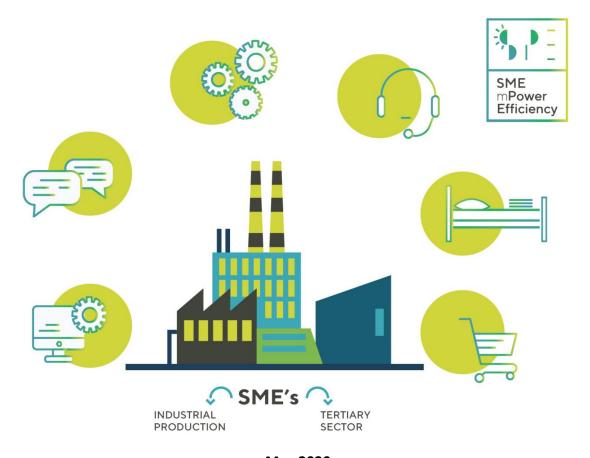


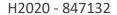
A holistic framework for Empowering SME's capacity to increase their energy efficiency "Report on current and potentially improved funding mechanisms and best practises for energy efficiency in SMEs"







This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 847132.







Disclaimer: "This document has been prepared in the context of SMEmPower Efficiency project, funded by the EU Horizon 2020 research and innovation programme under the Grant Agreement No 847132. This document reflects only the authors' views and the Agency and the Commission are not responsible for any use that may be made of the information it contains."





POWER SYSTEMS LABORATORY ARISTOTLE UNIVERSITY OF THESSALONIKI	AUTH – Aristotle University of Thessaloniki (Coordinator)	(EL)
Teesside University	TEE – Teesside University	(UK)
ŠTAJERSKA GOSPODARSKA ZBORNICA	SGZ – Chamber of Commerce and Industry of Stajerska	(SI)
UNIVERSITATEA TEHNICĂ DIN CLUJ-NAPOCA	UTC – Universitatea Tehnica Cluj-Napoca	(RO)
OEB	OEB – Cyprus Employers and Industrialists Federation	(CY)
SERVELECT Energy is money! We save both.	SVT – Servelect SRL	(RO)
• energiada	ENER – EnerGia-Da	(IT)
UNIVERSITAT POLITÈCNICA DE VALÈNCIA	UPV – UNIVERSIDAD POLITÉCNICA DE VALENCIA	(ES)
adelphi	ADE – adelphi research gemeinnützige GmbH	(DE)
	UOWM – University of Western Macedonia	(EL)





Contents

EXECUTIVE SUMMARY	
1. INTRODUCTION	(
1.1. EU & NATIONAL CONTEXTS	
1.1.1. The 2020 Climate & Energy package	
1.1.1.1 Energy efficiency	
1.1.1.2 Renewable energy sources	
1.1.1.3 Greenhouse gas emissions reduction targets	10
1.1.2. The 2030 Climate & Energy framework	12
1.1.2.1 Energy efficiency	12
1.1.2.2 Renewable energy sources	
1.1.2.3 Greenhouse gas emissions reduction targets	
1.1.2.4 Governance system/ National energy and climate plans	
1.1.2.5 European Green Deal	
1.2. The role of key actors	
1.2.1. Cyprus	
1.2.2. Germany	
1.2.3. Greece	
1.2.4. Italy	
1.2.5. Romania	
1.2.6. Slovenia	
1.2.8. United Kingdom	
2. CURRENT EU SUPPORT SCHEMES AND FUNDING PROGRAMMES FOR SMES	
2.1. AVAILABLE RES & EE SUPPORT SCHEMES IN CYPRUS	
2.2. AVAILABLE RES & EE SUPPORT SCHEMES IN GERMANY	
2.3. AVAILABLE RES & EE SUPPORT SCHEMES IN GREECE	34
2.4. AVAILABLE RES & EE SUPPORT SCHEMES IN ITALY	36
2.5. AVAILABLE RES & EE SUPPORT SCHEMES IN ROMANIA	37
2.6. AVAILABLE RES & EE SUPPORT SCHEMES IN SLOVENIA	39
2.7. AVAILABLE RES & EE SUPPORT SCHEMES IN SPAIN	39
2.8. AVAILABLE RES & EE SUPPORT SCHEMES IN THE UK	42
3. CURRENT FINANCIAL INSTRUMENTS FOR SMES	44
4. COMMON BARRIERS PROHIBIT ENERGY EFFICIENCY INVESTMENTS IN SMES	60
5. BEST-PRACTICE EXAMPLES FROM OTHER EU MEMBER STATES	
5.1.1. Slovakia - SlovSEFF	
6. RECOMMENDATIONS FOR FINANCIAL INSTRUMENTS/ SUPPORT SCHEMES IN SMES	65
BIBLIOGRAPHY	67
ANNEY 1	60





Table of figures

FIGURE 1. EU CLIMATE AND ENERGY TARGETS FOR 2020 AND 2030	
Figure 2: EU energy & climate targets for 2020	9
Figure 3: EU energy & climate targets for 2030	12
FIGURE 4: EU SUPPORT SCHEMES AND FUNDING PROGRAMMES RELATED TO ENERGY EFFICIENCY	28
FIGURE 5: COMMON FINANCIAL INSTRUMENTS FOR ENERGY EFFICIENCY PROJECTS	44
FIGURE 6: FINANCING VEHICLES FOR DIFFERENT MATURITY STAGES; SOURCE: (SCHNELLER ET. AL., 2019)	47
FIGURE 7: COMMON FINANCIAL BARRIERS ACROSS EU	61
Table of Tables	
TABLE 1: OVERVIEW OF THE AVAILABLE SUPPORT SCHEMES AND OTHER INSTRUMENTS FOR SMES IN THE SM PARTICIPATING COUNTRIES	
Table 2: Overview of the 2020 targets amongst the participating countries in the SMEMPOW	
(EUROPEAN RENEWABLE ENERGY COUNCIL, 2011)	
Table 3: Overview of the objectives of 2030 among the participating countries in the SMEMPow	
(EUROPEAN COMMISSION, 2020)	
Table 4: Stakeholders in Cyprus	
TABLE 5: STAKEHOLDERS IN GERMANY	
Table 6: Stakeholders in Greece	
Table 7: Stakeholders in Italy	
Table 8: Stakeholders in Romania	
Table 9: Stakeholders in Slovenia	
Table 10: Stakeholders in Spain	
Table 11: Stakeholders in UK	
TABLE 12: EU SUPPORT SCHEMES AND FUNDING PROGRAMMES RELATED TO ENERGY EFFICIENCY	
Table 13: Support schemes in Cyprus	32
Table 14: Support schemes in Germany	33
Table 15: Support schemes in Greece	34
Table 16: Support schemes in Italy	36
Table 17: Support schemes in Romania	37
Table 18: Support schemes in Slovenia	39
Table 19: Support schemes in Spain	39
Table 20: Support schemes in the UK	41
Table 21: Overview of the main financial instruments in EU and the participating countries	47





List of Acronyms

Acronym	Meaning		
AiF	German Federation of Industrial Research Associations		
BAFA	Federal Office of Economics and Export Control		
BEV	Battery Electric Vehicle		
BMU	Building and Nuclear Safety		
BMWi	Ministry for Economic Affairs and Energy		
CEI	Competitiveness, Entrepreneurship, Innovation		
CERA	Cyprus Energy Regulatory Authority		
СНР	Combined Heat and Power		
CYPEF	Cyprus Entrepreneurship Fund		
D2EE	Derbyshire 2 Energy Efficiency		
DG EPCD	Directorate General of European Programmes, Cooperation and Development		
EASME	Executive Agency for SMEs		
EBRD	European Bank for Reconstruction and Development		
EC	European Commission		
ECS	Energy Concept of Slovenia		
EE	Energy Efficiency		
EEA	European Economic Area		
EED	Energy Efficiency Directive (Directive 2012/27/EU)		
EEE-F	European Energy Efficiency Fund		
EFSI	European Fund for Strategic Investments		
EIB	European Investment Bank		
EIF	European Investment Bank		
EMAS	Eco-Management and Audit Scheme		
ENEA	Energy and Sustainable Economic Development		
EPC	Energy Performance Certificates		
ERDF	European Regional Development Fund		
ESA	Energy Services Agreements		
ESCO	Energy Service Company		
ESPC	Energy performance services contracts		
ETEK	Cyprus Scientific and Technical Chamber		
ETS	Emissions Trading Scheme		
EU	European Union		





FI	Financial Instruments
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GOs	Guarantees of origin
GW	Gigawatt
GWh	Gigawatt hour
kW	Kilowatt
kWh	Kilowatt hour
MAP	Market Incentive Programme
MARDE	Ministry of Agriculture, Rural Development & the Environment
MECI	Ministry of Energy, Commerce & Industry
MEK	Mittelstandsinitiative Energiewende und Klimaschutz
MoF	Ministry of Finance
Mtoe	Million Tonnes of Oil Equivalent
MW	Megawatt
NECAP	National Energy and Climate Action Plan
NEEAP	National Energy Efficiency Action Plan
NGOs	Non-Governmental Organizations
OEB	Cyprus Employers & Industrialists Federation
OECD	Organisation for Economic Co-operation and Development
PDA	Project Development Assistance
PF4EE	Pilot Project Private Finance for Energy Efficiency
PHEV	plug-in hybrid electric vehicle
PV	Photovoltaic
RES	Renewable Energy Sources
SME	Small and Medium-sized Enterprises
Тое	Tons of oil equivalent
ZDH	Central Association of German Crafts





Executive Summary

The EU, in an attempt to move towards a climate-neutral economy and to make the EU economy and energy system more competitive, secure and sustainable has initially set the 2020 targets and then the more ambitious 2030 targets regarding Greenhouse Gas (GHG) emissions reduction, renewable energy share increase and energy efficiency improvement.

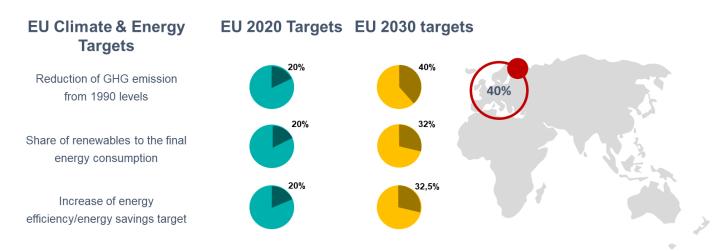


Figure 1: EU climate and energy targets for 2020 and 2030

Despite the fact that most of the EU member states are on track to achieve the 2020 targets on GHG emissions and renewable energy, more efforts should be made to keep the EU on track towards its energy efficiency target because of the increased energy consumption in the whole EU.

Although the EU has increased the number of public funds available for energy efficiency, it is necessary to further unlock private financing (in particular for energy efficiency investments) in order to meet the objectives of the EU and support the transition to a clean energy system. Many project promoters need assistance to take their energy efficiency projects from idea to implementation.

The Commission aims to guide projects through the financing process and to encourage promoters to implement their investments. Some of the available EU support schemes and funding programmes aiming to help SMEs to successfully implement energy efficiency projects are outlined in chapter 3.

The type of available support schemes and other instruments for SMEs identified in this report for the participating countries in the SMEmPower efficiency (Cyprus, Germany, Greece, Italy, Romania, Slovenia, Spain and the UK) are presented in the table below.





Table 1: Overview of the available support schemes and other instruments for SMEs in the SMEmPower participating countries

	Support Schemes for RES	Tendering schemes	Quota obligations with tradable green certificates	Grants for EE	Grants for RES	Tax incentives	Education/ Training	Transport
CYPRUS	V	X	×	V	V	X	X	X
GERMANY	X	X	×	V	V	X	V	V
GREECE	X	X	X	V	V	V	X	V
ITALY	X	X	V	V	V	V	V	X
ROMANIA	V	X	X	V	V	X	X	X
SLOVENIA	X	V	X	V	v	V	X	X
SPAIN	V	V	X	V	V	X	X	X
UK	V	X	X	V	V	X	X	X

Despite the utilization of these support schemes and other instruments in the SMEmPower participating countries, the finding of this report showed that there is a great need for a significant increase in **third party financing**, through the deployment of financing mechanisms that help SMEs avoid the upfront capital cost with repayments made out of savings and using new sources of finance via equity markets, securitization and, ultimately, bonds.

It is worth mentioning that there are many similarities among the participating countries regarding the financing mechanism that are available for SMEs. More specifically, the main financing mechanisms currently in place come from financial institutions offering loans specific for energy efficiency. Apart from the regular loans, in some participant countries such as Spain, some different types of loans can be offered. These are participatory loans, credit lines and credit policies.

Some good examples of **financing mechanisms** for EE projects applied in the participating countries are: Energy Fund-of-Funds (FoF) in Cyprus, KfW Energy Efficiency Programme - Energy Efficient and Process Heat from Renewable Energies in Germany, PF4EE Financial Instrument Piraeus Bank in Greece, Capital assets — Nuova Sabatini in Italy, Romanian Energy Efficiency Fund in Romania, Ekosklad (Eco Fund) in Slovenia, Energy performance services contracts (ESPC) in Spain and the Carbon Trust Green Business Funds in the UK.





There is a high or reasonably high potential for energy efficiency investments across Europe. However, this potential in many countries remains largely untapped. There is a significant gap between the investment opportunities and the level of investments in energy efficiency in most of the participating countries. The **main barriers** identified through the SMEmPower project, for the further promotion of energy efficiency in SMEs, are summarised below:

- 1. Low awareness about the multiple benefits of energy efficiency projects, mainly from the SMEs top-level management (decision-makers);
- 2. Lack of understanding of energy efficiency financing by banks and other financial institutions;
- 3. Lack of integrated long-term energy efficiency strategy within the SMEs;
- 4. Lack of effective support and supplementary support schemes;
- 5. Lack of motivation and commitment;
- 6. Lack of any tax incentives; and
- 7. Administrative barriers and bureaucracy.

The role of each key stakeholder for the effort of promoting energy efficiency in SMEs in each country has been defined. The **stakeholders** mapping is important as it gives a clearer picture of the competences and roles. The **key state actors** in all 8 participating countries are mainly the Energy and Finance Ministries' departments. State research centres have a primary role to play, while Universities' contribution can be considered significant, but as secondary actors. Regarding the **private sector**, various associations and federations from all participating countries play a key role, while different financial institutions, mainly banks, have a primary role. In some countries, private universities and research institutes contribute to the promotion of energy efficiency in SMEs, but with a secondary role.

The SMEmPower Efficiency project is based on a holistic framework to support Small and Medium-sized Enterprises (SMEs) in the implementation of the Energy Efficiency Directive (EED) and the improvement of their energy efficiency. The SMEmPower Efficiency project targets SMEs in 8 EU countries: Cyprus, Germany, Greece, Italy, Romania, Slovenia, Spain and the UK. This Report has been developed as part of the SMEmPower Efficiency project, funded by the European Union Horizon 2020 Research and Innovation program, under the Grant Agreement No. 847132.

The EED (2012/27/EU), which was adopted in October 2012, sets requirements for SMEs and obliges Member States to develop instruments to encourage SMEs to improve their energy efficiency. This is not surprising, since SMEs in Europe are estimated to have a consumption of approximately 13% of total energy demand (International Energy Agency, 2015) and they represent an enormous energy saving potential.

Energy efficiency is a hidden financial resource, which needs investment or support to be exploited. The majority of Member States, recognizing the importance to increase energy efficiency in SMEs, have started implementing focused financial instruments. Consequently, the aim of this report is to present the available support schemes and financial instruments in the participating countries targeted to SMEs and to identify the successful practices. In addition, this report aims to generate

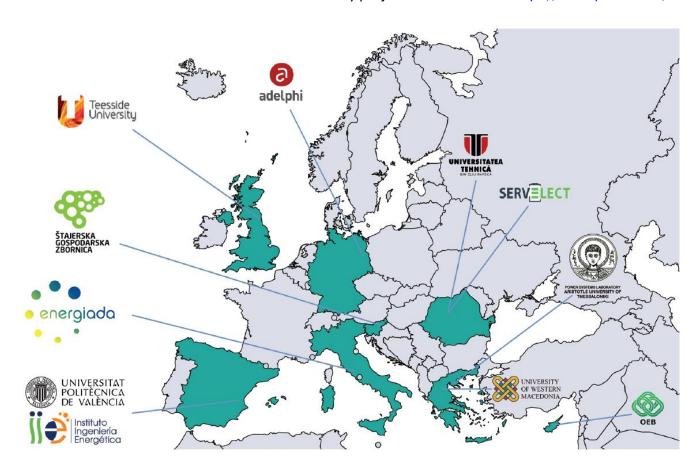




knowledge about the common barriers that prohibit the energy efficiency investments in SMEs, and to suggest improvements that could be applied in the current financial support schemes/instruments.

