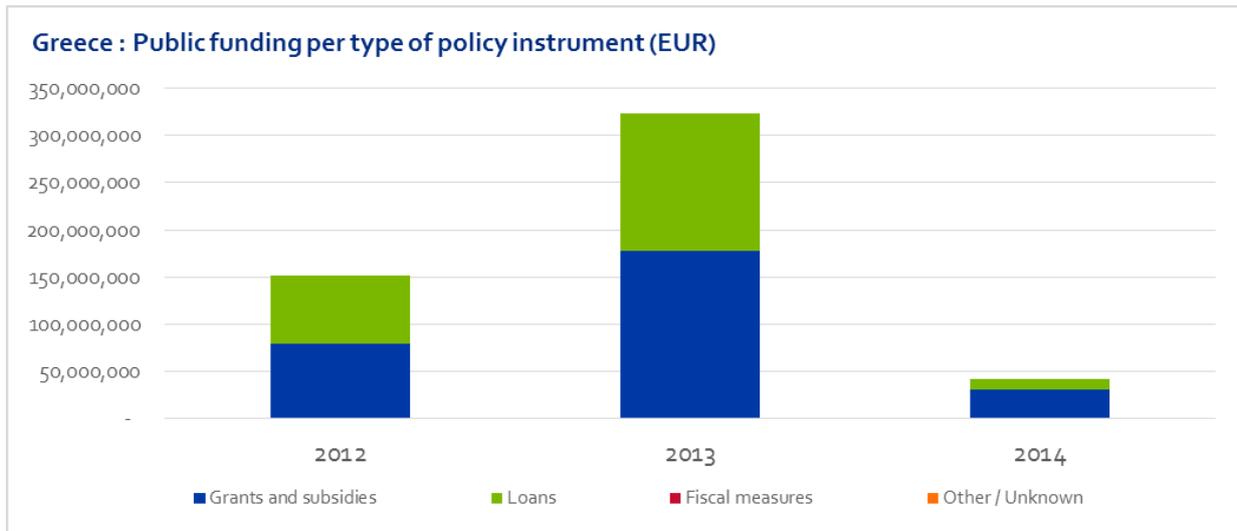
## Greece



**Figure 21: Greece - Available public funding by sector for the years 2012-2014**

Eight funding programmes were identified supporting energy efficiency activities in Greece. The overall amount of public funding for energy efficiency was around €150 million in 2012, peaked at €324 million in 2013 and decreased again to only €41 million in 2014. The programme *Saving Energy at Home* accounts for the largest share of funds available.

The increase and subsequent drop in the overall funding level in the country over the period 2012-2014 follows the level of funding for this programme. Energy efficiency funding in Greece is directed mainly at the buildings sector. Smaller amounts went to the energy supply sector – for the installation of CHP systems (about €18 million per year from 2012 to 2014) and around €5 million to the industrial sector (only in 2013).

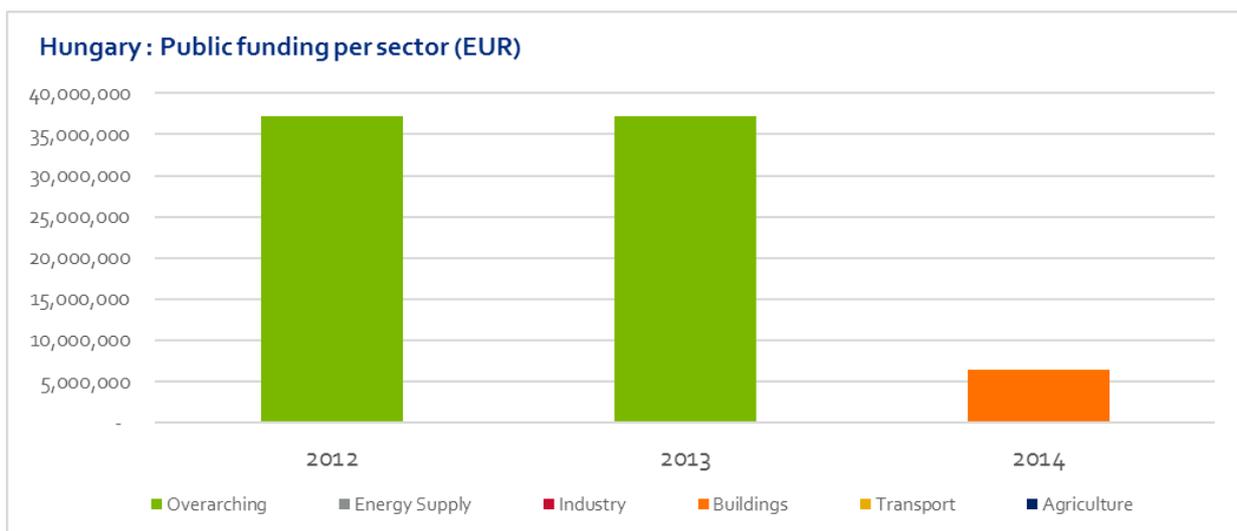


**Figure 22: Greece - Available public funding per type of policy instrument**

Funding for energy efficiency in Greece is channelled through grants and soft loans. The programme *Saving Energy at Home* provides both grants and soft loans. It is estimated that an average of 44% of the available funding for this programme are loans channelled by participating banks, whereas the rest of the funds are distributed as grants.

Quantitative funding data was obtained from the Greek NEEAP and complemented with inputs from a national expert.

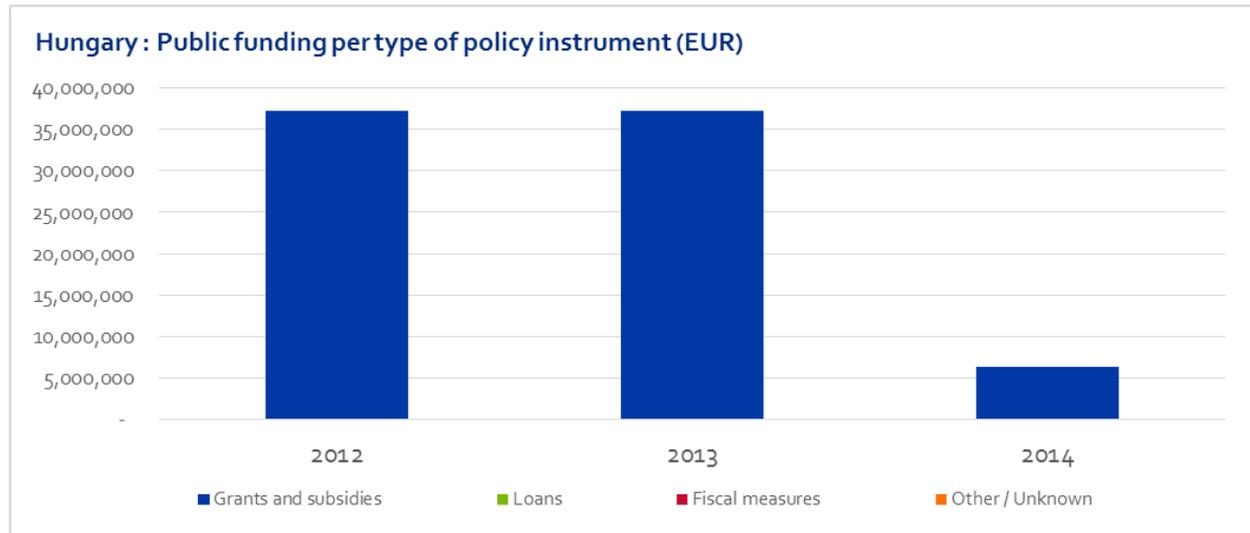
## Hungary



**Figure 23: Hungary - Available public funding by sector for the years 2012-2014**

Two programmes supporting energy efficiency over the period 2012-2014 were identified in Hungary. Funding for energy efficiency investments across different sectors was provided under the *Environment and Energy Operational Programme* (financed by the European Regional Development Fund - ERDF). Priorities were the modernisation of the energy consumption of buildings, and the modernisation of

district heating and cooling. The programme was the only one identified for 2012 and 2013 and provided an estimated €37 million per year. Only one programme could be identified providing funding for energy efficiency in 2014: The *Programme for the Energy Efficient Retrofit of Family Houses*, with around €6 million. The drop in funding level in 2014 may be due to the fact that this was a transition year for European Regional Development Funds.