The report is structured in the following way: First, an overview of the 2020 and 2030 climate and energy framework is presented in Chapter 2 with a focus on the national targets of each participating country. The role of key actors is also part of the analysis in this Chapter. Chapter 3 provides a summary of current EU support schemes followed by an overview on the available RES and EE support schemes in each participating country. Chapter 4 deals with the available financial instruments, whereas Chapter 5 illustrates the common barriers for the energy efficiency investments in SMEs. Chapter 6 provides a selection of best-practice examples from other EU member states. Finally, Chapter 7 concludes the recommendations for the establishment of improved financial instruments and support schemes for the promotion of energy efficiency projects in SMEs. The report is complemented by a detailed overview of the support schemes available in the participating countries that is presented in Annex 1.

More information about the SMEmPower Efficiency project can be found at https://smempower.com/.







1. Introduction

1.1. EU & National Contexts

1.1.1. The 2020 Climate & Energy package

The European Union (EU) 2020 climate & energy package is a set of binding legislation to ensure that the EU meets its climate and energy targets for the year 2020 and it includes three main targets that were enacted in the EU legislation in 2009: 20% reduction of greenhouse gas (GHG) emissions (in comparison with 1990 levels); 20% share of renewables of the EU final energy consumption; and 20% improvement in energy efficiency, as presented in the Figure 2.

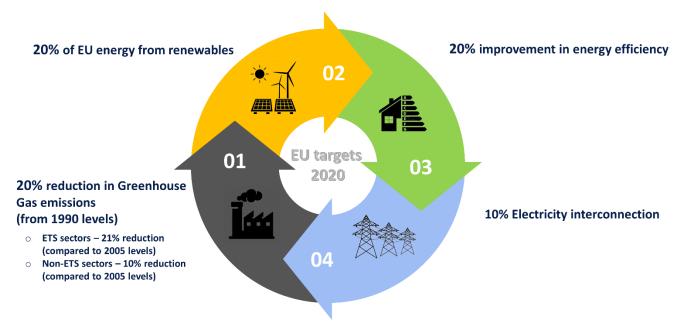


Figure 2: EU energy & climate targets for 2020

1.1.1.1 Energy efficiency

The energy efficiency target by 2020 was set under the Energy Efficiency Directive 2012/27/EU. In order to achieve this target, EU countries were required to set their own indicative national energy efficiency targets and publish 3-year national energy efficiency action plans (NEEAPs). In the context of this Directive, several important measures have been adopted throughout the EU to improve energy efficiency in Europe, including (European Commission, 2020):

- an annual reduction of 1.5% in national energy sales
- EU countries making energy efficient renovations to at least 3% per year of buildings owned and occupied by central governments
- national long-term renovation strategies for the building stock in each EU country
- mandatory energy efficiency certificates accompanying the sale and rental of buildings





- minimum energy efficiency standards and labelling for a variety of products such as boilers, household appliances, lighting and televisions (energy label and eco-design)
- the planned rollout of close to 200 million smart meters for electricity and 45 million for gas by 2020
- obligation schemes for energy companies to achieve yearly energy savings of 1.5% of annual sales to final consumers
- large companies conducting energy audits at least every four years
- protecting the rights of consumers to receive easy and free access to data on real-time and historical energy consumption

1.1.1.2 Renewable energy sources

In order to increase the share of renewable energy sources in the EU, each member country was obliged to set a binding national target for raising the share of renewables in their energy consumption by 2020. Although, this target was not the same for all member countries, the overall effect should enable the EU as a whole to reach its 20% target for 2020 (more than double the 2010 level of 9.8%) as well as a 10% share of renewables in the road transport sector.

1.1.1.3 Greenhouse gas emissions reduction targets

Binding annual greenhouse gas emission targets for Member States for the periods 2013–2020 and 2021–2030 were established under the Effort Sharing legislation. These targets concern emissions from most sectors not included in the EU Emissions Trading System (EU ETS), such as transport, buildings, agriculture and waste. These sectors will deliver a reduction of around 10% in total EU emissions and together with a 21% reduction in emissions covered by the EU ETS sectors by 2020, will allow the EU to achieve its climate targets for 2020 - 20% reduction in total GHG emissions, compared with 1990 levels, equivalent to a 14% reduction compared with 2005.

The national emission targets set for 2020, were based on Member States' relative wealth, measured by gross domestic product (GDP) per capita. These targets ranged from a 20% reduction by 2020 (from 2005 levels) for the richest Member States to a 20% increase for the least wealthy one (although they were still projected to have to make efforts to limit emissions) (European Commission, 2020).

An overview of the 2020 binding targets on renewables, energy efficiency and greenhouse gas emissions for the participating countries in the SMEmPower project (Cyprus, Germany, Greece, Italy, Romania, Slovenia, Spain and the UK), is listed in Table 2.





Table 2: Overview of the 2020 targets amongst the participating countries in the SMEmPower project (European Renewable Energy Council, 2011)

2020 Targets	EU	Cyprus	Germany	Greece	Italy	Romania	Slovenia	Spain	UK
Renewable Energy Sources (RES)									
Total Share of energy from RES in the gross final consumption of energy	20%	13%	18%	18%	17%	24%	25,3%	20,8%	15%
 RES – Heating and cooling (indicative) 	-	23,5%	14%	19,7%	17,1%	22,1%	30,8%	17,3%	12%
RES – Electricity (indicative)	-	16%	35%	39,8%	26,4%	42,8%	39,3%	39%	31%
RES – Transport (indicative)	-	4,9%	13,2%	10,1%	10,1%	10%	10,5%	11,3%	10,3%
RES – Road Transport (binding)	-	10%	10%	10%	10%	10%	10%	10%	10%
Energy Efficiency									
Final Energy Consumption (Mtoe)	1.086	1,8	194,3	18,4	124	30,3	5,1	91	129,2
Primary Energy Consumption (Mtoe)	1.483	2,2	274,7	24,7	158	43	7,1	128	177,6
Greenhouse Gas Emissions									
Overall greenhouse gas emissions compared to 2005	-20% (compared to 1990 levels)	-5%	-14%	-4%	-13%	+19%	+4%	-27%	-16%





1.1.2. The 2030 Climate & Energy framework

The EU has further adopted new targets and measures to make the EU's economy and energy system more competitive, secure and sustainable. These include objectives for reducing GHG emissions and increasing the use of renewable energy sources and propose a new governance system and performance indicators. A binding target was set to cut emissions in the EU by at least 40% below 1990 levels by 2030. This will enable the EU to move towards a climate-neutral economy and implement its commitments under the Paris Agreement (European Commission [EC]).

The EU has set the following key targets for 2030 (Figure 3):

- At least 40% cuts in greenhouse gas emissions (from 1990 levels);
- At least 32% share for renewable energy; and
- At least 32.5% improvement in energy efficiency.

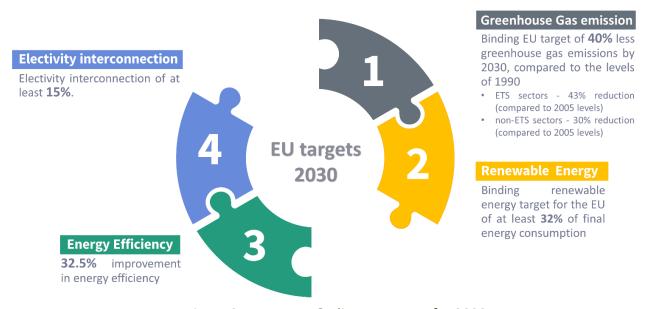


Figure 3: EU energy & climate targets for 2030

1.1.2.1 Energy efficiency

Even though most of the EU member states are in tract with 2020 targets, more efforts should be put in order to achieve 2030 targets, as energy efficiency is in centre of new policies. In December 2018, the revised Energy Efficiency Directive entered into force (amending Directive EU (2018/2002) updating some specific provisions and introducing new elements. Above all, it establishes the EU energy efficiency target for 2030 of at least 32.5% (compared to projections), with a clause for a possible upwards revision by 2023.

The revised Directive will encourage using energy more efficiently and will lead to (European Commission, 2019):





- reduced energy consumption for households and businesses thereby lowering energy bills
- lower consumption, making Europe less reliant on energy imports
- incentives for producers/manufacturers to use new technologies and innovate
- more investment, for example in the building sector, thereby creating jobs
- clearer information in household bill.

1.1.2.2 Renewable energy sources

In November 2016, the European Commission published its 'Clean Energy for all Europeans' initiative. As part of this package, the Commission adopted a legislative proposal for a recast of the Renewable Energy Directive which in December 2018, the revised renewable energy directive 2018/2001/EU entered into force.

Under the Revised Renewable Energy Directive, the EU has adopted very ambitious renewable energy policies. A new renewable energy binding target for the EU for 2030 of 32% was set, including a review clause by 2023 for an upward revision of the EU level target.

The new policy framework for renewables includes among other (European Commission, 2019):

- provides long-term certainty for investors and speeds up procedures to receive permits for projects
- facilitating (jointly acting) renewables self-consumers. Puts the consumer at the centre of the energy transition with a clear right to produce own renewable energy
- facilitating renewable energy communities
- increases competition and market integration of renewable electricity
- accelerates the uptake of renewables in the heating/cooling and transport sectors
- strengthens the sustainability of bio-energy and promotes innovative technologies
- provision of 'guarantees of origin' (GOs) to be awarded to all renewables (including renewable gas such as biomethane), and optionally also to non-renewable energy projects. Projects that already receive financial support under a support scheme may be excluded from receiving GOs. Alternatively, the support scheme must take into account the market value of the GOs.

1.1.2.3 Greenhouse gas emissions reduction targets

The binding target to reduce emissions in the EU by at least 40% in 2030 compared to 1990 levels was set.

To achieve the target:

- the EU ETS sectors will have to cut emissions by 43% (compared to 2005).
- non-ETS sectors will need to cut emissions by 30% (compared to 2005). Binding targets for each Members States was set in order to this target.





As part of the European Green Deal, the Commission aims to propose raising the EU target to at least 50% and towards 55% in a responsible way.

1.1.2.4 Governance system/ National energy and climate plans

On 24 December 2018, the regulation on the governance of the Energy Union and climate action entered into force. This regulation stresses the importance of meeting the EU's 2030 energy and climate targets and sets out how EU countries and the Commission should work together, as well as how individual countries should cooperate to achieve the Energy Union's goals.

It also takes into account the fact that different countries can contribute to the Energy Union in different ways. In order to achieve the respective targets, each Member State was required to submit an integrated National Energy and Climate Action Plan (NECAP), covering a ten-year over 2021 to 2030. The first drafts of the NECP were required to be submitted by the end of 2018 and were assessed by the Commission regarding whether they meet the set targets for 2030, with final NECPs being submitted at the end of 2019.

Under the governance system, Member States are required to develop national long-term strategies and ensure consistency between these strategies and their NECPs (Charalambous et al., 2019).

An overview of the 2030 targets as defined in the NECPs in the participating countries in the SMEmPower project (Cyprus, Germany, Greece, Italy, Romania, Slovenia, Spain and the UK), is listed in Table 3.

1.1.2.5 European Green Deal

In addition, the European Commission in December 2019, has adopted the European Green Deal which is a roadmap for **making the EU's economy sustainable**. The green deal will work through a framework of regulation and legislation setting clear targets to achieve a goal of net zero carbon emissions by 2050 at EU level; and a 50-55% cut in emissions by 2030 (compared with 1990 levels).





Table 3: Overview of the objectives of 2030 among the participating countries in the SMEmPower project (European Commission, 2020)

2030 Targets	EU	Cyprus	Germany	Greece	Italy	Romania	Slovenia	Spain	UK
Renewable Energy Sources (RES)									
Total Share of energy from RES in the gross final consumption of energy	32%	23%	30%	35%	30%	30,7%	27%	42%	27%
 RES – Heating and Cooling (indicative) 	-	39%	27%	43%	33,9%	33%	30,5%	31%	50%
RES – Electricity (indicative)	-	26%	65%	61%	55%	49,4%	47,4%	74%	47%
RES – Transport (indicative)	-	-	-	-	-	-	-	-	-
RES – Road Transport (binding)	-	14%	Not provided	19%	22%	14,2%	10,1%	28%	12,4%
Energy Efficiency									
Final Energy Consumption (Mtoe)	956	2	Not provided	17,38	103,8	25,7	Not provided	79	154,16
Primary Energy Consumption (Mtoe)	1.273	2,4	240,4	20,55	125,1	32,3	7,1	104	185
Greenhouse Gas Emissions	Greenhouse Gas Emissions								
Overall greenhouse gas emissions compared to 2005	-40% (compare d to 1990 levels)	-24%	-38%	-16%	-33%	-43,9%	-15%	-50%	-37%





1.2. The role of key actors

The major stakeholders (State, Private and Civil) have been mapped as key, primary and secondary, as presented in the following Tables for each country. The role of each key stakeholder for the effort of promoting energy efficiency in SMEs in each country has been defined. The stakeholders mapping is important as it gives a clearer picture of the competences and roles.

1.2.1. Cyprus

For **Cyprus** the key actors, regarding the **Government (State)**, are several departments that are involved either in the policy making of climate and energy and/or in the financing sector as shown in the Table 3 below. The key state actors regarding the implementation of NECAP are the Ministry of Energy, Commerce & Industry (MECI) and Ministry of Agriculture, Rural Development & the Environment (MARDE). Directorate General of European Programmes, Cooperation and Development (DG EPCD) and Ministry of Finance (MoF) can play clear role.

Regarding the primary actors, the Research & Innovation Foundation of Cyprus plays a clear role, having recently undertaken the promotion of financing innovation in SMEs. State universities and the Cyprus Scientific and Technical Chamber (ETEK) which is the technical advisor to the State and the umbrella organisation for all Cypriot engineers, also play a significant role, but only as secondary actors.

Regarding the **private sector**, key actors include businesses and the associations of business such as the Cyprus Energy Efficiency Businesses Association (represents companies active in the field of energy saving and energy services companies) and of course the Cyprus Federation of Employers & Industrialists (OEB) which is the representative organization of SMEs covering all sectors of the economy. Banks, Investors and bank Association can be considered as primary actors. Private universities and other research institutes also play a role as secondary actors.

When it comes to **Civil Society**, a limited role emerges through the environmental non-governmental organizations (NGOs), hence being classified as primary actors and not as key actors.

Table 4: Stakeholders in Cyprus

	State	Private sec	tor	Civil society
Key	 Ministry of Energy, 	Enterprises/		
stakeholder	Commerce & Industry	 Associations of 	f	
	(MECI)	Industries & B	usinesses	
	 Ministry of Agriculture, 	(Cyprus Federa	ation of	
	Rural development & the	Employers &		
	Environment (MARDE)	Industrialists		
	Directorate General of			
	European Programmes,			





	Cooperation and Development (DG EPCD) Ministry of Finance (MoF)	 Cyprus Energy Efficiency Businesses Association) 	
Primary	 Research & Innovation Foundation Research and Innovation Council 	 Banks (all private banks e.g. Bank of Cyprus, Hellenic Bank, Ancoria, Eurobank, National Bank of Greece etc) Investors (many private investors) 	 NGOs mainly environmental (Federation of Environmental Organisations)
Secondary	 State Universities (University of Cyprus,	 Universities (University of Nicosia, European University) Other research institutes (Cyprus Institute) 	

1.2.2. Germany

The key actors in **Germany** are three federal Ministries in charge of setting renewable shares and energy efficiency targets, implementing, regulating and financing GHG mitigation programmes. The Federal Ministry of the Environment (BMU) and the Federal Ministry of Economic Affairs and Energy (BMWi) are in charge of setting sector targets. The BMWi is also heavily involved with drafting financial support programmes to increase energy efficiency and renewable shares in the industry. The Federal Office of Economics and Export Control (BAFA) is one of the main implementers of the programmes, they check grant applications and accredit energy auditors among other activities.