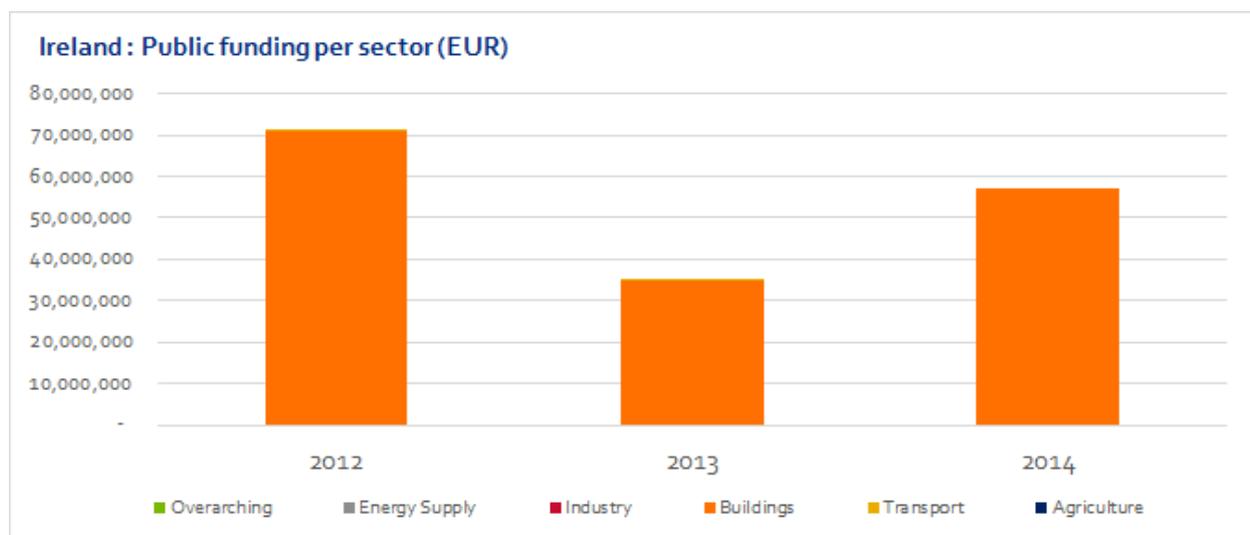


**Figure 24: Hungary - Available public funding per type of policy instrument**

Grants and subsidies are the only type of policy instrument supporting energy efficiency in Hungary. No soft loans or tax exemptions were identified. Funding came from the ERDF (in 2012 and 2013) and from the State budget (in 2014).

Figures were partially retrieved from the NEEAP and complemented with input from a national expert for the years 2012 and 2013. For 2014, figures were provided by the national expert.

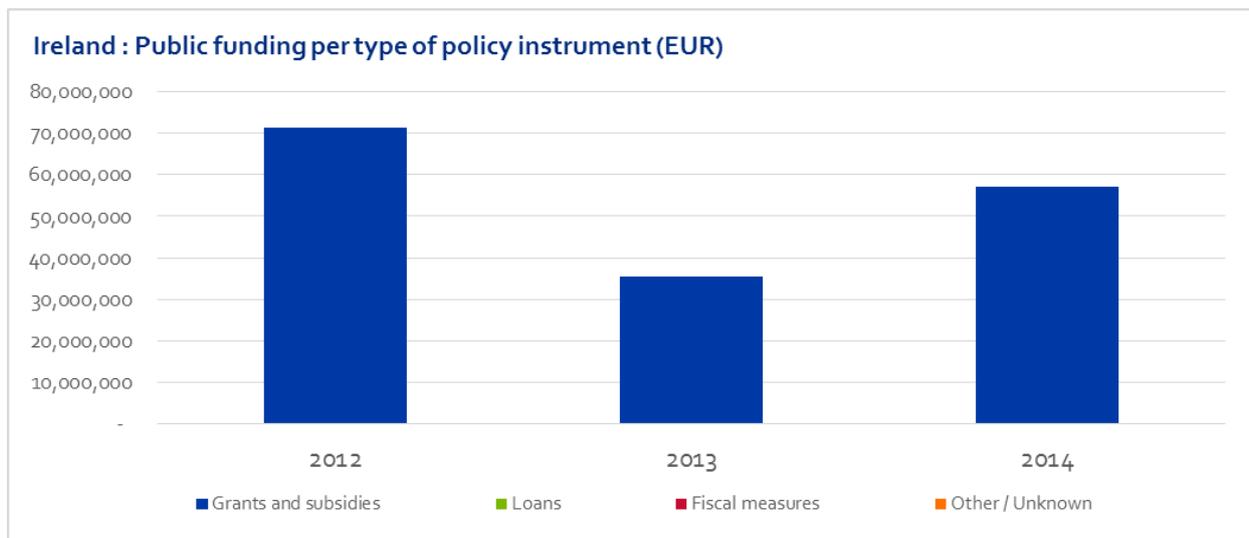
## Ireland



**Figure 25: Ireland - Available public funding by sector for the years 2012-2014**

Two programmes providing funding for energy efficiency could be identified from the Irish NEEAP. By far the largest one is the *Better Energy* programme. It amounted to €71 million in 2012, €35 million in 2013 and €57 million in 2014.

An electric vehicle grant scheme has been in place since 2009 providing grant support for the purchase of Battery Electric Vehicles (BEV's) and Plug-in Hybrid Electric Vehicles (PHEV's). Average funds spent on this programme are estimated at €320,000 per year.

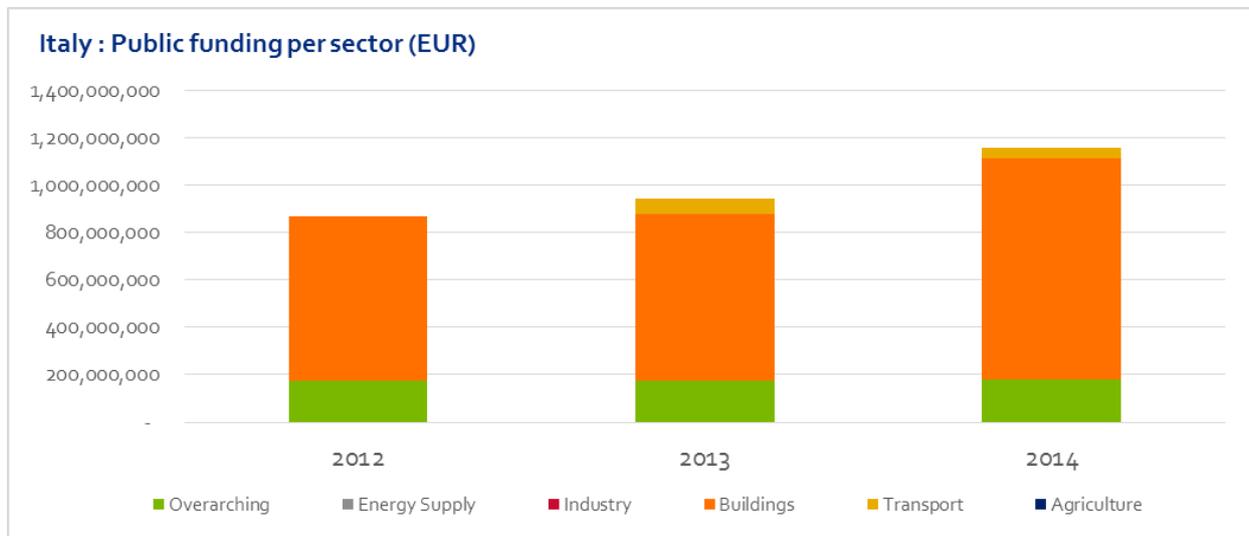


**Figure 26: Ireland - Available public funding per type of policy instrument**

The *Better Energy* programme offers grants for energy efficiency upgrade works in homes, businesses and public buildings and was launched in May 2011.

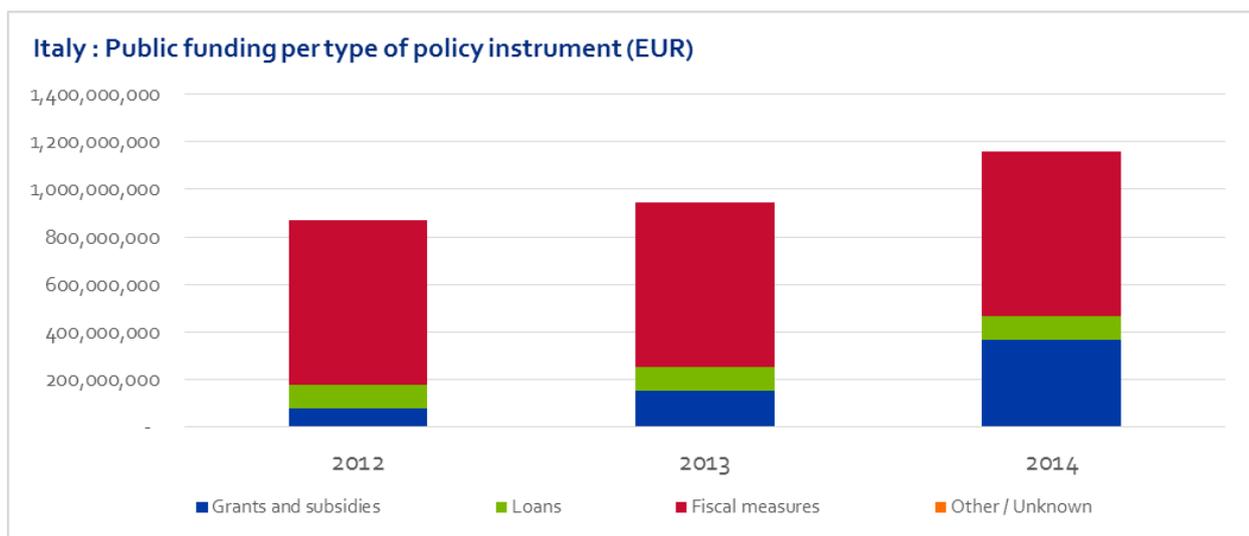
Figures were obtained from the Irish NEEAP.

## Italy



**Figure 27: Italy - Available public funding by sector for the years 2012-2014**

Nine instruments were identified providing funding for energy efficiency in Italy. The overall funding increased steadily from around €900 million in 2012 to almost €1.2 billion in 2014. The majority of these funds were directed at the building sector. A stable amount of funding of around €180 million was cross-sectoral and only a minor share was directed at the transport sector. The largest programmes in the years 2012-2014 were a tax rebate scheme for building redevelopment with a budget impact of almost €700 million per year and the Revolving Kyoto Fund with an annual volume of around €100 million.



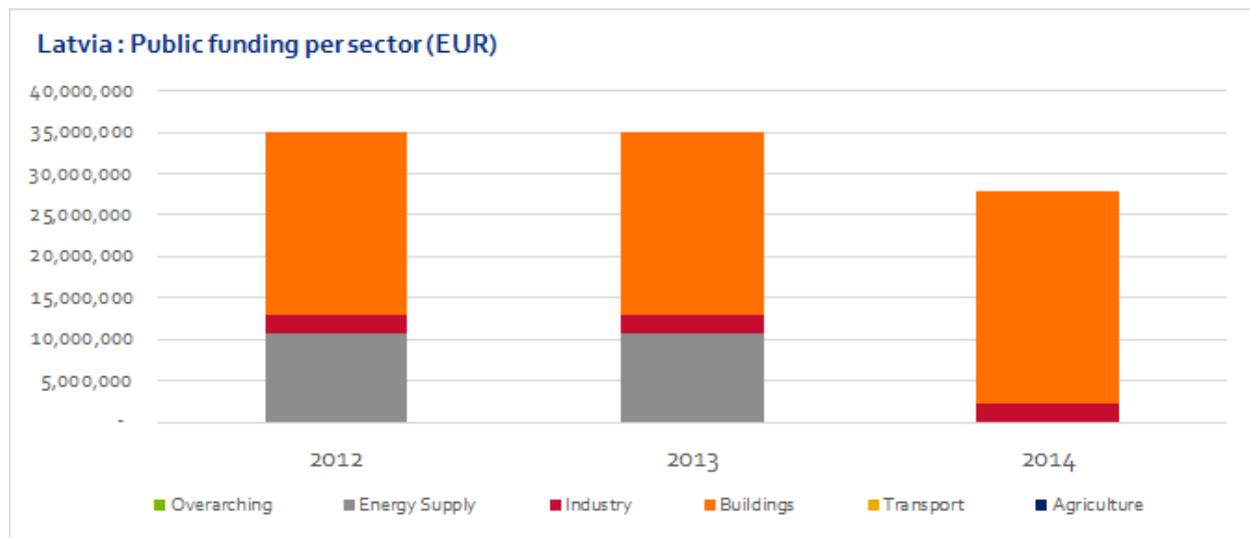
**Figure 28: Italy - Available public funding per type of policy instrument**

Tax rebates for energetic redevelopment of building dominated the public funding for energy efficiency in the years 2012-2014. The volume of public funding allocated through soft loans remained small but stable. Identified grants and subsidies saw an almost five-fold increase during this period. In 2014,

around 60% of the energy efficiency-related public funding volume came from tax exemptions, almost a third from grants and subsidies and the remaining from soft loans.

Information about funding programmes was obtained partially from the Italian NEEAP and Annual Report with additional input from a national expert. Figures were obtained researching additional official sources of information, including the Ministry for Economic Development and Gestore Servizi Energetici.

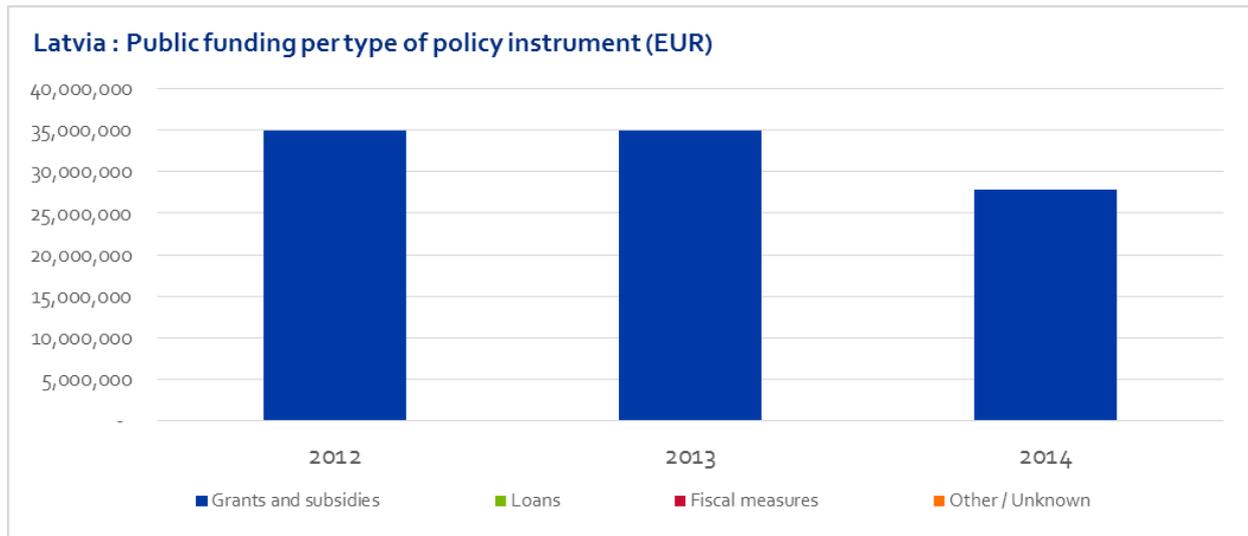
## Latvia



**Figure 29: Latvia - Available public funding by sector for the years 2012-2014**

Six programmes were identified providing funding for energy efficiency in Latvia. The overall amount of public funding for energy efficiency was about €35 million in 2012 and 2013, decreasing to €26 million in 2014. Energy efficiency funding was directed mainly at the buildings sector. A significant share was also directed to energy supply in 2012 and 2013, with the objective to increase the efficiency of thermal energy production and to reduce thermal energy losses in transmission and distribution systems.

Energy efficiency of industrial buildings and technologies received between 6 and 10% of the total funding for energy efficiency during this period. It could not be confirmed whether funding to increase efficiency in centralised heating supply systems was still in place in 2014.

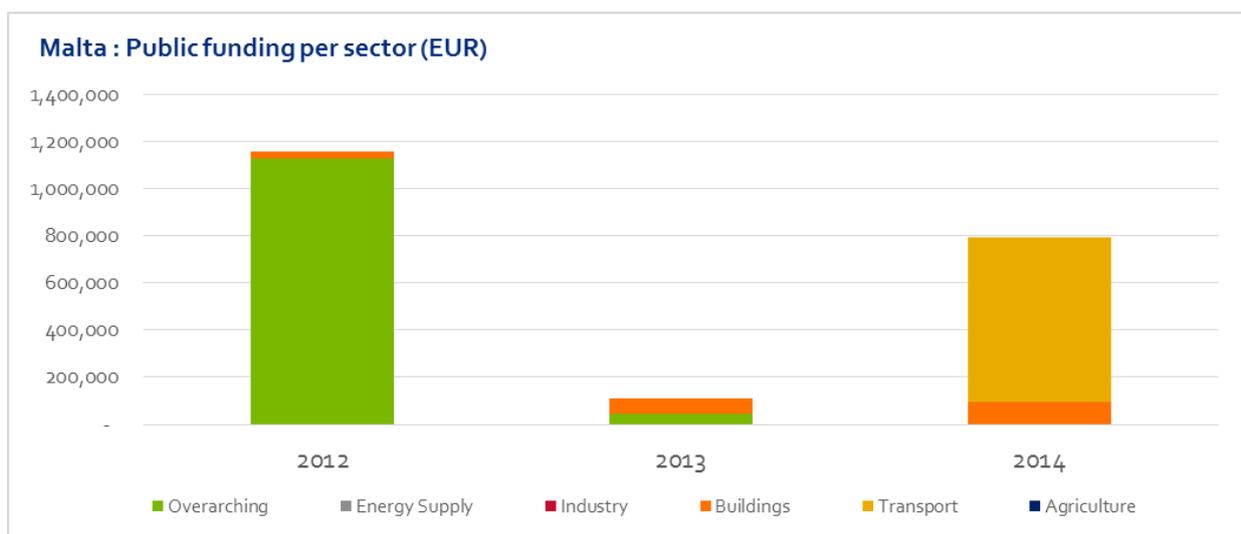


**Figure 30: Latvia - Available public funding per type of policy instrument**

Grants and subsidies were the main instrument to support energy efficiency in Latvia. No soft loans or tax exemptions were identified. The six identified programmes are subsidies covering part of the costs of energy efficiency investments. Identified funding comes from the European Regional Development Fund (ERDF) and the state budget.

Figures on funding were taken from the Latvian Annual Report, reviewed and complemented with input from a national expert.

## Malta



**Figure 31: Malta - Available public funding by sector for the years 2012-2014**

Six programmes were identified as providing public funding for energy efficiency in Malta. However, information about the level of funding could only be found for three of these programmes. The overall amount of identified public funding for energy efficiency was almost €1.2 million in 2012, decreasing to €0.8 million in 2014. This decrease is mainly due to the discontinuation of the programme with the



largest resources - the *Energy Grant Scheme*, which was funding energy efficiency investments in businesses (intelligent lighting systems, thermal insulation, CHP, etc.) In 2014, a grant scheme to improve the vehicle fleet was launched, with an estimated budget of €0.7 million euros. An incentive scheme for roof thermal insulation and double glazing started in 2012. Its funding was €90,000 in 2014.