The **private sector** also offers some key actors in the fields of renewables and energy efficiency in Germany. The German Energy Agency (dena) conducts studies and projects regarding energy system optimization, energy efficiency, and increasing renewables, they take a holistic approach to the energy transition and closely advise the government. The German Industry Initiative for Energy Efficiency (DENEFF) includes some of the largest German companies and plays a crucial role in promoting energy efficient practices in a range of industries.

The most important primary actor listed here is the KfW from the private sector. The KfW main provider of credit lines for investments in energy efficiency measures and renewable generation for both households and businesses. Other private banks also play an important role in financing these investments but do not have the backing of the state and do not have such favourable credits.





Table 5: Stakeholders in Germany

	State	Private sector	Civil society
Key stakeholder	 Ministry for Economic Affairs and Energy (BMWi) Federal Office of Economics and Export Control (BAFA) Federal Ministry for the Environment, Nature Conservation Building and Nuclear Safety (BMU) 	 Federal Agency for Energy Efficiency (BfEE) Central Association of German Crafts (ZDH) German Industry Initiative for Energy Efficiency (DENEFF) German Energy Agency (dena) German Association for Small and Medium-sized Businesses (BVMW) German Association of Chambers of Commerce and Industry (DIHK) Association of Consulting Engineers (VBI) 	
Primary	 German Federation of Industrial Research Associations (AiF) Institute for SMEs (IfM) 	KfWCommerzbankSparkasse	
Secondary	Heinz-Piest Institute for Craftsmanship and Technology at the Leibniz University of Hannover		

1.2.3. Greece

For **Greece**, there are several key actors regarding the **Government (State)** that play a vital role towards the promotion of energy efficiency measures in SMEs. Specifically, the Ministry of Environment and Energy, along with the Center for Renewable Energy Sources are the most responsible actors for the implementation of Energy Efficiency Directive. However, the Ministry of Development & Investments, the Ministry of Finance, the 13 Administrative Regions, along with the Managing Authority of Operational Programme 'Competitiveness, Entrepreneurship & Innovation' are also important actors.





The main State's primary actors for energy efficiency include the National Observatory of Athens with its research institute of Environmental Research and Sustainable Development. Also, several universities, namely the National Technical University of Athens, which is also involved in the implementation of energy related Greek Laws, the Aristotle University of Thessaloniki and the University of W. Macedonia (project partners), and the Democritus University of Thrace act as secondary State actors, by their relevant research activities.

Regarding the **private sector**, key actors include the Hellenic Federation of Enterprises (SEV), the Technical Chamber of Greece, which among others provides consultation and professional training to the energy related engineers, the Panhellenic Association of Certified Energy Auditors, whose members are responsible for the energy audits, along with the Centre for Research and Technology, which is involved in several environmental and energy related projects. The four systemic Greek banks are also important private sector actors.

Finally, NGOs like Greenpeace and WWF Greece can be considered as **Civil Society** primary actors, according to their activities.

Table 6: Stakeholders in Greece

	State	Private sector	Civil society
Key stakeholder	 Ministry of Environment and Energy Ministry of Development & Investments Ministry of Finance 13 Administrative Regions Center for Renewable Energy Sources (CRES) Managing Authority of Operational Programme "Competitiveness, Entrepreneurship & Innovation" 	 Hellenic Federation of Enterprises Technical Chamber of Greece Panhellenic Association of Certified Energy Auditors 	
Primary	 Center for Renewable Energy Sources National Observatory of Athens 	Piraeus BankAlpha BankNational BankEurobankOther banks	 Greenpeace, WWF Greece
Secondary	 Greek universities and public research centers 		





1.2.4. Italy

In Italy the **key stakeholders** in the energy sectors are several and they span among the three categories identified in the table below. For public sector there are two Ministries and an official research institute, while in the privatte sector there are several associations that gather both professionals and companies. Finally in the civil sector there are two main bodies specifically for energy, one is related to the management of services (GSE) and the other one is for energy market trade (GME).

As per the **primary actors**, Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) represents the main reference body in Italy, close also to public institutions. Another important actor is also the Federazione Italiana per l'uso Razionale dell'Energia (FIRE), which is focussed on the energy efficiency and very proactive with energy professionals.

Finally as **secondary actors** that still play a fundamental role in influencing the energy sector for SMEs there are: academia, in the table below there are some examples; other subjects as Accredia, in charge of the accreditation of professionals, and Fabricaintelligente-CFI, an association of SMEs and large businesses which aims to drive a sustainable economic growth.

Table 7: Stakeholders in Italy

	State	Private sector	Civil society
Key stakeholder	 Ministry of Economic Development (MISE) Ministry of Environment (MINAMBIENTE) Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA) 	 TERNA S.p.A. Confindustria Confindustria Energia Unindustria Confederazione Nazionale dell'Artigianato e della Piccola e Media Impresa (CNA) CNA Energia Associazione Energy Manager Federesco ESCOs 	 Gestore dei Servizi Energetici S.p.A.(GSE) Gestore dei Mercati Energetici (GME)
Primary	 Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) 		 Federazione Italiana per l'uso Razionale dell'Energia (FIRE)





Secondary	Milan Polytechnic	• Accredia
	University (POLIMI)	• Fabbrica
	• Dipartimento di	Intelligente
	Ingegneria dell'Impresa	
	University of Tor Vergata	
	(DII)	

1.2.5. Romania

The **legal authorities** established in accordance with EU Commission the energy efficiency and carbon emissions reduction trading schemes. The Ministry of European Funds is handling the allocation of the funding under several programmes for energy efficiency, in both industry and buildings. The Ministry of Environment is handling the allocation of the funding under other programmes for carbon footprint reduction.

At this moment, the Ministry of Energy is preparing a dedicated energy efficiency fund, but with no public details regarding the effective implementation.

The **civil professional** society is represented by the energy auditors and managers professional association, by ESCOROM – the patronal association of energy service companies and by other relevant to industries associations.

Table 8: Stakeholders in Romania

	State	Private sector	Civil society
Key stakeholder	 ANRE - Romanian Energy Regulatory Authority Ministry of Economy, Energy and Business Environment 	 ESCOROM SMEs Romanian Patronal Association Romanian Industrial Parks Association The Association of Romanian Building Energy Auditors 	SAMER - the association of auditors and energy managers in Romania
Primary		 BCR – Romanian Commercial Bank BRD - Groupe Société Générale Banca Transilvania UniCredit Bank 	 CNR-CME - The Romanian National Committee of the World Energy Council





		• EximBank	 AEE - Association of Energy Engineers
Secondary	 Technical Universities in Romania (the Technical University of Cluj-Napoca, Polytechnic University of Bucharest, Politehnica University of Timisoara, Technical University of lasi) 		

1.2.6. Slovenia

The Energy Directorate, part of the Ministry of Infrastructure is the key Government (State) stakeholder in **Slovenia**. The same Ministry is also responsible regarding the implementation of NECAP.

Regarding the primary actors in the **public (State)** sector, the Jožef Stefan Institute (and its Energy Efficiency Centre) serves as a public entity that analyses energy efficiency data and its indicators. They also promote the implementation of energy efficiency policies, measures and promote innovation in new energy technologies. Slovenian Export and Development Bank (SID Banka) also promotes sustainable development and improves the competitiveness of the Slovene economy by offering loans, and by providing and promoting long-term financial services designed to supplement financial markets in Slovenia. State universities (University of Ljubljana and University of Maribor primarily) serve as key organizations in educating and training Slovenian engineers (energy, mechanical, electrical, chemical, civil engineers etc.).

Regarding the **private sector**, the key stakeholder is the Center of Energy Efficient Solutions which is a network of advanced companies and organizations from different sectors which strive that Slovenia becomes the leading regional hub for the development of green technologies in the future. The Center also boosts innovative climate-neutral circular economy and green technologies that meet the environmental energy challenges. Banks, investors and bank associations can be considered as primary actors in the private sector. NGOs are given a limited role, when it comes to stakeholders in Slovenia, yet they are still part of the Civil Society, an example of Focus and DTE is given in Table 9 below.





Table 9: Stakeholders in Slovenia

	State	Private sector	Civil society
Key stakeholder	 Ministry of Infrastructure, Energy Directorate 	 Center of Energy Efficient Solutions 	
Primary	 Jožef Stefan Institute, Energy Efficiency Centre; SID Banka; Petrol 	Banks (in private ownership)	 Focus – civil society for conatural development; DTE – Civil society for sustainable energy
Secondary	University of Ljubljana;University of Maribor		

1.2.7. Spain

The main stakeholders in **Spain** can be classified at the state level, at the private level and at the social level. As regards the **state level**, several administrations play a fundamental role in the development of climate and energy policies (Ministry for the Ecological Transition and the Demographic Challenge (MITECO) and the Ministry of Industry, Trade and Tourism (MINCOTUR), among others). Similarly, the Institute for Energy Diversification and Saving (IDAE) plays a fundamental role at the state level, while other state research centres (CSIC; CIEMAT; CENER; CDTI; etc.) participate but as primary actors. In addition, public technical and engineering universities take on a secondary role in promoting energy efficiency.

At the **private level**, different business associations and institutions related to the energy sector are actively and significantly involved, such as the Association of Energy Efficiency Companies (A3e); National Association of Energy Service Companies (ANESE); Foundation for Energy Efficiency and the Environment (f2e). With a role as primary actors, there are banks and private investors when granting financing to energy efficiency projects. Lastly, this category also includes private technical and engineering universities, but in a more secondary role.

Finally, at the **social level**, some environmental and energy non-governmental organisations (NGOs) (Greenpeace; Green Fund; WWF; etc.) take on the role of primary actors in promoting energy efficiency in Spain.





Table 10: Stakeholders in Spain

	State	Private sector	Civil society
Key stakeholder	 General State Administration (Ministry for Ecological Transition and the Demographic Challenge (MITECO); Ministry of Industry, Trade and Tourism (MINCOTUR); Ministry of Science and Innovation (MCI), Ministry of Transport, Mobility and Urban Agenda (MITMA); Ministry of Enance; Ministry of Labour, Migration and Social Security; etc.) Regional and local administrations Institute for Energy Diversification and Saving (IDAE) Spanish Electricity Network (REE) National Commission for Markets and Competition (CNMC) 	 Business and industrial associations in the energy sector (Association of Energy Efficiency Companies (A3e); Association of Energy Services Companies (ANESE); Foundation for Energy Efficiency and the Environment (f2e); Wind Energy Business Association (AEE); Association of Renewable Energy Promoters (APPA); etc.) Energy and energy efficiency auditing companies (ENACE, Creara, Remica, etc.) 	
Primary	 Research centres (Superior Center of Scientific Research (CSIC); Centre for Energy, Environmental and Technological Research (CIEMAT); National Centre for Renewable Energies (CENER); Centre for 	 Private banks (Banco Santander; Sabadell; European Investment Bank (BEI); Abanca; Bankia; etc.) Private investors Funds (European Energy Efficiency Fund (FEEE); 	 Environmental and energy NGOs (Greenpeace; Energy without Borders; Green Fund; WWF; Friends of the Earth; Ecologists in Actions;





	Technological and Industrial Development (CDTI); State Research Agency (AEI); etc.) • European programmes (HORIZON 2020; INTERREG EUROPE; etc.)	National Energy Efficiency Fund (FNEE); European Regional Development Fund (FEDER) Energy Efficiency Financial Institutions Group (EEFIG) Private Finance Facility for Energy Efficiency (PF4EE)	Ecology and Development; etc.)
Secondary	1. Polytechnic Universities of Spain (Cartagena, Cataluña, Madrid, Valencia) Technical Universities in Spain (Universidad Autónoma de Madrid, Universidad Complutense de Madrid, Universidad de Alicante, de Sevilla, Universidad Miguel Hernández de Elche, del País Vasco, Universidad Pompeu Fabra, Universidad de Valencia, etc.)	Private Spanish Universities (Universidad CEU Cardenal Herrera, UCAM Universidad Católica de Murcia, Universidad Alfonso X el Sabio, Universidad Camilo José Cela, Universidad Católica de Valencia San Vicente Mártir, Universidad CEU San Pablo, Universidad Europea Miguel de Cervantes, etc.)	

1.2.8. United Kingdom

In the **UK**, the Department for Business, Energy & Industrial Strategy (BEIS) is a ministerial department, supported by 41 agencies and public bodies. BEIS allocate science budget and funds the UK Research and Innovation (UKRI), which is a quasi-autonomous non-governmental organization of the United Kingdom (UK) that directs research and innovation funding. UKRI brings together seven existing research councils, Innovate UK and the Research and Knowledge Exchange functions of the Higher Education Funding Council for England (HEFCE) into one unified body. These were established





in 2018 by the higher education and research act, working in partnership with universities, research organizations, businesses and charities who play a role as secondary actors.

More specifically, research councils such as Natural Environment Research Council (NERC), Economic and Social Research Council (ESRC), Engineering and Physical Sciences Research Council (EPSRC) are the main primary funders for energy efficiency and environmental and climate change research and innovation.

Furthermore, the Carbon trust is an independent company, set up by the government in 2001, who work with business and the public sector to reduce carbon emissions and develop commercial low carbon technologies. They offer advice, run events and produce publications as well as funding the development and deployment of low carbon technologies, and unusually for a government-funded body, they can offer venture capital funds. In addition, the Carbon Trust finances a number of loan funds - including an interest-free loan for small and medium sized enterprises for energy-efficient equipment.

Table 11: Stakeholders in UK

	State	Private sector	Civil society
Key stakeholder	 BEIS (Business, Energy and industrial Strategy), innovate UK UKRI (UK Research & Innovation) ISR (Industrial Research Strategy Research) UKAEA (UK Atomic Energy Authority) LEP (local enterprise partnership) 	 Ofgem (office of gas and electricity market) D2N2(Derby, Derbyshire, Nottingham, Nottinghamshire) 	 Carbon Trust Energy System Catapult
Primary	 Green Finance Institute UK Energy research Centre Innovate UK EPSRC (Engineering and Physical Sciences Research Council) NERC (Natural Environmental Research Council) 	 GIB (Green investor Bank) RBS (royal Bank of Scotland) Aviva Equitix 	• Carbon Trust





Secondary		UK Energy research
	 DTA Energy (Doctorial 	center Energy Institute,
	Training Alliance)	(Sheffield University),
		Centre for integrated
		energy research (Leeds
		university), Energy
		Transition Research (
		Cambridge University),
		Energy Systems Research
		Institute (Cardiff
		University)



2. Current EU Support Schemes and funding programmes for SMEs

Although the EU has increased the number of public funds available for energy efficiency, it is necessary to further unlock private financing (in particular for energy efficiency investments) in order to meet the objectives of the EU and support the transition to a clean energy system, as described in the previous chapter.

It is projected that an additional amount of €177 billion per year will be required over the period 2021-2030 in order to reach the EU's energy and climate objectives for 2030 (ManagEnergy, 2018).

Many project promoters, who may be cities, individuals, or businesses, need assistance to take their energy efficiency projects from idea to implementation. The Commission aims to guide projects through the financing process and to encourage promoters to implement their investments.

Some of the available EU support schemes and funding programmes aiming to help businesses, regions, and countries to successfully implement energy efficiency projects are outlined in the Figure 4 below.

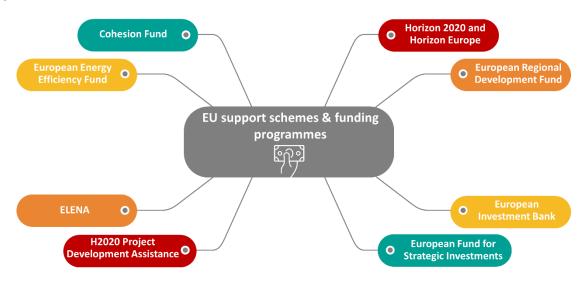


Figure 4: EU support schemes and funding programmes related to energy efficiency

The Table 12 provides description of the several available EU support schemes and funding programmes aiming at supporting businesses, regions, and countries to successfully implement energy efficiency projects.





Table 12: EU support schemes and funding programmes related to energy efficiency

EU support schemes/funding programmes	Description
Cohesion Fund	The EU's Cohesion Fund aims to reduce economic and social disparity between EU countries and promote sustainable development.
	The fund supports energy-related projects that benefit the environment for example by reducing greenhouse gas emissions, increasing the use of renewable energy or improving energy efficiency.
	Part of the Cohesion Fund is used to implement the energy union strategy with the help of the Energy and Managing Authorities Network (EMA) (European Commission, 2020).
Horizon 2020 and Horizon Europe	Around €5,9 billion goes towards energy research and innovation projects in the EU's Horizon 2020 programme. These projects aim at the creation and improvement of clean energy technologies, such as smart energy networks, tidal power, and energy storage.
	The Innovation and networks executive agency (INEA) is running parts of Horizon 2020 in the areas of transport and energy. EASME - the executive agency for SMEs - is providing support through Horizon 2020 for innovation of energy efficient technologies and solutions for buildings, heating and cooling and more (European Commission, 2020).
European Regional Development Fund	The European Regional Development Fund (ERDF) aims to reduce economic and social disparity between the EU's regions.
	One of the ERDF's four priority areas for 2014-2020 is 'the low carbon economy'. A minimum percentage of ERDF funding must be channelled towards low carbon projects in regions: 20% for more developed regions, 15% for transition regions and 12% for less developed regions.
European Investment Bank	The European Investment Bank (EIB) helps finance energy projects by providing companies with loans and other financial instruments. The EIB also provides advice and expertise on administration and project development.
	EIB financed energy projects include renewable generation, infrastructure, and new technologies (European Commission, 2020).
European Fund for Strategic Investments	The European Fund for Strategic Investments (EFSI) is a joint initiative between the EIB Group (the EIB and the European Investment Fund) and the Commission. The EFSI supports strategic investments in key areas such





EU support schemes/funding programmes	Description
	as infrastructure, energy efficiency and renewable energy, research and innovation, environment, agriculture, digital technology, education, health and social projects – all essential to speed up the decarbonisation of the EU economy. It also helps small businesses to start up, to grow and to expand by providing risk finance.
	It aims to tackle the lack of confidence and investment which resulted from the economic and financial crisis, and to make use of liquidity held by financial institutions, corporations and individuals at a time when public resources are scarce.
	The EFSI is key to unlock private financing for energy efficiency and renewable in buildings at a greater scale. (European Commission, 2020)
H2020 Project Development Assistance	The Project Development Assistance (PDA) is a technical assistance facility managed by the Executive Agency for SMEs (EASME) under the Horizon 2020 Energy Efficiency Call and is aimed at public authorities and their groupings, energy service companies, public-private infrastructure operators and bodies, retail chains and large property owners and services/industry. The PDA supports building technical, economic and legal expertise needed for project development and leading to the launch of concrete sustainable energy investments, which are the final aim and deliverable of the projects.
	The PDA focus on small and medium-sized energy investments of at least €7.5 million and up to €50 million, covering up to 100% of eligible project development costs (Covenant of Mayors – Europe Office, 2019).
ELENA	ELENA is a joint initiative by the EIB and the European Commission under the Horizon 2020 programme. ELENA provides grants for technical assistance focused on the implementation of energy efficiency, building integrated-renewable energy, innovative transport and mobility projects. The ELENA can be used to finance costs related to feasibility and market studies, energy audits, financial and programme structuring, business plans, as well as to the preparation of tendering procedures, contractual arrangements and project implementation units. ELENA covers investments above €30 million financing the 90% of project
	development costs (Covenant of Mayors – Europe Office, 2019).





EU support schemes/funding programmes	Description
European Energy Efficiency Fund	The EEE-F supports all activities necessary to prepare investments into sustainable energy projects.
	The fund offers senior and junior loans, guarantees or equity participation in projects launched by public authorities, public bodies, or ESCO's working on a public contract.
	The eligibility criteria are:
	the beneficiary should be a public authority or a public-owned company Company
	 the annual primary energy savings should reach at least 20% and, for renewables energy technologies, reduce CO2 emissions by 20% achieve minimum leverage factor of 20
	 the financing of the investment volume by the Fund should range between € 5 – 25 million (Covenant of Mayors – Europe Office, 2019).

The available on-going RES & energy efficiency support schemes for SMEs in Cyprus, Germany, Greece, Italy, Romania, Slovenia, Spain and the UK are outlined in the following subchapters. A detailed description of these schemes and other energy related schemes can be found in ANNEX 1.





2.1. Available RES & EE support schemes in Cyprus

Table 13: Support schemes in Cyprus

Туре	Target Group	Description
Support	Households,	Net-metering
mechanism	SMEs	This is a support scheme for the production of electricity from renewable energy sources for own use. Currently, the Net-metering category is applied for small scale photovoltaic systems with capacity up to 10KW, for all consumers (residential and non-residential).
Support	SMEs	Net-billing for PV and Biomass
mechanism		This scheme is related to the installation of PV systems or Biomass Electricity Systems which are implemented only in the premises of SMEs (under commercial or industrial pricing) for the purpose of generating electricity for their own use with the methodology of netbilling.
		The installed capacity of each installed RES system ranges from 10kW to 10MW per installation.
Support	Public buildings,	Net-billing for CHP
mechanism	SMEs	Included in the category of net-billing are the combined heat and power (CHP) units, which can be located on any commercial or industrial premise (e.g. commercial or industrial units, public buildings, camps, schools, agricultural and livestock units).
		The installed power of each CHP system cannot exceed 5MW per installation and the total power for all units allocated to this scheme is 20MW.
Support	Households,	Stand-alone PV systems
mechanism	SMEs	Any consumer that is interested in submitting application for autonomous PV systems and stand-alone systems of biomass / biogas exploitation that are not connected to the grid is eligible to submit an application.
Support Scheme	SMEs	Rural development programme 2014-2020 of the Ministry of Agriculture, Rural Development and Environment.





Туре	Target Group	Description
		Subsidy is granted under the scheme for actions that involve purchasing and installing PV systems used to generate energy for own use in agricultural holdings/enterprises.
Grant scheme	SMEs	Energy Audits for SMEs
		This government endorsed grant will supplement 30% of the costs of an energy audit in SMEs, up to a maximum of € 2.000. Total available budget: € 200.000.
Grant scheme	SMEs	Eco-Management and Audit Scheme (EMAS) for enterprises and public & private organizations
		This scheme aims to increase the environmental performance of SMEs through the establishment of an environmental management system as foreseen in Regulation 1221/2009 / EC. It concerns the provision of subsidies to enterprises that intend to establish an Eco-Management and Audit Scheme (EMAS).
Support	All buildings	Building factor incentive
instrument	(Households, SMEs)	If a building is energy class A in the EPC and 25% of its energy consumption comes from RES, an additional 5% building factor can be provided.

2.2. Available RES & EE support schemes in Germany

Table 14: Support schemes in Germany

Туре	Target Group	Description
Grant scheme	Households, SMEs, Local Authorities, NGOs	In the framework of the Market Incentive Programme (MAP), The Federal Office for Economic Affairs and Export Control (BAFA) provides investment support for heat produced in existing buildings from solar, biomass and geothermal energy.
Grant scheme	SMEs	Energy Efficiency Incentive Programme (APEE) The BAFA grants additional incentives for the optimisation of an entire heating system that replaces a particularly inefficient system based on fossil heat production, without the use of condensing boiler technology or fuel cells.





Туре	Target Group	Description
Grant scheme	Grant scheme Households, SMEs, NGOs	Subsidy for electric, plug-in and hydrogen vehicles
		It aims to support at least 300.000 vehicles. The costs of so called "Umweltbonus" ("Environmental Bonus") is equally shared between the federal government and the automotive industry. The maximum net price of a basic model is € 60.000.
		The amount of support is \in 4.000 for electric and hydrogen vehicles and \in 3.000 for externally chargeable hybrid-electric vehicles.
Support	SMEs	The SME Initiative for Energy Transition and Climate Protection
mechanism		(Mittelstandsinitiative Energiewende und Klimaschutz [MEK]) The MEK is the most prevalent support scheme for SMEs in Germany, encouraging implementation of the energy transition. It provides SMEs with a service to easily find information and financing opportunities to support them through the energy transition.
Grant scheme	SMEs	Federal Funding for Energy Consulting in Medium-sized Companies SMEs are provided with a grant covering 80% of the cost of a professional energy audit, with the level of support depending on the energy expenditure.

2.3. Available RES & EE support schemes in Greece

Table 15: Support schemes in Greece

Туре	Target Group	Description
Grant scheme	SMEs	Improving the energy efficiency of SMEs*
		Aim of this programme is to support micro, small and medium-sized enterprises in order to improve their energy efficiency. The action would be funded by the European Union, and more specifically by the European Regional Development Fund (ERDF) and by National Resources, through the Operational Programme 'Competitiveness, Entrepreneurship, Innovation' (OP-CEI) 2014-2020.
Grant scheme	SMEs	Enhancing of heating and cooling systems using Renewable Energy
		Resources (RES) and Combined Heat and Power (CHP) systems for self-consumption*
		In the framework of this action the following measures could be invested:





Туре	Target Group	Description
		 Installation of new or replacement of the already existing heating or/and cooling system, along with the hot water system, integrating RES. Installation of high efficiency CHP system taking advantage of RES for self-consumption operation. Supportive actions, such as Energy Consultants.
Grant scheme	SMEs	Modern manufacturing*
		The main goal of this programme is to finance business plans for SMEs. One of its three distinct choices was to improve energy efficiency. In particular, the energy efficiency component for SMEs, focused on providing support to boost the energy efficiency of their production processes. Also, on their preparation for the implementation of future Community standards on energy consumption in the production of goods and related services.
Grant scheme	SMEs	Competitiveness Toolkit for SMEs
		Under the auspice of PA 2014-2020, the programme named 'Competitiveness Toolkit for SMEs' have been implemented since February 2019. This programme does not aim solely at the improvement of energy efficiency, but among other types of expenditure, the expenditure on equipment for the improvement of energy efficiency-environmental protection is also foreseen. Specific energy costs are foreseen, such as equipment to improve energy efficiency, supply-transport-installation of equipment to improve energy efficiency of building infrastructure, supply-transport-installation of equipment to improve energy efficiency of the generation process, supply-transfer-installation of equipment and systems for environmental protection, costs for certification, along with costs for services and studies conducted by engineers.
Support	SMEs	Energy efficiency in SMEs
mechanism		 This Programme is about to include: Public subsidies through PA or other Community sources, Private banks loans SMEs own funding Tax exemptions The contribution of 'Enforcement Regime', which was introduced in Article 9 of Law 4342/2015. According to this,





Туре	Target Group	Description
		energy retailers and distributers should implement actions concerning the improvement of energy efficiency, so as to boost the effort towards achieving EU goals on energy savings, while customers could be favored by the reduction of energy costs.
		Further information regarding this support scheme for energy efficiency in SMEs is about to be announced by the Ministry of Environment and Energy in the near future.
Tax incentive	SMES, Large enterprises, social cooperatives	Development Law (Law No.4399/2016) The new Development Law that came into force in July 2016, foresees support for CHP plants, small-scale hydro-power plants, and self-production using other RES in a form of an income tax relief and stabilization of income tax coefficient.

^{*} Those measures were presented publicly, however they were not implemented till this date. As there are not specific targets for energy savings in the SMEs and energy audits are not obligatory by the EU Directive and the local legislation, subsidy funding has been used in other sectors

2.4. Available RES & EE support schemes in Italy

Table 16: Support schemes in Italy

Туре	Target Group	Description
Tax incentive	All buildings, SMEs	Tax regulation mechanism This scheme allows for a 65% tax deduction ("detrazione") for expenses related to energy efficiency measures including installation of RES Heating technologies. In the case of private individuals, this availability is valid for works undertaken up to 31 December 2017 and in the case of common buildings the disposition is valid up to 31 December 2021.
Support scheme	SMEs	National Fund for Energy Efficiency The fund facilitates the interventions necessary to achieve the national energy efficiency targets, promoting the involvement of financial institutions, national and community, and private investors on the basis of adequate risk sharing. The Fund supports energy efficiency measures carried out by businesses, including ESCOs and local authorities, on buildings,





Туре	Target Group	Description
		plants and production processes (Ministry of Economic Development, 2020).
Support	SMEs	White Certificates or Energy Efficiency Shares (TEE)
mechanism		TEE's are tradable shares which certify energy saving achievement in final use, through activities and projects to improve the energy efficiency.
		Certificates can be generated by energy managers implementing savings measures in industry, thus creating incentives for putting energy management systems in place (MEnS, 2015).
Support	SMEs	National Plan for Industry 4.0 (14.0)
mechanism		The National Plan for Industry 4.0 (I4.0) was launched by the Italian Ministry of Economic Development in February 2017. The I4.0's strategy aims at supporting industrial change through a series of conjunctional measures. The Plan provides a wide array of measures in the short and medium term for the period 2017-2020, as well as long term, collectively ensuring the foundation of an efficient framework (European Commission, 2017).
		In addition, there are several energy incentives dedicated to the SMEs and industrial sector. These are all summarised and constantly updated within the webpage of the Ministry of Economic Development dedicated to companies: https://www.mise.gov.it/index.php/it/incentivi.

2.5. Available RES & EE support schemes in Romania

Table 17: Support schemes in Romania

Туре	Target Group	Description
Support	SMEs	Open calls for European Funds as non-reimbursable financial
scheme		support, up to 80% for SMEs:
		 POIM 6.1 – Call for projects to support investments in the production of electricity and/or thermal energy from biomass/biogas and geothermal energy.





Туре	Target Group	Description
		 POIM 6.2 – Reducing energy consumption for industrial consumers, within a period of maximum 5 years from the completion of the project; POIM 6.4 – Call for projects to support investment in high efficiency cogeneration.
Grant scheme	Agriculture SMEs	"Measure 4": Investments in physical assets - Electricity, Heating & Cooling
		The subsidy "measure 4", encompassing the sub-measures 4.1. and 4.2., is part of the National Rural Development Programme and financed by the European Agricultural Fund for Rural Development (EAFRD). The National Rural Development Programme's new financing period operates from 2014 to 2020. The programme targets are to promote the use of renewable energy sources for the farm own consumption.
Grant scheme	Large	Support scheme for less exploited energy sources
	enterprises, SMEs, Local Authorities	The state aid scheme has been approved by Government Decision no. 216/2017 in April 2017 to promote energy production from less exploited energy sources, namely biomass, biogas and geothermal energy. The new support scheme is supported by the Ministry of Regional Development, Public Administration and European Funds, and aims to increase the electricity and thermal energy production from these sources by 60 MW until the end of 2023.
Grant scheme	SMEs, Public	EEA and Norway Grants
	entities	The aim of the programme is the reduction of carbon emissions caused by electricity production and safety of electricity supply.
		The use of RES, increased energy efficiency in public and private sector, energy research and development, awareness of the RES and EE benefits leads to proper impact toward carbon emissions. The programme is conducted by the Norwegian organization Innovation Norway, as Fund Operator, in partnership with the Ministry of Energy, Ministry of the Environment, Nation Energy Authority in Iceland and the Norwegian Water Resources and Energy Directorate.
		Different calls of projects were established in 2018-2020.





2.6. Available RES & EE support schemes in Slovenia

Table 18: Support schemes in Slovenia

Туре	Target Group	Description
Grant scheme SMEs	SMEs	<u>Financial Incentives of the Eco Fund</u>
		The Eco Fund (EkoSklad, Slovenian Ecological Fund) provides funding for investments in RES through public calls. New rounds of tenders and public calls are usually open at the beginning of the year.
Tendering	Agriculture	SPIRIT Slovenia
scheme	SMEs	SPIRIT Slovenia is an agency that provides support to the Slovenian economy in a coordinated, transparent and comprehensive manner in important areas of the Slovenian economy. It has issued its 5th public tender for the support of investments in processing, marketing and development of agricultural products for 2019 on 1.2.2019. The official tenderer was the Ministry of Agriculture, Forestry and Food.
		Measures, implemented in the SME, that are eligible for this tender are, among others, the purchase and installation of equipment for the production of electrical and heat energy, required for processing agricultural products and the purchase of energy-efficient equipment.
Grant scheme	SMEs	Support of the Ministry of Infrastructure
		The Ministry of Infrastructure of the Republic of Slovenia awards subsidies, state aid (regional aid, aid for small and medium enterprises) and "de minimis" aid through a scheme of state aids. The subsidies, state aid and "de minimis" aid are intended to cover some of the costs related to the use of renewable energy instead of traditional energy sources.