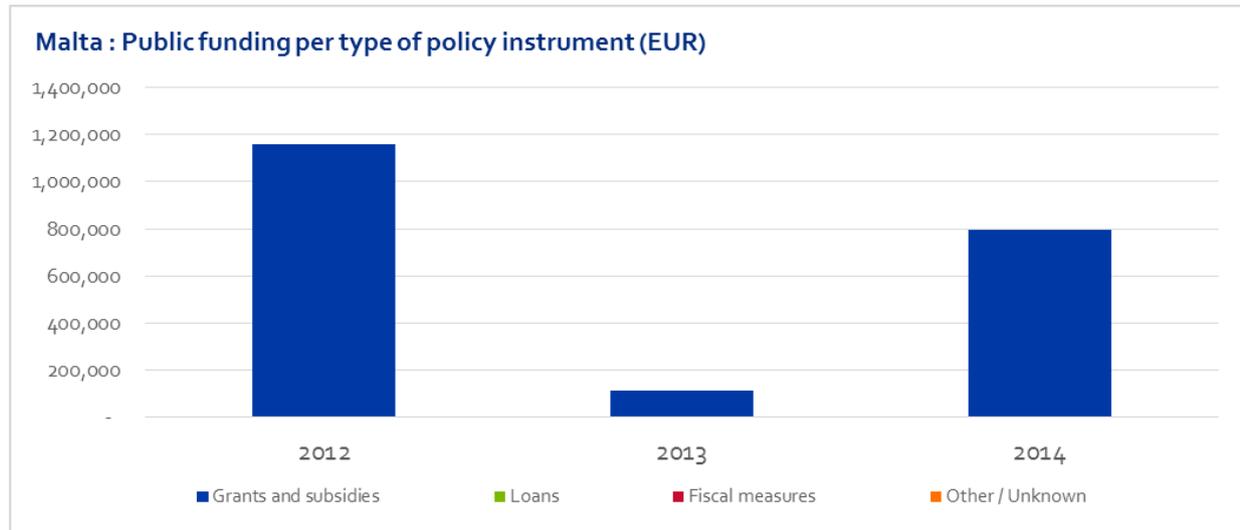


Figure 32: Malta - Available public funding per type of policy instrument

All three programmes for which information on funding was available were grants or subsidies. Two other identified programmes provide tax exemptions, for energy efficient air conditioning and lighting; however, figures were not available and they are therefore not considered in the graphs.

Quantitative funding data was obtained from Malta’s NEEAP and complemented with inputs from a national expert.

## Netherlands

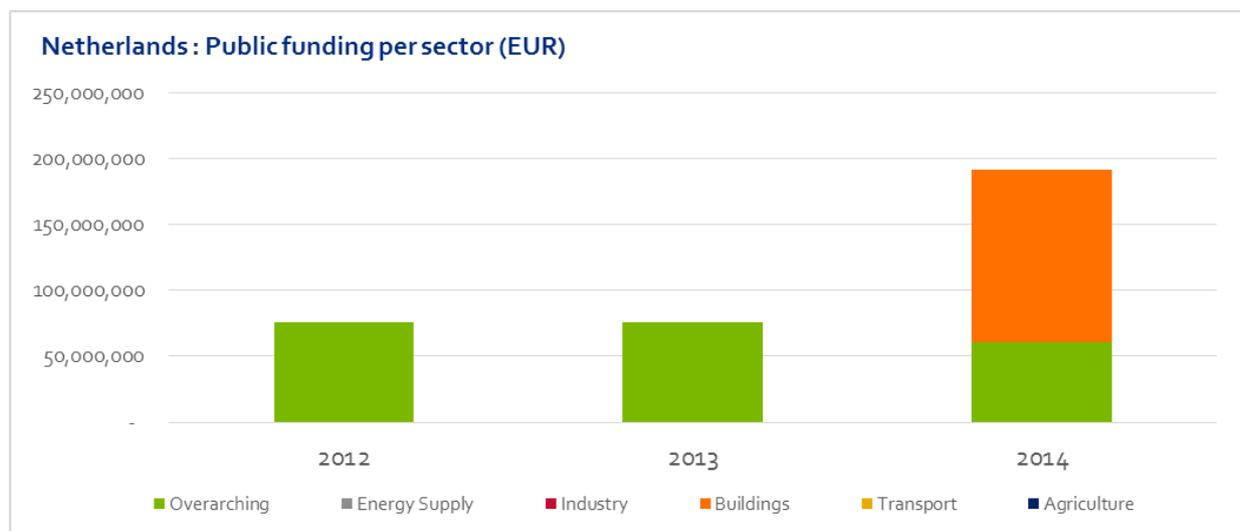
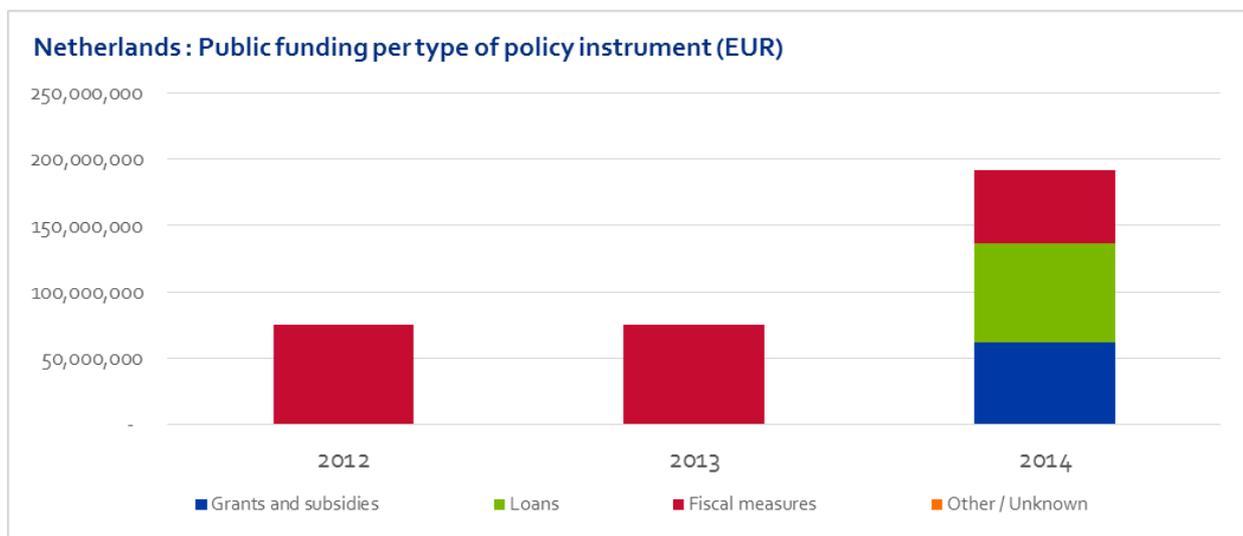


Figure 33: Netherlands - Available public funding by sector for the years 2012-2014

Four programmes were identified as providing funding for energy efficiency in the Netherlands during the period 2012-2014. The overall amount of identified public funding for energy efficiency has grown from €75 million in 2012 to €192 million in 2014. In 2012 and 2013, all of the identified funding went to the *Energy Investment Allowance*, an overarching programme that gives companies a tax incentive for investing in energy-efficient techniques. The *National Energy Fund* was launched in 2014 with a public contribution of €75 million. It is aimed at energy saving for homeowners and housing cooperatives (of minimum 10 units). A subsidy scheme for social housing corporations and private rental companies to improve the energy performance of their building stock was set up during the year 2014, with an average budget of €113 million per year. Both programmes are results of the National Energy Agreement, which was concluded late 2013 between government, and 40 organisations (labour unions, employers, nature and environment organisations, financial institutions, etc.). A fourth programme supports municipalities and regional authorities to invest in energy efficiency, with a budget of €5 million per year.

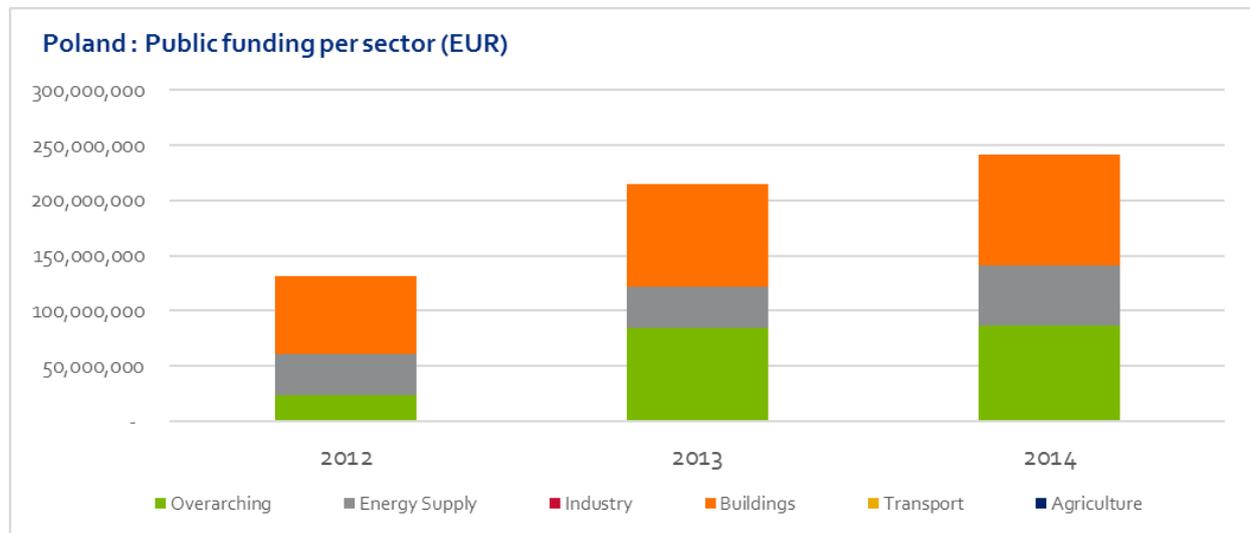


**Figure 34: Netherlands - Available public funding per type of policy instrument**

There was only one identified programme with funding available in 2012 in the Netherlands: The *Energy Investment Allowances* scheme for companies, which provided tax exemptions. The *National Energy Fund* launched in 2014 uses soft loans to support investments in energy efficiency in buildings. Support for energy efficient refurbishment for social housing is given in the form of subsidies.