2.7. Available RES & EE support schemes in Spain

Table 19: Support schemes in Spain

Туре	Target Group	Description
Support	SMEs	Quota-based support mechanisms
mechanism		This type of mechanism forces market actors (consumers,
		manufacturers or suppliers) to provide a certain share of electricity





Туре	Target Group	Description
		from renewable energy sources or to achieve a defined percentage of energy savings.
		The mechanism can lead to a focus on mature technologies and a significant reduction in investments in innovative technologies with high initial investment costs.
Tendering	SMEs	Bidding systems
scheme		The bidding system is a support mechanism that provides for the issuance of an offer or tender for a renewable energy project of a specific size.
		Financial support can lead to participation in investment capital, or to allow the bidder to set the cost of generating energy per unit of electricity. The latter is, in general, the type of intervention preferred in the framework of bidding systems.
Support	SMEs	Net Balance
scheme		The Net Balance is a service for electrical consumers in which the electrical energy generated by a particular electrical consumer in a particular installation, and which is turned over to the local distribution network, can be used to compensate the energy electricity supplied by the electricity supplier to consumers during the applicable billing period.
		The Net Balance applies mainly to the promotion of decentralized solar electricity, in particular for small-scale projects.
Support	SMEs	<u>Premiums</u>
scheme		This type of mechanism establishes a fixed price for the purchase of an electricity unit. The price is usually higher than the market price and the duration of the rate is often around 15/20 years.
		Premiums are calculated on the cost of each renewable energy technology and the technology in question.
Grant scheme	SMEs	National subsidies offered by the "Instituto para la Diversificación y Ahorro de Energía" (IDAE) with the aid program for energy efficiency actions in SMEs and large companies in the industrial sector (FNEE)
		These grants belong to the modality of cash delivery without consideration, which have a maximum amount of 30% of the





Туре	Target Group	Description
		corresponding eligible investment and a maximum amount of investment eligible per request of ${\it \&}4.000.000.$
		Eligible actions are those that achieve a reduction in CO2 emissions and final energy consumption, by improving energy efficiency, in either of the following two types:
		 Measure 1: Improvement of technology in industrial equipment and processes, Measure 2: Implementation of energy management system
Grant scheme	SMEs	FEDER and FSE funds Grants are the most used mechanism in Spain. The grants are mainly granted for Energy Efficiency and Renewable Energy projects, which are based on European structural funds.

2.8. Available RES & EE support schemes in the UK

Table 20: Support schemes in the UK

Туре	Target Group	Description
Support scheme	SMEs	Feed In Tariffs Scheme (FIT) The FIT scheme is a government programme designed to promote the uptake of small-scale renewable and low-carbon electricity generation technologies. Introduced on 1 April 2010, the scheme requires participating licensed electricity suppliers (FIT Licensees) to make payments on both generation and export from eligible installations.
Support scheme	SMEs	Non-Domestic Renewable Heat Incentive The Non-Domestic Renewable Heat Incentive (RHI) is a government environmental programme that provides financial incentives to increase the uptake of renewable heat by businesses, the public sector and non-profit organisations. Eligible installations receive quarterly payments over 20 years based on the amount of heat generated.
Support scheme	SMEs	Low Carbon SME





Туре	Target Group	Description
		Low Carbon SME is an energy advice service providing free, expert energy efficiency advice and support to SMEs in the Black Country, Greater Birmingham and Solihull. They transform businesses for a sustainable prospect by bringing together academia and industry together resulting in a holistic approach to energy efficiency leading to reduced energy costs for the SMEs.
Support	SMEs	New Anglia Growth Programme
scheme		New Anglia Growth Programme, funded by ERDF, provides free, confidential and impartial information and support across Norfolk and Suffolk. The support can include telephone, online and mentoring through business growth advisors. This business energy efficiency programs exists in other regions such as Anglia and Cambridge & Peterborough. There are similar support across all UK regions.
Support	SMEs	Derbyshire 2 Energy Efficiency (D2EE)
scheme		Derbyshire 2 Energy Efficiency (D2EE) is a low carbon project which aids SMEs in Derby and Derbyshire become more energy efficient by awarding grants and expert guidance. The D2EE is half funded by the ERDF coming via the European Structural and Investment Funds (ESIF) assigned to the D2EE Local Enterprise Partnership.
Grant/	SMEs	Business Energy Efficiency Project (BEEP)
Support scheme		Business Energy Efficiency Project (BEEP) provides independent analysis of a business existing practices by performing free simple advice and guidance, energy audit and energy analysis. This provides the SME with cost-effective options for generating financial savings by energy reductions. In addition, grants are available for up to 40% of capital costs and are paid in arrears.
Grant scheme	SMEs	The Carbon Trust Green Business Funds
		The Carbon Trust has several schemes for the SMEs. These includes the Green Business Fund, offering 30% of project cost and up to a maximum of £10,000 when buying energy saving equipment.
Grant scheme	SMEs	Low Carbon Growth Support Project
		The project aims to help businesses identify and realise energy efficiency savings that will lead to reduced energy costs and lower carbon emissions. Grants of up to £25.000 are available to cover





Туре	Target Group	Description
		approximately 40% of the cost of items such as Boilers / Heating, LED Lighting, Cooling, Insulation, Plant and Equipment. SME's can obtain free energy audits and 40% grant funding towards energy efficiency measures in Greater Birmingham, Solihull and the Black Country from the Low Carbon Growth Support Project.
Grant scheme	SMEs	Energy Efficiency Grants for East Sussex Businesses
		 An SME may apply for a grant of up to £1.000 to cover a maximum 40% of the total value of their energy efficiency project through the Sustainable Business Partnership CIC. The grant is available to any business, social enterprise or charity that: Has fewer than 250 full time equivalent employees Has a turnover less than £44 million Is not owned by a group or company that does not meet the above two criteria
Grant scheme	SMEs	Green BELLE Launch Event
		SMEs can apply for a grant to install low carbon and energy efficient measures in their premises, such as: • Heating • Lighting • Heating and Lighting controls • Insulation • Renewable energy • Efficient equipment Grants of £1.000 to £10.000 are available, with Green BELLE providing up to 50% of the total cost of the project.





3. Current Financial Instruments for SMEs

According to the survey carried out among 213 SMEs located at the 8 participating EU countries as part of SMEmPower project, the SMEs do not set investments for energy efficiency improvement and establishment of an energy efficiency strategy high on their agenda, mainly due to lack of financing. The survey has shown that the main source of financing for energy efficiency investments among SMEs is from their own resources, demonstrating the great need for utilization of effective support schemes but also the need for promotion of third-party financing. The same results were concluded in The IEA's Energy Efficiency Market Report (2016), according to which 60% of efficiency investments rely on self-financing with the majority of the rest being financed through loans.

Thus, in order to reach the ambitious targets for energy efficiency improvement of SMEs, there is a great need for a significant increase in third party financing through the deployment of financing mechanisms that help enterprises avoid the upfront capital cost with repayments made out of savings and using new sources of finance via equity markets, securitization and, ultimately, bonds.

There are several types of Financial instruments which can be used for investing in energy efficiency as well as function as leverage for existing private and business capital.

The most common and frequently used are outlined as follows (Schneller et. al., 2019):

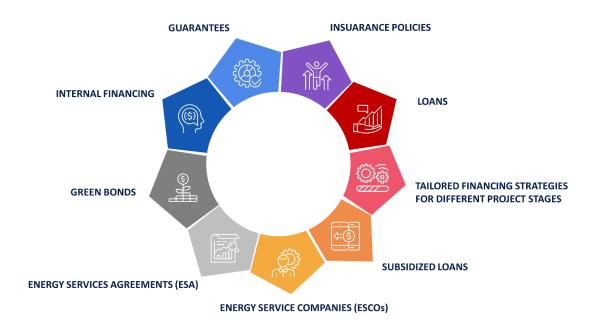


Figure 5: Common financial instruments for energy efficiency projects





Internal Financing: Many companies prefer to finance their climate-related sustainability projects internally, using available cash or infusions of capital from the parent company. When possible, internal financing is relatively cheap - with no interest payments and few restrictive covenants - but the company must weigh potential returns from a project against other investment opportunities, such as debt money.

Loans are a classic form of financing that is used for instance for the purpose of investing in the improvement of the energy performance of buildings. On the market there is a wide range of specific banking products offered by commercial and development banks. The financing conditions are often stipulated by financial institutions by achieving predefined energy savings. It is important to note that interest rates on loans that are significantly below market conditions, are also considered to be a form of state aid and are subject to restrictions governed by the European Commission.

Subsidized loans are forms of lending capital under conditions that are more favourable than the standard market conditions. This can apply not only to lower interest rates but also to longer repayment periods than those on the market. However, these loan types tend to be limited to specific innovation types or geographies or both. The interest rates, payback periods, and other conditions of such loans are less rigid than those of market loans. In energy renovation projects they are often referred to as specialized renovation loans. In addition to traditional loans they may appear in the form of leasing services, factoring and services or hybrid products such as energy savings.

Guarantees are collateral for the loan repayment. They are based on the control (impairment) of market risks that are common obstacles in energy-efficiency related project implementation. They can be used in the framework of public-private partnerships in which public institutions provide guarantees to private investors / participants of the projects in form of an incentive.

Insurance policies are also instruments of risk controlling for project financing. They are either associated with the property (insurance matters and property interests, liability insurance), loans (insurance funds or billing) or legal persons involved in the project (accident insurance, life insurance).

Green Bonds: A green bond is a bond issued by both public and private institutions. Green bonds are very similar to conventional bonds, but their proceeds are reserved for funding green projects. Green bonds are priced very tightly, with comparable coupons to ordinary bonds. Supranational agencies dominated the green bond scene in its early days, later joined by municipalities. Over the past three years, numerous companies have joined the green bond issuing community from utilities to renewable energy companies to brands such as Apple and Starbucks. The global green bond universe is estimated at almost \$700 billion, of which \$118 billion qualifies as labelled green bonds. Given each green bond's inherent mitigative or adaptive climate risk aspect, and the issuing entity's usually very strong credit rating, green bonds have become popular in the investor community.

Energy Service Companies (ESCOs) are service providers that guarantee future savings made on energy bills and can fund projects upfront that are refinanced through the savings achieved. In an ESCO financing model the service provider usually charges the building owner a fee to deliver energy





savings on the owner's utility payments. In addition, savings are often guaranteed over a set period of time (see illustration).

The development of ESCOs in Europe is expected to help implement the EU's Energy Services Directive, which obliges public authorities to improve energy efficiency and encourages the use of financial instruments for energy savings, such as third-party financing contracts and energy performance contracts.

An ESCO will assess the efficiency opportunity, purchase equipment necessary to improve performance, and install the equipment. Most ESCOs will provide a financing option for these services as well, but depending on the ESCO, the building owner may be required to seek outside financing.

As the Commission's Energy Efficiency Plan underlines, ESCOs can help public authorities to upgrade buildings by grouping them into scalable projects under energy performance contracts. This is supported by an initiative to make the use of Energy Performance Contracting more accessible to the public sector.

Energy Services Agreements (ESA) build on the historical use of PPAs in power plant project finance and, more recently, in renewable energy project finance. Third party entities negotiate ESAs, arrange/provide capital, develop projects and manage installed equipment for large industrial and commercial projects. The SPE is capitalized by third party investors and finances the costs of the efficiency improvement. The host signs an ESA with a project developer and agrees to pay either a fixed or floating rate for the energy savings received. A floating rate is equal to a percentage (e.g. 80%) of their actual utility rate. A fixed payment is based on a cost per avoided energy basis (e.g. €per kWh avoided or €per therm of natural gas avoided). The host agrees to make payments for contractual terms of their agreement (e.g. 5-15 years). This structure enables energy efficiency to be treated as a service and an off-balance sheet transaction.

Tailored financing strategies for different project stages matches FIs with maturity stages of investment projects, which also acts an important criterion to consider when selecting the appropriating financing strategy. Financing vehicles and green projects tend to vary depending on their stage of maturity and investor requirements (see figure). Players in the early stage rarely have access to bank loans or the equity market, so they typically rely on grants, government or public loans, private sector loans, and venture capital for financing. Established companies may be able to finance all or part of their projects internally, with available cash flow. Companies in the middle stage may not be eligible for government support, and most grants are too small to supply the scale of financing needed. These companies cannot generate enough attention to produce a stable and supportive regulatory environment, which would increase investor confidence. Instead, they may self-fund with internal cash flow, use internal or external loans, or attract private equity from investors.





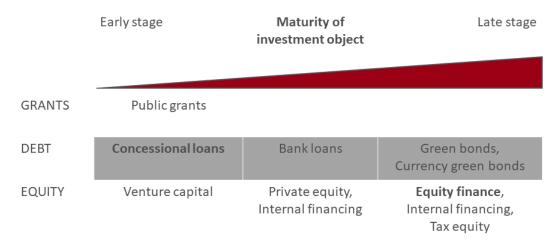


Figure 6: Financing vehicles for different maturity stages; Source: (Schneller et. al., 2019)

The main financial instruments applied in EU level and in each participating country in SMEmPower efficiency project, are outline on the table below.

Table 21: Overview of the main financial instruments in EU and the participating countries

Institution/Policy /Programme	Type of instrument	Description
		EU level
EuroPACE	Loan	With a European pilot project in Spain starting in 2020, this new property attached financing fund allows investors to lend money for up-front costs for extensive retrofits (i.e. new heating and cooling systems) with costs repaid through a special charge added to a property tax bill over a term of up to 20 years (Climate-KIC 2020). Although this fund is aimed at the residential sector, SMEs are eligible to participate.
SUSI Energy Efficient Fund (SEEF)	Loan	SEEF is Europe's largest fund dedicated to energy efficiency with over € 200 M committed. SME's projects with a quantifiable CO₂ impact can be funded where proven EE retrofit solutions are used, including HVAC, building management systems, PV for self-consumption, waste heat recovery, plants and processes/pumps. The programme finances redesign projects, upgrading equipment, or optimising energy supply. Funds can cover up to 100% of costs associated with EE, are deployed with a very fast turnaround of 6-10 weeks and have a long maturity (tenor can be up to June 2027) (Rothlin, 2017).





Institution/Policy /Programme	Type of instrument	Description
Private Financing for Energy Efficiency (PF4EE)	Loan	Participating banks on-lend money for SME's EE improvement projects from the EIB and EC. 100% of the funds must be for EE measures. Tools are available online to help banks facilitate lending, such as workshops and trainings for bank staff, portfolio screening, identification of sectors and clients, examples and showcases of financed projects (Private Finance for Energy Efficiency, 2020).
		Cyprus
Energy Fund-of- Funds (FoF) – EIB	Loan	The Energy FoF is co-financed by European Structural and Investment Funds (ESIF) (€ 40 million), national funds as a national loan from EIB (€ 40 million) and the participated financial intermediaries (€ 40 million). The Cyprus Energy Fund targets in accelerating clean energy investments, including energy efficiency improvements, renewable energy and sustainable urban development projects. Investment to improve energy efficiency in public and private buildings, including SMEs. The funding will be allocated to the following Special/Thematic Objectives: Promotion of entrepreneurship in specific population groups enhancing access to finance. (€10.000.000) Increase energy savings in SMEs. (€14.200.000) Increase energy savings in public buildings (€7.900.000)
EIF InnovFin SME Guarantee (EFSI) – EIB	SME Guarantee Facility	 InnovFin SME Guarantee Facility is an unfunded instrument. Meaning that EIF shares / guarantees 50% of all losses of an investment. Bank of Cyprus and RCB Bank are the two participating banks offering €10.000.000 each. The Innovation Eligibility Criteria are: 1. Investing in the production or development of innovative products, processes and/or services that present a risk of technological or industrial failure; 2. "fast growing enterprises" i.e. their workforce or turnover has increased by at least 20% p.a. over the last 3 years Amount of investment: at least €25.000 and up to a max of €7.500.000.





Institution/Policy /Programme	Type of instrument	Description
		Maturity: at least 1 year and up to a max of 10 years.
The Cyprus Entrepreneurship Fund (CYPEF) – EIB	SMEs/ Loan	CYPEF is a fund established by the Republic of Cyprus to support and strengthen entrepreneurship in the country by enhancing access to finance to SMEs. Amounts dedicated from the Cypriot government to CYPEF are made available through financing from the EIB. CYPEF is managed by the European Investment Fund (EIF). Specifically, €100.000.000 of initial capital pulled together under CYPEF by the Cypriot Government will be matched by equal contributions from EIF's selected financial intermediaries, translating into €200.000.000 of finance to the benefit of Cypriot SMEs.
		Germany
KfW Energy Efficiency Programme - Energy Efficient and Process Heat from Renewable Energies	Loan	Loans of up to € 25 million with a repayment subsidy of up to 55% are issued for significant improvements in energy efficiency using cross-sectional technologies; process heat supply from renewable energies; measurement and control technology, sensor technology and energy management software; and energy-related optimisation of plants and processes. National banks serve as an intermediary for this loan (KfW, 2020b).
KfW Energy Efficiency Programme - Energy Efficient Construction and Renovation Deutsche Bank's	Loan	Building owners are eligible for loans at favourable interest rates with terms of up to 20 years and up to a 17.5% repayment subsidy for refurbishment if, after the refurbishment, they do not exceed a specific energy requirement for a comparable new building. National banks serve as an intermediary for this loan (KfW, 2020a). Retail branches offer their own low-interest energy efficiency
low-interest loans		loans to businesses, including SME's (in addition to giving customers access to KfW financing) (Deutsche Bank, 2014).
		Greece
National Bank of Greece (NBG)	Loan	As part of its Green Growth policy to save energy in all possible ways, the National Bank promotes and supports green energy investment in various products for business and equipment or in RES (National Bank of Greece (NBG), 2020).





Institution/Policy /Programme	Type of instrument	Description
PF4EE Financial Instrument Piraeus Bank	Loan	Piraeus Bank participates in the European Investment Bank's (EIB) and European Commission's (EC) joint instrument Private Finance for Energy Efficiency (PF4EE) with the aim of providing debt financing with favourable terms to businesses wishing to invest in improving their energy efficiency. PF4EE is an innovative financing tool that combines liquidity in the form of an EIB Loan and loan guarantees funded through the LIFE Programme of the European Commission.
Alpha Bank and Eurobank	Loan	Alpha Bank and Eurobank finance energy investments as part of their general business financing.
		Italy
Capital assets – Nuova Sabatini	Loan	The subsidy introduced by Article 2 of Decree-Law No 69/2013 seeks to enhance the competitiveness of Italian manufacturing and improve access to credit for micro, small and medium-sized enterprises for purchasing new machinery, plant and equipment. This involves a contribution towards some of the interest paid by the enterprise on bank loans of between € 20.000 and € 2 million, arranged with banks approved by the Ministry of Economic Development, which either meet the credit limit set by Cassa Depositi e Prestiti, or constitute ordinary lending. The contribution is calculated on the basis of a five-year repayment plan with an interest rate of 2.75 % per annum. It is increased by 30 % for investments in Industry 4.0 technologies.
Super- amortisation and hyper- amortisation		 To support and encourage businesses that invest in new capital assets and tangible and intangible assets (software and IT systems) necessary for the digital and technological transformation of production processes, there are two forms of amortisation: Super-amortisation: overvaluation of 140 % of investments in new capital assets purchased or leased. hyper-amortisation: overvaluation of 250 % of investments in new purchased or leased tangible assets, equipment and technologies enabling Industry 4.0 transformation.





Institution/Policy	Type of	Description
/Programme	instrument	Description
		Romania
Open calls for EEA and Norwegian funds	Fund	Through this program that is available in Romania it is aimed to achieve less carbon-intensive energy and increased security of supply. The Programme seeks to stimulate long-term cooperation between the Donor States (Iceland, Liechtenstein, Norway) and the Beneficiary State (Romania) and is encouraging bilateral Donor Partnership Projects. • The Energy Programme in Romania has five main focus areas with own call for proposals: ○ Renewable Energy: Increased Renewable Energy production. Foreseen to be launched in the second call in late March 2020. - Call 1: 'Increased capacity to deliver renewable energy' — Hydropower, Available amount: € 7.500.000 from EEA Grants - Call 2: 'Increased capacity to deliver renewable energy' — Geothermal, Available amount: € 6.600.000 from EEA Grants - Call 3: 'Increased capacity to deliver renewable energy' — Other Renewable Energy Sources, Available amount: € 11.000,000 from Norway Grants - Small Grants Scheme - SGS-1: 'Hydropower, geothermal and other RES for SMEs and NGOs', Available amount: € 2.000.000 from Norway Grants ○ Energy Efficiency: Reduced CO2 emissions in all sectors (Energy Efficiency). Call for energy efficiency is open until 31 March 2020. ○ Research & Development: Enhanced research and development capacity on renewable energy, energy efficiency and energy security ○ Training and Awareness: Increased knowledge on renewable energy, energy efficiency and energy security in all sectors of society ○ Electrification: Increased access to electricity for households in areas where connection to the electricity network is not feasible





Institution/Policy /Programme	Type of instrument	Description
, ,		 Fund Operator: Innovation Norway Programme budget: € 62.826.500
Romanian Energy Efficiency Fund	Fund	 Introduced by the Government of Romania and the World Bank. It represents a national interest pole in promoting commercial financing for energy efficiency investments. This project aims to achieve energy savings and to encourage the use of renewable energy sources for self-consumption. Eligibility: The funding is up to \$1 million (or more, for high-performance investments); The beneficiary must cover a minimum of 20% of the financing; The investment recovery period should be maximum 4-5 years; The investment brings financial benefits, at least 50% of them coming from energy-saving.
BRD - Groupe Société Générale	Loan	 The investment loan from BRD supplements the company's resources when they are insufficient to develop an investment plan: Financing 75% of the investment value. Up to 10 years credit period, based on the subject of financing. Grace period adapted to the investment, that can reach 24 months credit period, based on the subject of financing.
Banca Transilvania	Loan	 Co-financing European Programs. They support the development of projects financed using European funds by offering consulting and financial services for their implementation. Therefore, it helps the companies to have faster and easier access to European funds. Medium-term loans Maximum value of the credit: 1.500.000 Ron. Granting period: 120 months.





Institution/Policy	Type of	Description
/Programme	instrument	 Operational Program "Initiative for SMEs" (POIIMM) European warranties: 60% of the loan. Granting period: 12 years.
UniCredit Bank	Loan	 General needs: quick financial support. Investment loans. Eu Funds: Co-financing projects from non-reimbursable funds.
EBRD		 Through this program, eligible Romanian companies have the opportunity to obtain financial support and assistance for the implementation of consulting projects in areas such as energy efficiency and the environment. EBRD finances SMEs in performing energy audit, implementing energy management programs and obtaining ISO 50001 certifications. Currently, the program covers 70% of the costs of the project for the following enerprises: Micro (<10 employees and <€2m turnover) Small (<50 employees and <€10m turnover) Medium (<250 employees and <€50m turnover) EBRD financing for private sector projects generally ranges from \$5 million to \$250 million, in the form of loans or equity. The average EBRD investment is \$25 million. Smaller projects may be financed through financial intermediaries or special programmes for smaller direct investments in the less developed countries.
		Slovenia
SID Banka – Slovenska izvozna in razvojna banka (Slovenian Export and Development Bank)	Loan	SID is a bank, 100% owned by the Republic of Slovenia which promotes sustainable development and improves the competitiveness of the Slovene economy. The bank offers loans (to ESCO companies, public utility services and enterprises) for funding projects regarding energy restoration of buildings (SID Banka, 2020).
Ekosklad (Eco Fund)	Loan & Grant	Ekosklad is an independent legal entity, within the Ministry of the Environment and Spatial Planning, being represented as





Institution/Policy	Type of	Description
/Programme	instrument	majority in the Supervisory Board. Eco Fund's purpose is to promote development in the field of environmental protection and, therefore, provides financial supports for environmental projects (which are also linked to energy efficiency projects). They offer loans or grant financing programmes to legal entities, individuals and to municipalities (for investments in buildings where public education takes place) and its financial resources are gathered under the Regulation on energy savings ensured to final customers (Eco Fund, 2020).
Achilles		 Achilles is a private Slovenian company that offers two financial mechanisms for SMEs: Supply factoring: A financial mechanism that enables SMEs to repay their supplier immediately. Buyers (companies) thus have more time and flexibility to pay for the order and that means that they can allocate more funds elsewhere (e.g. development). It is suitable for regulating the transaction relationship between the supplier and buyer, of some product or a service. While customers often need or want longer payment deadlines, suppliers need a steady and rapid inflow of funds to maintain or grow their work operations. Supply factoring, therefore, provides with the means by which someone as a service provider or supplier of goods, can cover the cost of the order before the buyer reaches the deadline (expiration date), thus remaining competitive as they can now offer the buyer a longer payment period. Classical factoring: A financial mechanism that enables the immediate repayment of receivables with a deferred payment deadline and provides businesses with the ability to eliminate risks in financial operations, manage receivables more efficiently and improve financial liquidity. Classic factoring is, therefore, a financial service that enables customers to do business on foreign and domestic markets on a regular basis by financing the company through the purchase of past due receivables without additional material insurance (Achilles, 2020).





Institution/Policy	Type of	Description
/Programme	instrument	
Banks	Loan	The bank loan is one of the tools most used by SMEs for EE investments in Spain. The costs involved are generally the payment of an opening commission and an interest rate for disposing of the money for a period. The main financial obstacles faced with direct loans are the high costs of financing energy efficiency projects, the lack of availability of commercial loans for investments in energy efficiency, the disinterest of local financial institutions in the efficiency business energy, and competition between all projects that require financing in an energy end user company. The use of loans to finance investments in energy efficiency offers many advantages, such as the decrease in the cost of
		financing and the creation of leverage. In turn, it allows end users to increase the amount and size of their investments.
Credit policies		Credit policies are an instrument like bank loans differing in that the SME can make use of the total capital or not, paying interest only for the funds used. However, it must also pay an availability commission for being able to access them if you wish, and on some occasions, a maximum discovered commission.
Internal financing		One of the most interesting forms of financing for those companies that do not wish to risk using third-party resources is self-financing. This is part of the Net Equity and two types are distinguished: maintenance and enrichment. In the first, the objective is to finance the assets that the company owns so that the development of the business activity is possible. In the second, instead, it seeks to increase capital resources so that it can increase production and productivity. This type of financing has not cost, so it is accessible to all SMEs that generate enough resources to self-finance. However, their size and conditions often limit the use of this route, forcing them to go outside in search of extra financing.
Renting		The renting or operating leasing consists of the rental of an asset for a certain period without any purchase option at the





Institution/Policy /Programme	Type of instrument	Description		
		end of the contract. In this way, SMEs can enjoy vehicles, machinery, etc. without acquiring ownership of the good. The company periodically disburses an amount for enjoying it and at the end of the contract returns it to its owner, who is responsible for maintenance, insurance, payment of taxes, etc. This type of lease allows early cancellation of the contract.		
Leasing		Leasing is like renting with the difference that it contemplates the purchase option at the end of the contract. In this way, the financial or leasing entity finances the good to the SME, allowing it to enjoy tax advantages in corporate income tax. In turn, the company can perform the opposite procedure: sell an asset to a leasing company on which a lease contract is signed. It is achieved through this procedure liquidity of a certain idle good for SMEs.		
		The use of leasing, like loans, to finance investments in energy efficiency offers many advantages, such as the decrease in the cost of financing and the creation of leverage. In turn, it allows end users to increase the amount and size of their investments.		
Energy performance services contracts (ESPC)		ESPC constitute a business model offered by contractors who are going to implement an energy efficiency project, and who will share the risk of expected savings that are not achieved with the project. In the most common type of ESPC, the contractor will finance the entire project implementation against a portion of the savings, after a certain period in which the adjustment has been made.		
Stock markets		The company obtains financing from investors who become partners, shareholders or creditors based on the type of value issued. If the financing is obtained by issuing shares, the Alternative Stock Market (MaB) is the mechanism to which, by size and characteristics, SMEs could go. This type of financing does not oblige the company to return the resources obtained from outside, so the cost is lower.		





Institution/Policy /Programme	Type of instrument	Description			
		If, on the other hand, the issuance of bonds, obligations or promissory notes is chosen, their cost means that they are not profitable for amounts less than five million €.			
Participatory loans	Loan	These are considered hybrid instruments when participating who grants the loan of the profits of the financed company. These types of loans have an average duration of five to ten years. The interest to be received is usually agreed according to the evolution of the investee company, with the possibility of agreeing on a minimum interest independent of the company's benefits, for example EURIBOR +0.25%. These are tax deductible for the company. In reference to the enforceability of this debt, all creditors that the company owns will have preference, leaving behind only the shareholders.			
Mezzanine financing		Mezzanine financing is a hybrid between debt financing and equity financing. Basically, it is a debt that gives the lender the right to convert the interest or ownership of the equity interests in the limited company if the loan payments are not fulfilled on time. This system is subordinated to financing, facilitated by guaranteed parties such as banks and risk investors. Mezzanine financing is assumed as a capital share in the balance sheet of the limited company and can make it easier to obtain loans or leases from banks. Considering that the risk incurred by the financier is greater than that incurred by the banks, this type of financing has a much higher price than a simple loan or a lease.			
Credit lines	Loan	The credit line is a credit source in the form of a loan. They facilitate access to financing in energy efficient investments, which create a special liquidity source dedicated specifically to these projects. To benefit from this available resource, commercial banks have no choice but to consider the investment in energy efficiency projects. The main obstacles faced by credit lines are: the scarcity in the liquidity of the market, necessary for the financial institutions do business in energy efficiency; the competitiveness between business opportunities within financial institutions, and the disinterest of local financial institutions in the energy			





Institution/Policy /Programme	Type of instrument	Description					
		efficiency business, compared to interest in other traditional opportunities.					
	UK						
Royal Bank of Scotland, Aviva, Equitix	loan	These banks offer loans specific for energy efficiency which can cover the cost of energy efficiency installation.					
The Carbon Trust Green Business Funds	loan	It supports SMEs throughout the UK providing opportunities to improve energy efficiency and reduce energy costs. It provides loans, which are interest free, and 4 years are given for repayment. This loan is directed mainly in Wales and Northern Ireland, offering interest free and unsecured loans from £3.000 and up to a maximum of £200.000 in Wales and up to £400.000 in Northern Ireland for energy efficiency measures and installation of renewable energy products. This scheme benefits both purchasers and suppliers as business can acquire the latest equipment that are effectively paid by the monthly savings they make. Furthermore, this has the advantage of helping suppliers of energy efficient equipment grow their market but the overarching advantage is reduced carbon emissions help to lessen the long-term climate change impact.					
Investment Bank		 The Investment Bank is a publicly funded bank for immobilizing private finance into the green energy sector and part of this is directed specifically to SME. Below are two examples of SMEs being funded by GIB matched with equal funding from the private sector. ReEnergise Finance Ltd's Smart Energy Finance vehicle, a two million pounds in total funding with £1 million by the UK Green Fund Bank (GIB) and its fund manager Sustainable Development Capital LLP (SDCL) and is matched by £1 million from SI Capital R&S1. This funding is directed primarily to SMEs, for energy efficiency projects. These funding were initially for biomass and lighting projects. A number of Scottish distilleries benefited from GIB £5 million funding for energy efficiency projects through its fund manager Equitix. Half of this was from GIB, with 					





Institution/Policy /Programme	Type of instrument	Description		
		matched funding from private capital through the Equit managed Equitix Energy Efficiency Fund. The investment is in partnership with Balcas Limited (Balcas), a Britis SME and leading UK manufacturer of wood pellobiomass. This will save Greenhouse by 101.196 tonne over the project lifetime		





4. Common barriers prohibit energy efficiency investments in SMEs

There is a high or reasonably high potential for energy efficiency investments across Europe. However, this potential in many countries remains largely untapped. There is a significant gap between investment opportunities for energy efficiency and the level of investments in energy efficiency in most of the countries.