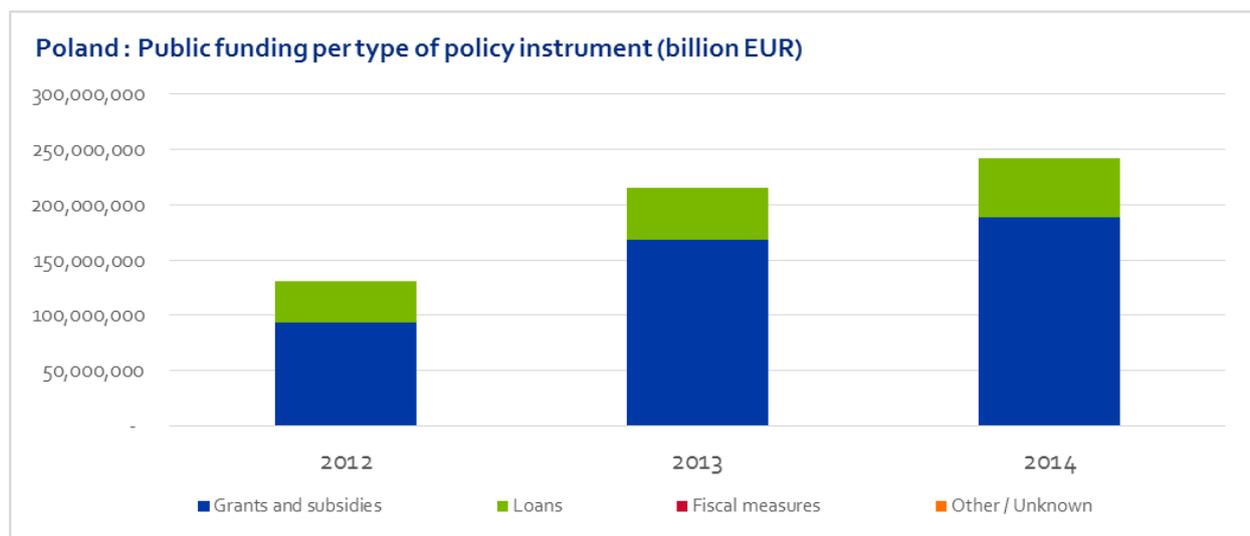
Data on some of the programmes could be found in the Dutch NEEAP. A national expert provided additional information on the basis of official sources.

## Poland



**Figure 35: Poland - Available public funding by sector for the years 2012-2014**

Twenty-four programmes were identified providing funding for energy efficiency in Poland. Data on the level of funding could be found for 19 of these programmes. The overall amount of funding increased from €130 million in 2012 to €215 million in 2013 and €241 million in 2014. Around 40% of public funding went to buildings, 35% to cross-cutting efficiency measures and 22% to energy supply in 2014. The level of identified funding for energy efficiency in buildings increased from €70 million in 2012 to €100 million in 2014. Similarly, funding for efficiency in the energy supply sector increased from €37 million in 2012 to €54 million in 2014. Identified funding for cross-cutting efficiency measures also increased significantly, from €24 million in 2012 to €87 million in 2014.



**Figure 36: Poland - Available public funding per type of policy instrument**

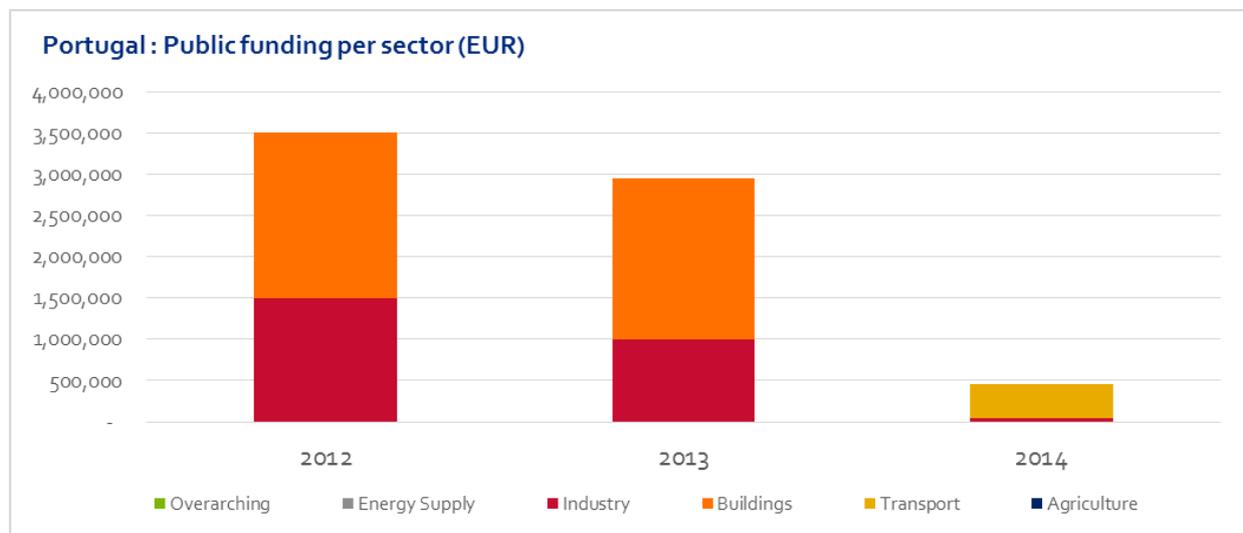
Grants and subsidies are the main policy instrument to support energy efficiency in Poland. Soft loans also play a small but increasing role. No fiscal measures were found. Most soft loans are complementing grants or subsidies: out of the 4 soft loans programmes identified, 3 are part of a programme that has

both a grant and a soft loan component, such as for instance the *Green Investment Scheme* that provides grants and loans to public utilities to improve energy management in their facilities. Only one soft loan programme providing access to financial instruments for SMEs is a stand-alone programme.

The budget for the programmes comes from three different sources: the National Fund for Environmental Protection and Water Management (i.e. the state budget), the EU cohesion funds and the Norwegian Financial Mechanism 2009-2014.

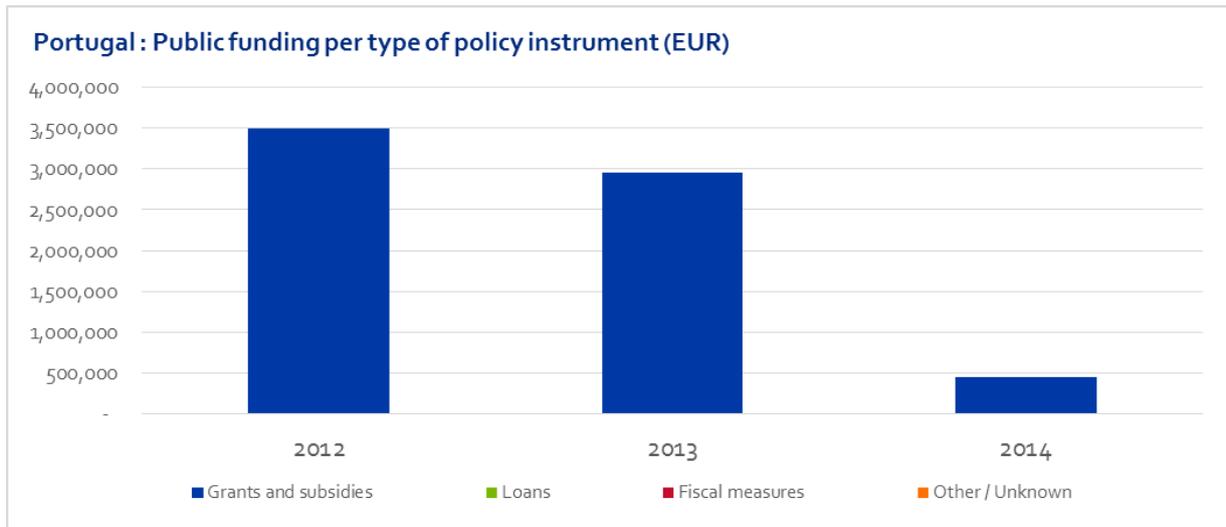
Data on funding was obtained from the polish NEEAP with additional input from a national expert.

## Portugal



**Figure 37: Portugal - Available public funding by sector for the years 2012-2014**

The level of public funding for energy efficiency identified in Portugal has substantially decreased over the period studied, from €3.5 million in 2012 to €450,000 in 2014. In 2012 and 2013, funding available targeted primarily efficiency in buildings and industry. In 2014 only 3 minor programmes with very limited funding available were identified. These were aimed at the transport and industrial sector.

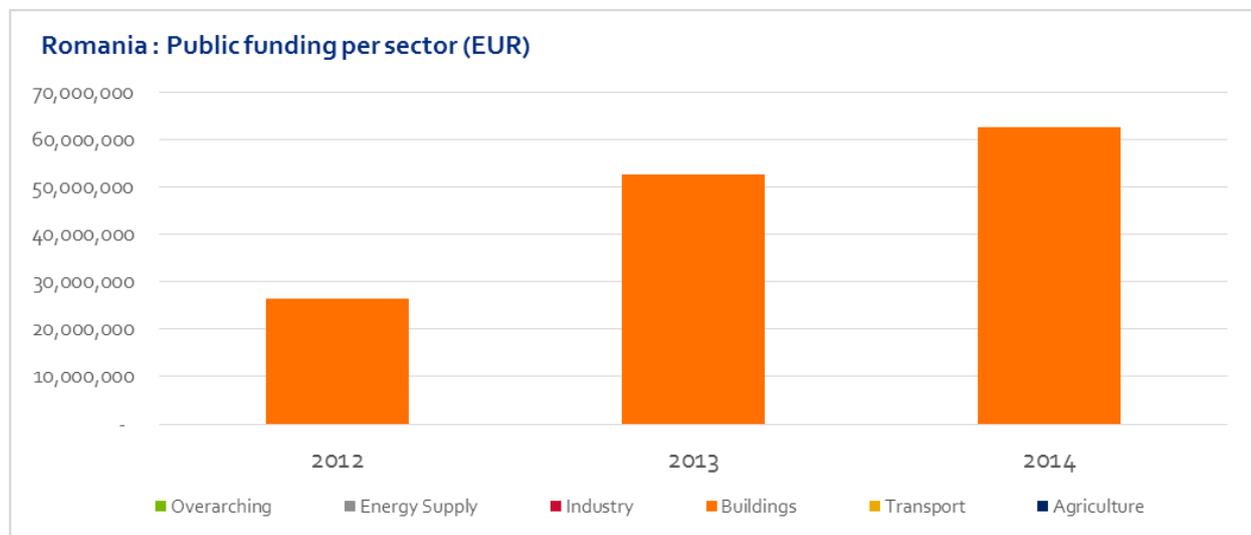


**Figure 38: Portugal - Available public funding per type of policy instrument**

All identified public funding in Portugal over the period 2012 – 2014 was available in the form of grants and subsidies.

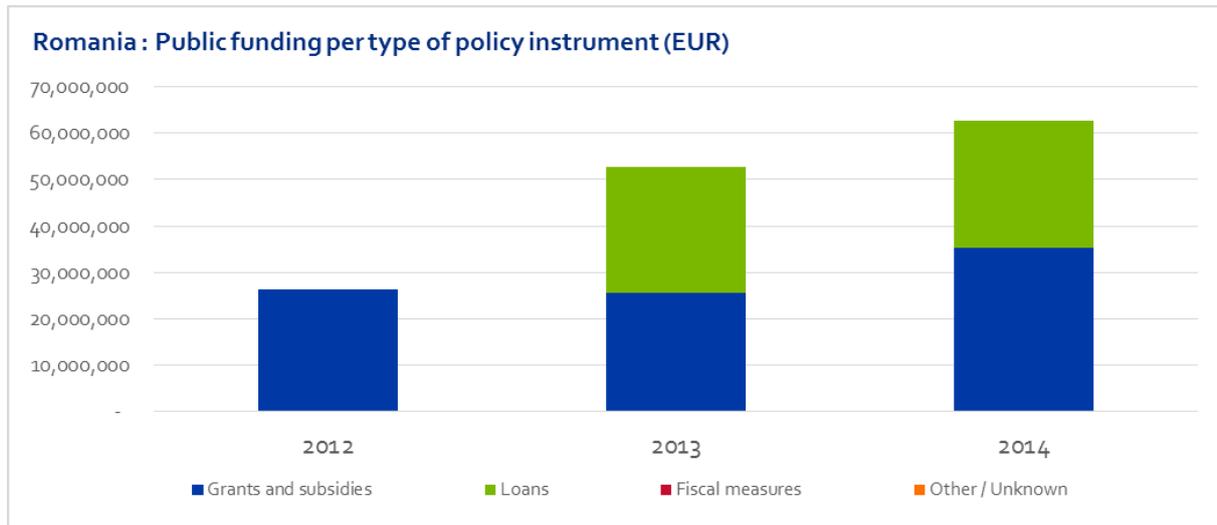
Data on funding was obtained from the Portuguese Annual Report with additional input from a national expert.

## Romania



**Figure 39: Romania - Available public funding by sector for the years 2012-2014**

Three programmes were identified in Romania providing funding for energy efficiency during the period 2012-2014. The overall amount of identified public funding supporting energy efficiency in Romania more than doubled, from €26 million in 2012 to €62 million in 2014. All three programmes aimed to improve energy efficiency in buildings. One programme, targeted at multi-family buildings, was financed by the state budget. A second programme was financed by EU funds from the period 2007-2013 with the aim to support overall thermal renovation. The third programme - financed by the European Investment Bank (EIB) - supported the thermal rehabilitation of multi-storey buildings.

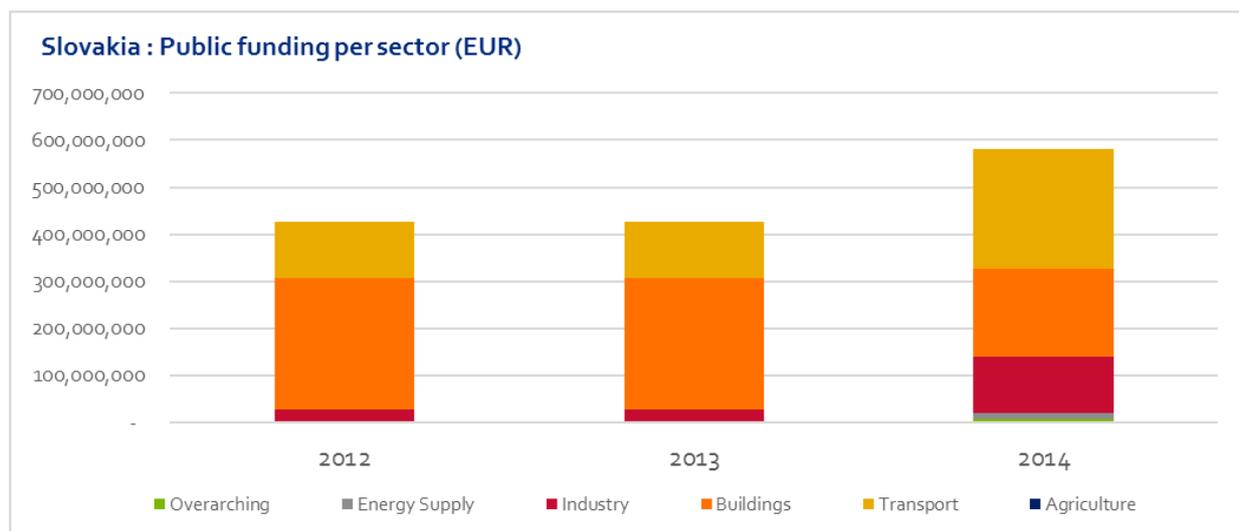


**Figure 40: Romania - Available public funding per type of policy instrument**

Grants and subsidies on one hand, and soft loans on the other, are the instruments used to support energy efficiency in Romania. The programme for thermal rehabilitation of multi-storey buildings provides soft loans, in line with EIB activities. The other two programmes provide grants that cover part of the costs of rehabilitation works.

Data on these programmes was not available in the NEEAP, nor in the Annual Report. Figures were provided by a national expert.

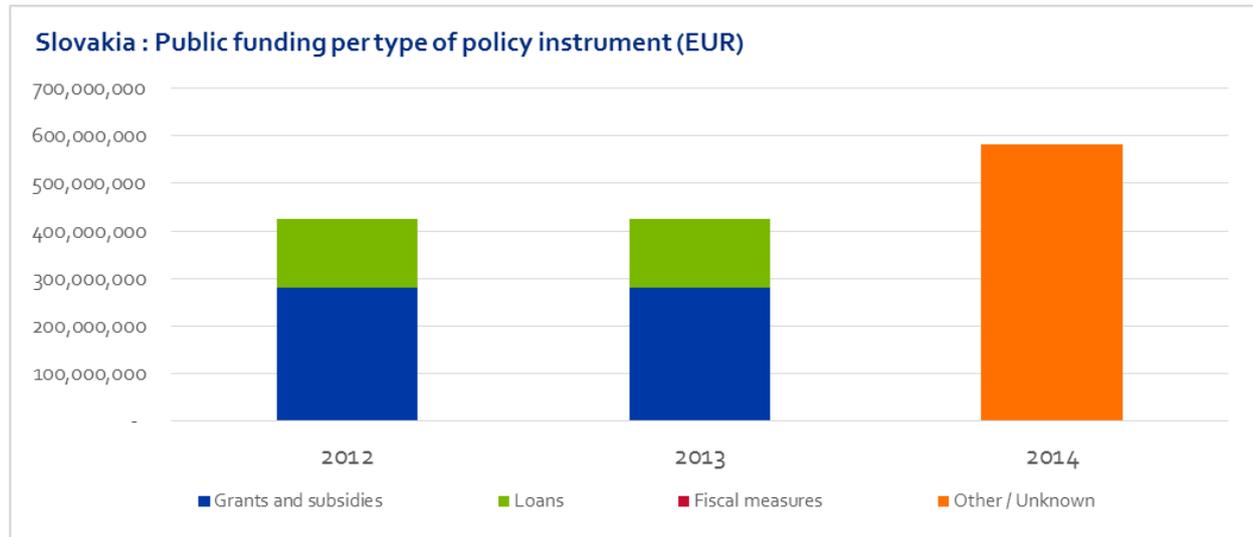
## Slovakia



**Figure 41: Slovakia - Available public funding by sector for the years 2012-2014**

Twenty-three programmes were identified providing public funding for energy efficiency in Slovakia during the period 2012-2014. The overall amount of identified public funding was around €425 million in 2012 and 2013, increasing to almost €600 million in 2014. Energy efficiency funding was mainly

directed at the buildings sector in 2012 and 2013. Identified programmes supporting energy efficiency in the buildings sector amounted to around €280 million in 2012 and 2013, and around €185 million in 2014. For 2014, large amounts of funding - above €250 million - were allocated to the transport sector; however, the Slovakian NEEAP does not provide details about the actual purpose of these funds. The industrial sector receives also large amounts of funding at around €120 million.