In general, there is a good correlation between the existence of the regulatory framework (EU Directives) and how well it supports and enables investments in energy efficiency. For example, Germany possesses strong regulatory framework that ensures strong support for investments.

Institutions at the national level responsible for developing and implementing policies that support investments in energy efficiency projects exist in member states. However, assessment of their effectiveness differs among individual countries. Among the various levels of government, national authorities are generally considered to be providing the highest level of support for developing and implementing energy efficiency projects compared to regional (provincial) and local (municipal) (Schneider et al., 2020).

The price of energy provides some but often insufficient incentives for improving energy efficiency. When the energy prices are low there is no energy efficiency investment interest. Self-financing remains the most widely used type of financing of energy efficiency projects followed by direct financing from public budgets and debt financing.

Low awareness about the multiple benefits of energy efficiency projects is viewed as the main barrier to increasing investment and financing flows to energy efficiency projects. Other important factors are lack of understanding of energy efficiency financing by banks and other financial institutions; administrative barriers and bureaucracy; Low awareness due to the lack of information and scepticism of the SMEs top-level management (decision-makers) on the added value of energy efficiency measures; Lack of integrated long-term energy efficiency strategy within the SMEs; and low energy prices (Schneider et al., 2020).

On the other hand, tax incentives and low-interest loans for energy efficiency projects are viewed as the most important factors that can lead to increasing energy efficiency project investments. Also, stricter energy efficiency standards; training and awareness programmes; improved legislation; obligation for SMEs to undergo energy audits; and de-risking of investments through Government support programmes can contribute towards increased number of investments.

The most common financial barriers across Europe identified, are presented in Figure 7.





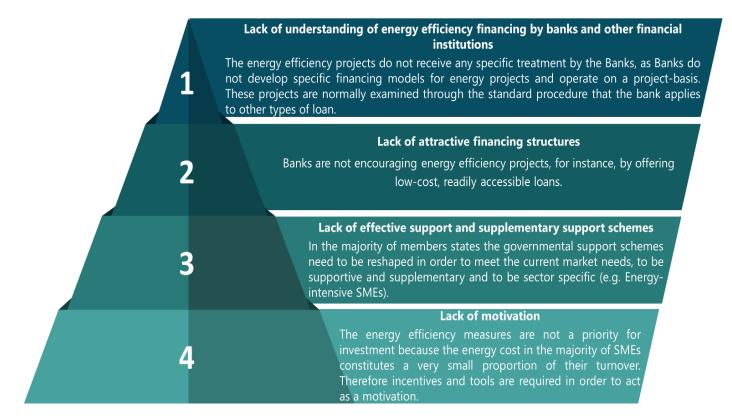


Figure 7: Common financial barriers across EU





5. Best-practice examples from other EU member states

5.1. Financial instruments related to Banks

5.1.1. Slovakia - SlovSEFF

The Slovak Sustainable Energy Financing Facility (SlovSEFF) is a credit line provided by the European Bank for Reconstruction and Development (EBRD) through local banks aimed at promoting sustainable energy investments in the Slovak Republic's private sector. It was one of the first in a series of SEFF facilities implemented by the EBRD over recent years to encourage energy efficiency and renewable energy projects within private industrial companies and housing associations. SlovSEFF intends to channel financing to sustainable energy projects which reduce GHG emissions and also aims at transferring knowledge and building expertise among banks and companies related to sustainable energy investments. This is done by providing loans (€20.000 − 2.500.000) and incentive payments in case of successful completion and verification of a project. Integral to the project design is also supplemental grant funding (€30 million) for technical assistance which is free to borrowers and assumed to be one of the successful programs within the facility (EBRD, 2014).

By 2015, the SlovSEFF had supported more than 700 energy efficiency projects and sustainable energy investments that contribute to lowering emissions-intensive energy with a combined value of over €200 million, resulting in combined annual energy savings equivalent to the total household electricity consumption of a city the size of Slovakia's capital city, Bratislava (EBRD, 2014). Since 2014, measures have resulted in an estimated 582 GWh of additional renewable energy generated in addition to the combined energy savings.

Sustainable energy projects financed under SlovSEFF III, which was implemented in 2014, are expected to achieve annual GHG emission savings of 40.000 tonnes of CO2 equivalent. Launched in 2007 and respectively 2010, the two previous SlovSEFF phases reduced the amount of CO2 emissions by 115.000 tonnes each year (EBRD, 2014).

5.1.2. Belgium – Pilot Project Private Finance for Energy Efficiency (PF4EE)

The **Private Finance for Energy Efficiency (PF4EE)** instrument is a joint agreement between the EIB and the European Commission which aims to address the limited access to adequate and affordable commercial financing for energy efficiency investments. It is managed by the EIB and funded by the Programme for the Environment and Climate Action (LIFE programme).

The LIFE Programme committed €80 million to fund the credit risk protection and expert support services. The EIB will leverage this amount, making a minimum of €480 million available in long term financing.

The PF4EE instrument will provide:

1. Portfolio-based credit risk protection provided by means of cash-collateral (Risk Sharing Facility),





- 2. Long-term financing from the EIB via their Loan for Energy Efficiency,
- 3. Expert support services for the Financial Intermediaries (Expert Support Facility).

At the end of 2016, the Belfius Bank in Belgium drew up a pilot project, supported by the EIB (European Investment Bank), to lower the threshold for financing of energy-efficiency projects. The EIB is giving Belfius guarantees on possible losses of up to 80%. When this happens, it is easier for energy-efficiency projects to be approved. The targeted audience are especially SMEs.

The PF4EE instrument combines three elements. The first consists of an EIB loan for financing eligible energy efficiency projects, to be managed by local banks. The second component covers the losses potentially incurred by partner banks in relation to energy efficiency loans. The third component will bolster the implementation of the PF4EE instrument by transferring the technical and financial experience acquired in the course of other similar projects.

This financing facility enables Belfius to provide businesses with €75 million in loans on favorable terms for investments aimed at improving energy efficiency in Belgium, thereby addressing key climate-change issues.

These loans are available to both businesses and ESCOs. Belfius has access to the technical and financial expertise of specialised consultants and benefits from a transfer of experience as part of PF4EE. These loans are also secured by the PF4EE guarantee up to 80% of their value.

Projects financed by PF4EE will aim, in particular, to improve the energy efficiency of existing buildings (insulation, heating, ventilation, cooling, lighting, decentralised renewable energy production, etc.), reduce the energy consumption and strengthen the energy efficiency of industrial sites and processes, refit or extend urban heating or cooling networks, and improve the energy performance of public lighting systems.

The projects will be implemented on behalf of either the borrowing companies themselves or their public or private sector customers.

This agreement with Belfius makes Belgium the fourth country to benefit from PF4EE after the Czech Republic, Spain and France. The European Commission and EIB aim to use this new instrument to generate €1 billion in energy efficiency investments across Europe (Schneller et. al., 2019).

5.2. Financial instruments related to support schemes

5.2.1. Case Study: Integrated approach - Austria

The integrated approach of Austria may be the most shining example in Europe, where a country sets specific targets and financially supports actions and measures that bring SMEs closer to climate strategy of the country.

The Environmental Aid Act (UFG) provides for the general support of projects which protect the environment. The UFG is divided into several fields of action; incentives to use energy from RES in





the heating and cooling sector are provided in the Environmental Assistance in Austria (UFI) field of action. (§ 23 para. 1 UFG in conjunction with § 4 para. 1 Guidelines 2015). An annual budget of maximum € 130 million between 2009-2021 is granted for different purposes of environmental assistance by the Austrian Federal Ministry for Sustainability and Tourism (BMNT) (§ 6 para. 2f subpara. 1 UFG). For 2017-2021 the annual budget stands at €80 million (Stenkopf, 2018).

As part of the environmental assistance, promoting small-scale RES heating and cooling is applied at a federal level carried out through the national corporate environmental support programme (UFI – betriebliche Umweltförderung im Inland). There are special investment incentives for solar thermal installations, heat pumps, geothermal energy and biomass heating plants, especially for businesses.

Thus, since the existence of this instrument, investments of €33 billion in renewable energy, energy efficiency, climate-friendly mobility and other climate and environmental protection measures, promotion of water management and remediation initiated. This saved over 176 million tons of greenhouse emissions (Stenkopf, 2018).





6. Recommendations for financial instruments/ support schemes in SMEs

Recommendations for the establishment of improved financial instruments and support schemes for the promotion of energy efficiency projects in SMEs:

- The governmental support schemes need to be reshaped in order to meet the current market needs, to be supportive and supplementary and to be sector specific e.g. Energy-intensive SMEs.
- Informative campaigns and capacity building workshops should be organized for the personal development of bankers. For example, Banks lack of technical knowledge and expertise and so they cannot properly assess ESCO projects and other energy saving projects in SMEs.
- Tax incentives e.g. reduced corporate tax to SMEs that implement energy efficiency projects.
- (Monetary) awards for SMEs who display outstanding energy savings measures and practices.
- Reduce the cost of investment through fiscal incentives to promote energy saving measures (e.g. tax/import duty reduction on energy efficient equipment, property tax rebate for EE buildings).
- Private equity funds to invest in stocks relating to energy efficiency projects in SMEs; Revolving funds provide loans to energy efficiency projects with corresponding cost savings used to restock the funds for the next round of investments.
- The applications for the governmental support schemes should be submitted electronically so as to avoid the bureaucratic procedures and make the application process less time consuming. Meanwhile incentives should be given for the development of SMEs on the basis of digitalization.
- Collaboration between EIB and national banks. EIB shall act as guarantee for private banks towards de-risking of investment in energy efficiency. As a result, banks could provide more attractive funding products to SMEs.
- Generous incentives for the promotion of energy audits directly linked with the implementation of investments.
- Energy audits should be obligatory for SMEs as well. This could result in significant energy savings, as appropriate measures for increasing energy efficiency will be identified and proposed, considering the specific audit results of each SME.
- Training and information courses targeting members of SMEs staff instead of energy professional to increase the awareness and de-risking the investments in energy efficiency.
- Alternative funding mechanisms, such as peer to peer business lending, equity crowdfunding, and social impact bonds could be taken into consideration.
- The State should provide information (through campaigns, advertisements etc.) on the role and benefits of energy service contracts so as to boost the ESCO market.





• Aggregation of SMEs can reduce the risk of investors for renovation financing; possibility for micro enterprises to pool savings to achieve critical mass and standardise portfolio risk.





Bibliography

Achilles. (2020). *Poslovne in finančne storitve, d.o.o.* Retrieved 11 Mar 2020, from https://www.achilles.si/

Andreas Schneller, A. B. (2019). *GHG financing models and support schemes in the EU.* Berlin: adelphi.

Anthi Charalambous, R. A. (2019). *Market Assessment Report for Renewable Energy and Energy Efficiency Small investments in Cyprus*. Nicosia.

Covenant of Mayors – Europe Office. (2019). Project Development Assistant.

Deutsche Bank. (2014). *Energy efficiency and Germany's energy transition*. Retrieved 11 Mar 2020, from https://www.db.com/cr/en/concrete-energy-efficiency.htm

Eco Fund. (2020). Eco Fund. Retrieved from https://www.ekosklad.si/english

European Bank for Reconstruction and Development 2014. (2014). *Operation evaluation: Slovak sustainable energy finance I & II.* London: EBRD Evaluation Department.

European Commission. (2017). *Italy:"Industria 4.0"*. Retrieved 26 Mar 2020, from https://ec.europa.eu/growth/tools-

databases/dem/monitor/sites/default/files/DTM Industria4.0 IT%20v2wm.pdf

European Commission. (2019). The revised energy efficiency Directive.

European Commission. (2019). The revised renewable energy Directive.

European Commission. (2020). 2020 climate & energy package. Retrieved 27 Mar 2020, from https://ec.europa.eu/clima/policies/strategies/2020_en

European Commission. (2020). *Energy efficiency directive*. Retrieved 17 Mar 2020, from https://ec.europa.eu/energy/topics/energy-efficiency/targets-directive-and-rules/energy-efficiency-directive_en

European Commission. (2020). *Financing energy efficiency*. Retrieved 26 Mar 2020, from https://ec.europa.eu/energy/topics/energy-efficiency/financing-energy-efficiency_en?redir=1

European Commission. (2020). *Financing energy efficiency*. Retrieved 03 Apr 2020, from https://ec.europa.eu/energy/topics/energy-efficiency/financing-energy-efficiency en?redir=1

European Commission. (2020). *National energy and climate plans (NECPs)*. Retrieved 09 Apr 2020, from https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans en

European Renewable Energy Council. (2011). *Mapping Renewable Energy Pathways towards 2020.* Brussels.

International Energy Agency. (2015). Accelerating Energy Efficiency in Small and Medium-sized Enterprises. Powering SMEs to catalyse economic growth.

International Energy Agency. (2016). Energy efficiency market report 2016.

KfW. (2020a). *KfW-Energieeffizienz-programm – Energieeffizient Bauen und Sanieren*. Retrieved from https://www.kfw.de/inlandsfoerderung/Unternehmen/Energie-





KfW. (2020b). Energy efficiency, corporate environmental protection and renewable energies. Retrieved from https://www.kfw.de/inlandsfoerderung/Unternehmen/Energie-

LEGAL SOURCES ON RENEWABLE ENERGY. (2019). Subsidy (Support of the Ministry of Infrastructure). Retrieved 06 Apr 2020, from http://www.res-legal.eu/search-by-country/slovenia/single/s/res-e/t/promotion/aid/subsidy-scheme-of-the-ministry-for-infrastructure-and-spatial-planning/lastp/191/

Madeline Schneider, J. W. (2020). *Financing options to support GHG reductions in Cypriot and Greek hotels.* adelphi, OEB, INSETE.

ManagEnergy. (2018). *Financing energy efficiency*. Retrieved 19 Mar 2020, from managenergy.net: https://www.managenergy.net/node/580

MEnS. (2015). National Integrating Report Deliverable D2.1.

Ministry of Economic Development. (2020). *National Energy Efficiency Fund*. Retrieved 13 Mar 2020, from Ministry of Economic Development: https://www.mise.gov.it/index.php/it/energia/efficienza-energetica/fondo-nazionale-efficienza-energetica

National Bank of Greece (NBG). (2020). *Special credit solutions*. Retrieved 26 Mar 2020, from https://www.nbg.gr/el/corporate/specialized-lending#solutions

Private Finance for Energy Efficiency. (2020). *PF4EE - Unlocking Europe's energy savings potential through Private Finance for Energy Efficiency*. Retrieved 17 Mar 2020, from https://pf4ee.eib.org/

Rothlin, A. (2017). SUSI Energy Efficiency Fund ("SEEF") Standardization – A requirement to finance energy efficiency projects.

SID Banka. (2020). Loans for funding projects regarding complete energy renovation of buildings. Retrieved 21 Apr 2020, from https://www.sid.si/obcine/posojila-za-financiranje-projektov-celovite-energetske-prenove-javnih-stavb-ee

SPIRIT podjetniški portal. (2020). *5. javni razpis za podukrep 4.2 – Podpora za naložbe v predelavo, trženje oziroma razvoj kmetijskih proizvodov za leto 2019*. Retrieved 13 Apr 2020, from https://www.podjetniski-portal.si/razpisi/5-javni-razpis-za-podukrep-4-2-podpora-za-nalozbe-v-predelavo-trzenje-oziroma-razvoj-kmetijskih-proizvodov-za-leto-2019-2019-02-01

Stenkopf, T. (2018). Subsidy I (Environmental Assistance in Austria - UFI). Retrieved 17 Apr 2020, from Renewable energy policy database and support: http://www.res-legal.eu/search-by-country/austria/single/s/res-hc/t/promotion/aid/subsidy-environmental-assistance-in-austria-ufi/lastp/94/.