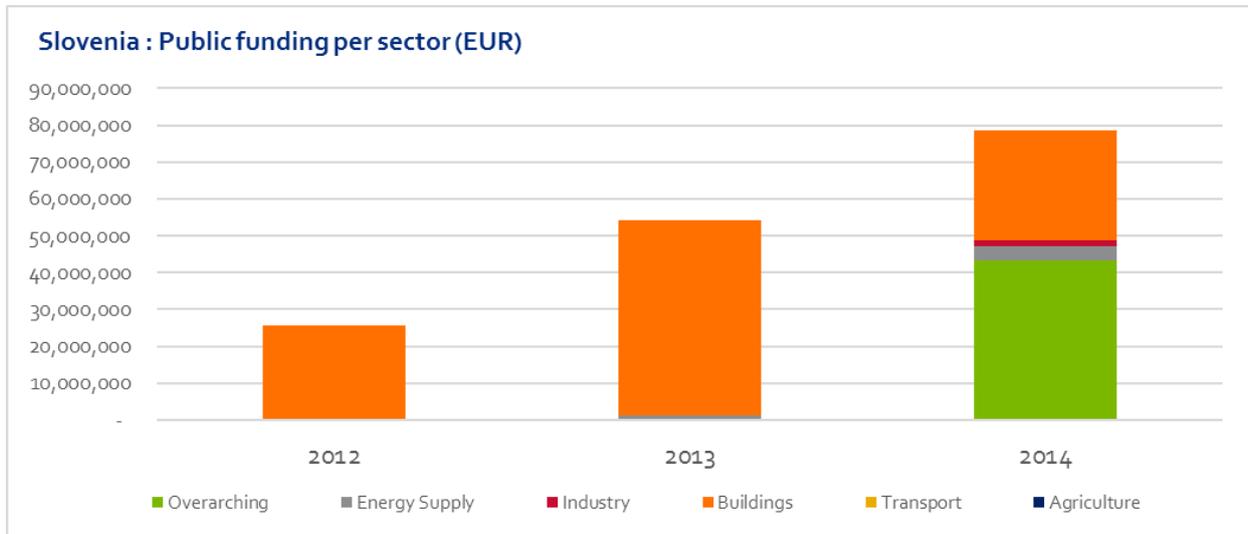


**Figure 42: Slovakia - Available public funding per type of policy instrument**

Grants and subsidies as well as soft loans are the instruments used to support energy efficiency in Slovakia. Identified funding comes from the European Regional Development Fund and Cohesion Fund, co-financed by the State budget. No information could be found in the NEEAP or latest Annual Report on which instruments are being used to channel available funding from 2014 onwards.

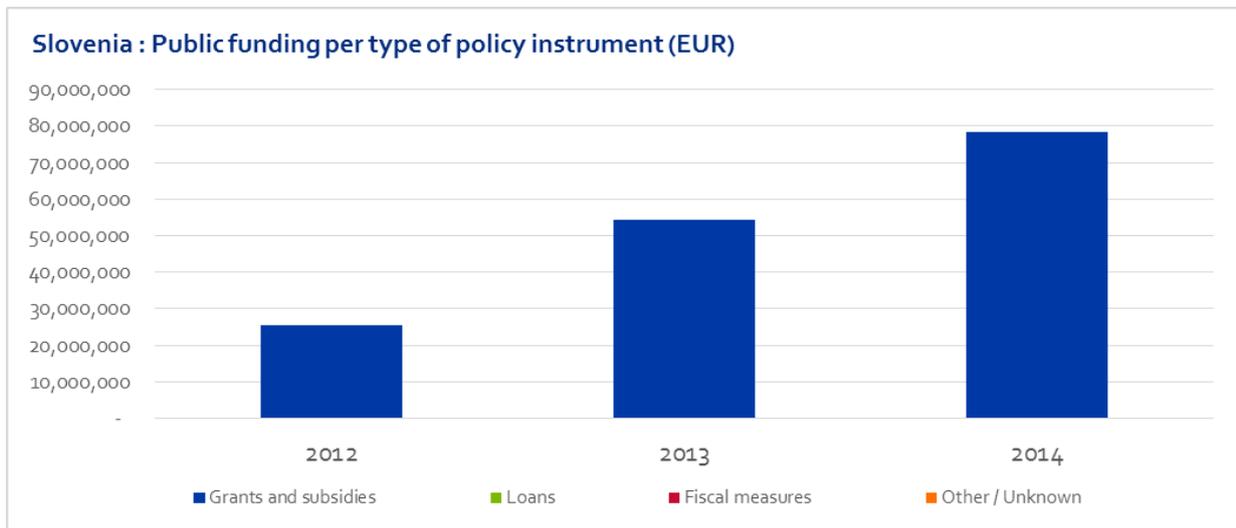
Data on funding was obtained from the Slovakian NEEAP and complemented with additional input from a national expert.

## Slovenia



**Figure 43: Slovenia - Available public funding by sector for the years 2012-2014**

Twenty-one programmes were identified providing funding for energy efficiency in Slovenia during the period 2012-2014. The overall amount of identified public funding was about €25 million in 2012, increasing to almost €80 million in 2014. Energy efficiency funding was directed mainly at the buildings sector in 2012 and 2013. In 2014, two large overarching programmes started, with total funding of around €43 million, along with two smaller programmes funding high efficiency cogeneration (€2.3 million) and energy efficiency in industry (€1.5 million).

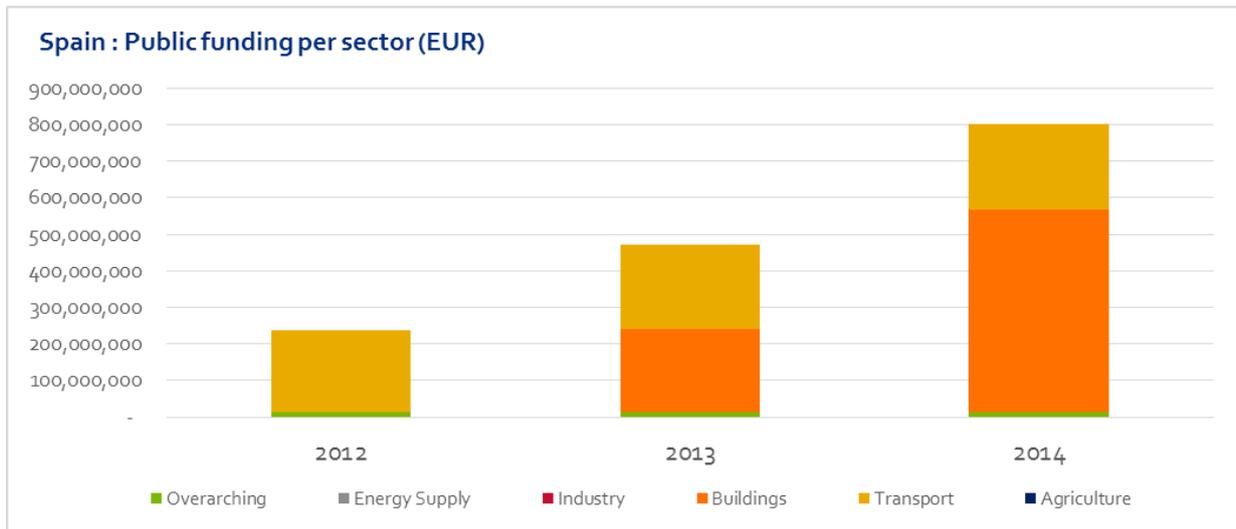


**Figure 44: Slovenia - Available public funding per type of policy instrument**

Grants and subsidies are the main policy instrument to support energy efficiency in Slovenia. No soft loans or tax exemption programmes were identified. Identified funding comes from the European Regional Development Fund and Cohesion Fund, co-financed by the State budget.

Information on amounts of funding available was retrieved from NEEAP and was complemented with the input from a national expert.

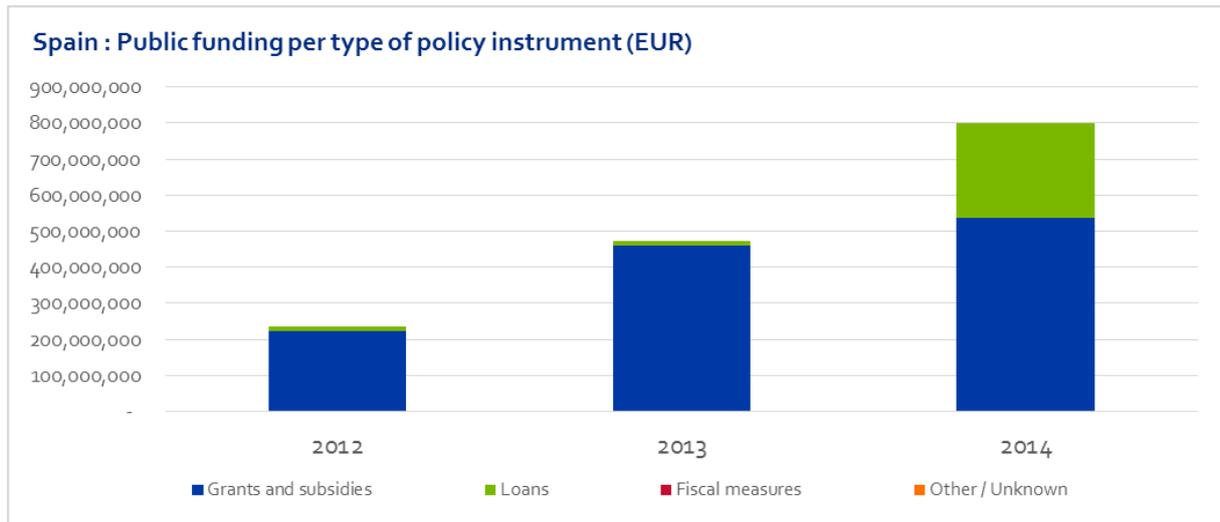
## Spain



**Figure 45: Spain - Available public funding by sector for the years 2012-2014**

Nine energy efficiency programmes were identified in Spain with public funding available over the period 2012-2014. The overall amount of identified public funding more than doubled over this period, from approximately €236 million in 2012 to around €800 million in 2014. Most programmes in Spain target energy efficiency in the built environment. The transport sector also receives a sizeable part of public support by means of two programmes, one directed to incentivise the replacement of old inefficient cars - *PIVE programme* - and another one aimed at incentivising the adoption of electric cars - *MOVELE*. Spain also used funds from the JESSICA framework<sup>8</sup> to provide soft loans for energy efficiency measures across several sectors.

<sup>8</sup> <http://www.eib.org/products/blending/jessica/background/index.htm>



**Figure 46: Spain - Available public funding per type of policy instrument**

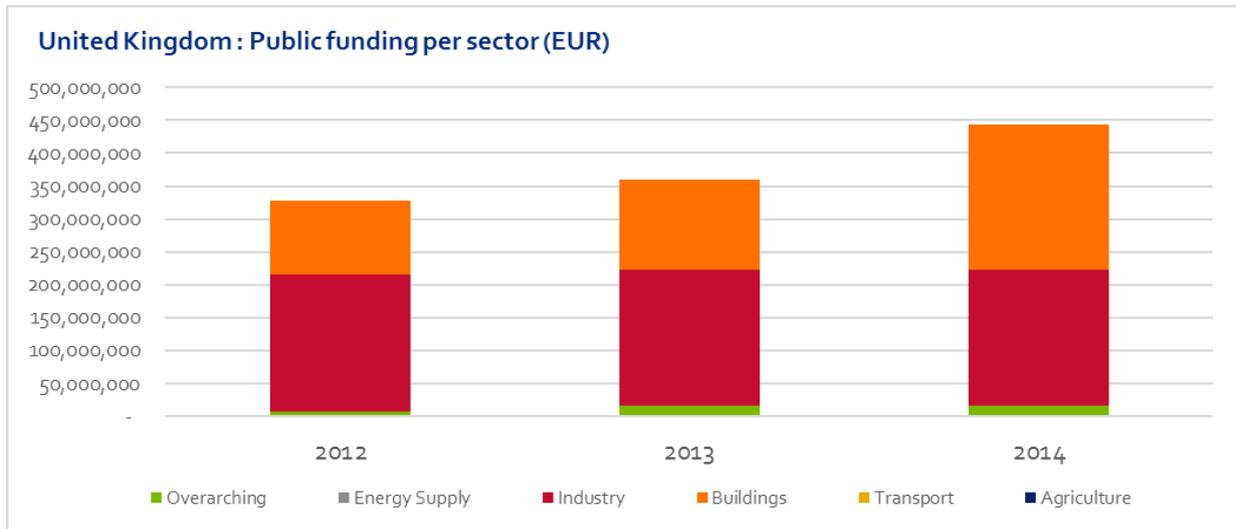
The bulk of the funding for energy efficiency in Spain was provided by means of grants and subsidies. There were three soft loan programmes in place aimed at financing building renovations, efficient public street lighting and other cross-cutting efficiency measures.

The funding data for Spain was retrieved from the latest Annual Report in accordance with Article 24(1) of Directive 2012/27/EU and complemented with inputs from a national expert.

## Sweden

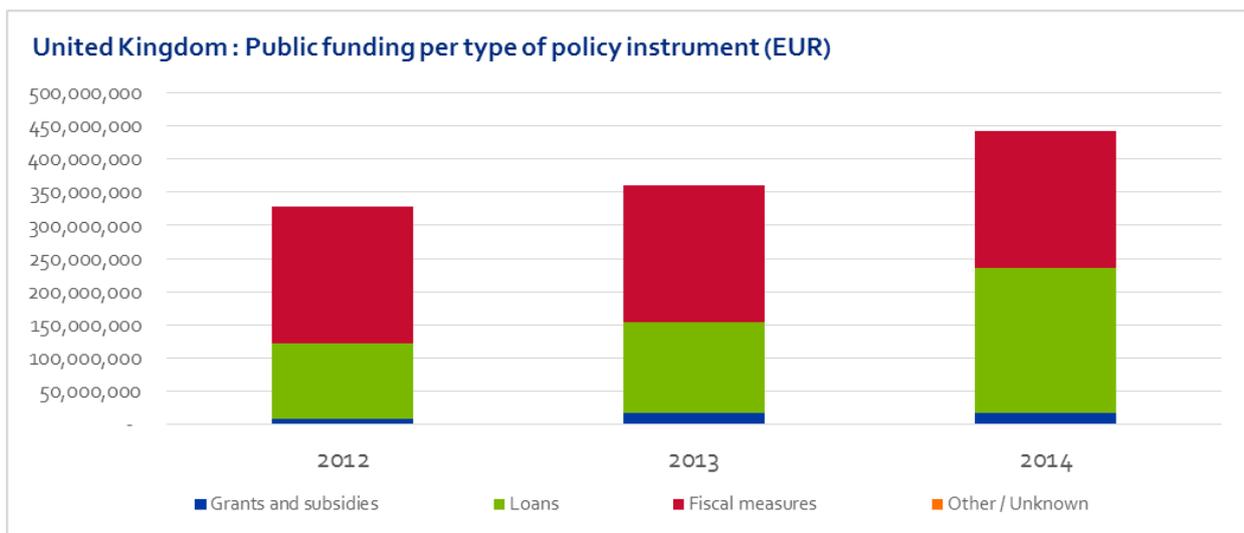
No data were found in the Swedish NEEAP and latest Annual report in accordance with Article 24(1) of Directive 2012/27/EU with regards to public funds for energy efficiency. The Swedish NEEAP states: *"Funds have not traditionally been used to finance Swedish policies to improve energy efficiency. Instead, the State contributes in various ways, with support to make it easier for various stakeholders to implement measures to improve energy efficiency"*.

## United Kingdom



**Figure 47: United Kingdom - Available public funding by sector for the years 2012-2014**

A total of 13 schemes were identified providing public funding for the adoption of energy efficiency measures in the United Kingdom. The level of funding could be quantified for seven of them. Identified available public funding increased from an estimated €330 million in 2012 to above €440 million in 2014. Most available economic support over the period 2012-2014 went to energy efficiency measures in industry under the framework of the *Climate Change Agreements*. Funding was also available for improvement of energy performance of buildings through *Salix Finance Capital* loans, the *Green Deal*, the *Spruce Fund* in Scotland, the *London Energy Efficiency Fund* and the *RE:FIT* programme.



**Figure 48: United Kingdom - Available public funding per type of policy instrument**

The two prevailing funding tools in United Kingdom are soft loans and tax exemptions<sup>9</sup>. Funding to improve the energy efficiency of buildings is channelled primarily by soft loans. A smaller amount of funding is channelled by the RE:FIT programme in the form of free technical assistance. Industries participating in the *Climate Change Agreements* are eligible for an exemption *on the Climate Change Levy* in return for meeting their energy efficiency targets.

Information about funding programmes was obtained partially from the NEEAP and Annual Report with additional input from a national expert. Figures were obtained researching additional official sources of information.

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<sup>9</sup> The Energy Company Obligation (ECO) - a UK government scheme to obligate larger suppliers to deliver energy efficiency measures to domestic premises - is a key instrument in the UK energy efficiency policy; however, it is not included in this report. Expenditures under this programme do not fall under our definition of public funding as they are financed through the energy bills and cannot be considered a tax.

## Appendix 2: Definitions

**Public funding for energy efficiency in the EU:** Public economic resources made available by national authorities at EU Member State level with the main purpose of incentivising the adoption of energy efficiency improvement measures in the country. Funding from EU institutions - e.g. EU Structural and Cohesion Funds - but managed at national or subnational level is included in the scope of this project. In this study we classify public funding into three possible categories: subsidies and grants; loans; fiscal measures.

**Energy efficiency:** The EU Energy Efficiency Directive (2012/27/EU) defines energy efficiency as the *'ratio of output of performance, service, goods or energy, to input of energy'*;

**Energy efficiency improvement:** The EU Energy Efficiency Directive (2012/27/EU) defines *energy efficiency improvement* as an increase in energy efficiency as a result of technological, behavioural and/or economic changes;

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