ANNEX 1

	Support Schemes for RES	☐ Grant for RES		☐ Education/Training		
Cyprus	Tandarina sahamas	M Cuant fau FF	tradable green certificates	□ Tueses aut		
		☑ Grant for EE	☐ Tax Incentives	□ Transport		
	 1) Net-metering This is a support scheme for the production of electricity from renewable energy sources for own use. The implementation of the measure started in 2013 as national policy to promote RES electricity. Currently, the Net-metering category is applied for small scale photovoltaic systems with capacity up to 10KW, for all consumers (residential and non-residential). The scope of the net-metering is to provide the option to residential and small commercial consumers to cover all or part of their electricity consumption using a PV. The generated RES electricity is subtracted from the electricity consumption of the building. Consumers pay only for the difference between the energy consumed and energy produced (net electricity used) plus a cost that reflects the cost of the electricity grid to support continuous supply and taxes (VAT, RES levy). The maximum power for each building is subject to the following restrictions: Premises with Single Phase Electrical Installation: installed system can be up to 4,16 kW. Premises with Three Phase Electrical Installation: the installed system can be up to 10 kW. Until December 2019, 14.779 systems with total capacity of around 54 MW were installed (Source: Electricity Authority of Cyprus) 					
	2) Net-billing for PV and Bioma	<u>ss</u>				

D2.2 Funding mechanisms





- This scheme is related to the installation of PV systems or Biomass Electricity Systems (BES) which are implemented only
 in the premises of SMEs (under commercial or industrial pricing) for the purpose of generating electricity for their own
 use with the methodology of net-billing.
- The installed capacity of each installed RES system ranges from 10kW to 10MW per installation.
- Basic requirement: The maximum power of each RES system cannot exceed the 80% of the installed capacity except the occasions where a storage system would be installed.
- Operation: If the cost of exported electricity (from PV) does not exceed the cost of imported electricity (from the grid), then the consumer will pay the difference for each billing period. Respectively, in the case where the cost of the exported electricity exceeds the cost of imported electricity, the surplus amount will be credited to the next billing period.
- Until December 2019, systems with total capacity of around 8MW were installed. The net-billing with biomass had no interest (Source: Electricity Authority of Cyprus).

3) Net-billing for CHP

- Included in the category of net-billing are the combined heat and power (CHP) units, which can be located on any commercial or industrial premise (e.g. commercial or industrial units, public buildings, camps, schools, agricultural and livestock units).
- The installed power of each CHP system cannot exceed 5MW per installation and the **total power for all units allocated to this scheme is 20MW**.
- Until now, there is **no interest for this scheme** as the tariff regime is bit unclear.

4) Stand-alone PV systems

- Any consumer that is interested in submitting application for autonomous PV systems and stand-alone systems of biomass / biogas exploitation that are not connected to the grid is eligible to submit an application.
- There is no restriction on the total available capacity of each system and the total available capacity for this scheme.





5) Rural development programme 2014-2020 of the Ministry of Agriculture, Rural Development and Environment.

- Subsidy is granted under the scheme for actions that involve purchasing and installing PV systems used to generate energy for own use in agricultural holdings/enterprises.
- Subsidy is also granted for purchasing energy storage systems.

6) Energy Audits for SMEs

- The grant scheme for energy audits in SMEs has been in place since May 2019.
- Total available budget: € 200.000.
- This government endorsed grant will supplement 30% of the costs of an energy audit, up to a maximum of € 2.000.
- The scheme is expected to be utilised by 100 SMEs across the country, however there in not much interest from SMEs mainly due to the following reasons:
 - a) the energy audit is not obligatory for SMEs
 - b) there is no grant scheme or other financial instruments to support SMEs to materialise the investments.

7) Eco-Management and Audit Scheme (EMAS) for enterprises and public & private organizations

- This scheme aims to increase the environmental performance of SMEs through the establishment of an environmental management system as foreseen in Regulation 1221/2009 / EC. It concerns the provision of subsidies to enterprises that intend to establish an Eco-Management and Audit Scheme (EMAS).
- It aims to address the environmental impacts of SMEs, as well as to reduce the use of natural resources and improve their energy performance.
- It is based on de minimis aid and provides 70% of the cost of providing services for the establishment of an environmental management system with a maximum grant amount of € 2.000.
- It is also available for the verification and validation of the system with a maximum grant amount of € 500.





	 Transition Costs from ISO 14001 to EMAS can also be funded through additional grants of € 500. 				
	8) Building factor incentive				
	If a building is energy class A in the EPC and 25% of its energy consumption comes from RES, an additional 5% building factor can be provided.				
	9) The Cyprus Entrepreneurship Fund (CYPEF) – EIB				
	CYPEF is a fund established by the Republic of Cyprus to support and strengthen entrepreneurship in the country by enhancing access to finance to SMEs. Amounts dedicated from the Cypriot government to CYPEF are made available through financing from the EIB. CYPEF is managed by the European Investment Fund (EIF). Specifically, €100.000.000 of initial capital pulled together under CYPEF by the Cypriot Government will be matched by equal contributions from EIF's selected financial intermediaries, translating into €200.000.000 of finance to the benefit of Cypriot SMEs.				
Germany	☐ Support Schemes for RES	☑ Grant for RES	☐ Quota obligations with tradable green certificates	☑ Education/Training	
	☐ Tendering schemes	☑ Grant for EE	☐ Tax incentives		
	1) Investment Support				
	In the framework of the Market Incentive Programme (MAP), The Federal Office for Economic Affairs and Export Control (BAFA)				
	provides investment support for heat produced in existing buildings from solar, biomass and geothermal energy:				
	a) Solar thermal:				
	 Basic support: Solar collectors ex 	clusively for water heating:			
	 New installations with a gross collector area between 3 and 40m², € 50/m² (minimum support € 500). 				





- Expansion of already commissioned installations of at least 4 to 40 m² gross collector area 50/m² (minimum support € 500).
- All other solar collectors:
 - New installations with a gross collector area up to 40m², € 140/m² (minimum support € 2.000).
 - Expansion of already commissioned installations of at least 4 to 40 m² gross collector area, € 50/m².
- Bonus support
- Innovation support
 - Solar collectors exclusively for water heating:
 - New installations with a gross collector area between 20 and 100m², € 100/m² (€ 75 for new buildings)
 - All other solar collectors:
 - New installations with a gross collector area between 20 and 200m² € 100/m² (€ 150 for new buildings).
 - Big collectors can be alternatively financed depending on their output.
 - o Some types of big collectors can be also granted a repayment grant through the KfW Premium Programme

b) Biomass:

- Basic support:
 - Pellet installations
 - € 80/kW nominal heat output for the construction of an installation with automatic feeding, power and combustion control, and automatic ignition for the combustion of biomass pellets (or combination boilers).
 - However:
 - Min. € 2.000 for pellet stoves with water chamber.
 - Min. € 3.000 for pellet boilers.
 - Min. € 3.500 for pellet boilers with newly installed buffer tank with a volume of at least 30 lt / kW nominal heat output.
 - Wood chips installation





- A lump sum of € 3.500 per unit for the construction of an installation with automatic feeding, power and combustion control, and automatic ignition.
- Log wood installation
 - A lump sum of € 2.000 per unit for the construction of emission-poor log wood installations.
- Bonus support
 - o A **combination bonus** of **€ 500** can be granted:
 - In the case of simultaneously erecting also an eligible solar collector or an efficient heat pump
 - When connecting the biomass installation to a heating network.
 - o Further single optimization measures are available
- Innovation support
 - o Installations with condensing technologies.
 - In existing buildings
 - **€ 4.500** for boilers.
 - € 5.250 for boilers with a new erected buffer tank with a volume of at least 30 lt/kW nominal heat output.
 - In new buildings
 - € 3.000 for boilers.
 - € 3.500 for boilers with a new erected buffer tank with a volume of at least 30 lt/kW nominal heat output.
 - Installations with secondary particle separation
 - In existing buildings
 - € 3.000 for pellet stoves with water chamber.
 - € 4.500 for pellet boilers.





- € 5.250 for pellet boilers with a new erected buffer tank with a volume of at least 30 lt/kW nominal heat output.
- € 5.250 for wood chips.
- € 3.000 for log wood.
- In new buildings
 - € 2.000 for pellet stoves with water chamber.
 - € 3.000 for pellet boilers.
 - € 3.500 for pellet boilers with a new erected buffer tank with a volume of at least 30 l/kW nominal heat output.
 - € 3.500 for wood chips.
 - € 2.000 for log wood.
- For retrofitting a biomass installation with secondary particle separation technology, a lump sum of € 750 may be granted.
- Supply of process heat
 - The erection of a new biomass installation mainly for the supply of process heat can be granted support up to 30% of the net investment costs until a maximum of € 40.000.

c) Heat pumps:

- Basic support
 - o Electrical heat pumps (heat source: air)
 - € 40/ kW of nominal heat output up to
 - At least € 1.500 for performance-controlled installations and/or monovalent heat pumps.
 - At least of € 1.300 for all others installations.
 - o Electrical heat pumps (heat source: geothermal energy, water), sorption and gas-motoric heat pumps





- € 100/ kW of nominal heat output up to
 - At least € 4.500 for the erection of electrical heat pumps based on geothermal energy, as long as an associated earth probe drilling is also being executed.
 - At least € 4.500 for each sorption and gas-motoric heat pump installation.
 - At least € 4.000 for all other electrical pumps with geothermal or water heat sources.
- Bonus support (Guidelines for the support of RES-H Art. IV:3.2.2.):
 - Load management capacity:
 - € 500 as long as these further requirements are fulfilled: concomitant erection of a buffer tank and complying with the "Smart Grid Ready" certificate requirements.
 - A combination bonus
 - of € 500 can be granted:
 - in the case of simultaneously erecting also an eligible solar collector or biomass installation.
 - when connecting the heat pump installation to a heating network.
 - in the case of simultaneously erecting an eligible solar collector with a gross collector area of at least 7m², as long as this is contributing as a heat source for the heat pump.
- Innovation support
 - o Granted to heat pumps in new and existing buildings with a nominal heat output of at least 100 kW.
 - For heat pumps with high annual COP or improved system efficiency in existing buildings can be increased up to
 50%.
 - Supply of process heat
 - The installation of a new heat pump mainly for the supply of process heat can be granted support up to 30% of the net investment costs with a maximum of € 60.000.





Beneficiaries: Private persons, freelancers, small and medium size companies, municipalities/local authorities, non-profit organisations. The applicants can be owners, tenants, leaseholders or contrapplicants of properties.

2) Energy Efficiency Incentive Programme (APEE)

- The BAFA grants additional incentives for the optimisation of an entire heating system that replaces a particularly inefficient system based on fossil heat production, without the use of condensing boiler technology or fuel cells.
- An additional amount of 20% of the total funding granted under the MAP may be awarded. Additionally, a one-time grant of € 600 for the implementation of measures to improve EE may also be granted (BMWi 2020b).

3) Subsidy for electric, plug-in and hydrogen vehicles

- To achieve the target of 1 million electric vehicles registered in Germany until 2020, the Federal Ministry of Economy and Energy introduced an additional buyer's premium for sales of electric, plug-in and hydrogen vehicles. It aims to support at least 300.000 vehicles during the support period. The costs of so called "Umweltbonus" ("Environmental Bonus") is equally shared between the federal government and the automotive industry. The maximum net price of a basic model is € 60.000.
- The amount of support is € 4.000 for electric and hydrogen vehicles and € 3.000 for externally chargeable hybrid-electric vehicles.
- Beneficiaries: The support applies to private individuals, companies, foundations, clubs and associations.

4) Transport

• Subsidies were introduced in June 2016 and run until June 2019 (€ 4.000 for BEV and € 3.000 for PHEV with less than 50 gCO2/km and not exceeding € 60.000 net list price of the base model).





- Half of the subsidy is paid by the government and the other half is paid by the automobile manufacturer. As the manufacturer subsidy reduces, the net list price in addition less value added tax (19%) has to be paid by the customer (this sums up to € 380 for BEV and € 285 for PHEV).
- The company car tax is commonly calculated as 1% of the gross list price times the personal income tax rate. As a calculation basis for company car taxation of BEV and PHEV, the gross list price is reduced by € 500 per kWh storage capacity of the battery with a cap at 20 kWh (€10.000) for vehicles bought before 31 December 2013. After 2013, this amount is reduced by € 50 every year (i.e., €450 /kWh in 2014, € 400 /kWh in 2015, etc.). This compensation is available only for vehicles bought before 31 December 2022.

5) The SME Initiative for Energy Transition and Climate Protection (Mittelstandsinitiative Energiewende und Klimaschutz [MEK])

- The MEK is the most prevalent support scheme for SMEs in Germany, encouraging implementation of the energy transition (DIHK, 2019). Alongside the BMWi, BMU and the ZDH, the German Association of Chambers of Commerce and Industry (DIHK) provides SMEs with a service to easily find information and financing opportunities to support them through the energy transition.
- The initiative has three focal areas:
 - 1) Strengthening the dialogue on the development of renewables, energy efficiency, network modernisation, and their impacts on companies.
 - 2) Optimising information and consultation.
 - 3) Improving education, training and the exchange of experience (MEK, 2013).
- Some of the services offered through the initiative include free webinars on various energy efficiency topics, guides for SMEs to improve EE in enterprises ranging from employee motivation to business models, training programmes for mobility management to optimise corporate mobility and preparation of a catalogue of events related to energy efficiency and climate protection.





to follow up or contractua	ally obliged to carry out any o	mpanied by the proof of payment. Alt of the energy saving measures, this in nd identifies measure to improve ene U Quota obligations with tradable green certificates	nportant tool helps to reduce ergy efficiency in the company
to follow up or contractual information asymmetries,	ally obliged to carry out any o	of the energy saving measures, this in	nportant tool helps to reduce
With funding from the BM with the level of support of For companies with less than € 10.000 per year the For smaller companies with The audit and advice must for companies to find a propose Application process In line with streamlining the grant simple find an energy	MWi, SMEs are provided with depending on the energy exphan 250 staff, an annual turned grant is set to a maximum of the energy costs under € 10.00 to be carried out by an eligible pofessional in their region.	a grant covering 80% of the cost of enditure. over that does not exceed € 50 million of € 6.000 00 per year the maximum is set to € 2 energy consultant, for which there is explication is simple and straightforwast estimate. Next, the SME can contain the contains	on, and energy costs of more 1.200. 5 an online database available vard. Companies seeking the ct the BAFA and apply for the
, ,	·	-	g renovations as they provide
•	Carrying out an energy audition companies with precise results. With funding from the BN with the level of support of For companies with less than € 10.000 per year the For smaller companies with The audit and advice must for companies to find a precision process. In line with streamlining light grant simple find an energy	Carrying out an energy audit is an important step in invocompanies with precise recommendations for effective With funding from the BMWi, SMEs are provided with with the level of support depending on the energy exp For companies with less than 250 staff, an annual turn than € 10.000 per year the grant is set to a maximum of For smaller companies with energy costs under € 10.00 The audit and advice must be carried out by an eligible for companies to find a professional in their region. Application process In line with streamlining bureaucratic measures, the agrant simple find an energy consultant and receive a consultant simple find an energy consultant and receive a consultant simple find an energy consultant and receive a consultant simple find an energy consultant and receive a con	

1) Improving the energy efficiency of SMEs*





- Aim of this programme: To support micro, small and medium-sized enterprises in order to improve their energy efficiency.
- Target group: Manufacturing, handicraft, trade, services, tourism and shipping sectors.
- The action would be funded by the European Union, and more specifically by the European Regional Development Fund (ERDF) and by National Resources, through the Operational Programme 'Competitiveness, Entrepreneurship, Innovation' (OP-CEI) 2014-2020.
- Total estimated budget: € 64.6 million
- Total estimated public expenditure: € 32.3 million.
- The action would be implemented by the Special Management Service for the OP-CEI, while the Ministry of the Environment and Energy would act as the supervising authority.
- The action involves among others:
 - o interventions in the building envelope, such as thermal insulation, window frames/glazing and shading systems,
 - o upgrade of internal electrical installations and power distribution systems,
 - o upgrade of systems for the production and distribution of thermal energy both for cooling/heating purposes and in production (e.g. hot water/steam generating equipment and systems, waste heat recovery equipment, etc.),
 - o upgrade or inclusion of new materials and equipment to reduce energy losses,
 - o upgrade of lighting equipment,
 - o installation of energy management systems,
 - o energy inspections and/or energy audits before and after assessing the energy outcome,
 - o certification of the energy management system according to ISO 50001, and
 - o project consultation.
- 2) Enhancing of heating and cooling systems using Renewable Energy Resources (RES) and Combined Heat and Power (CHP) systems for self-consumption*
 - Approved budget: € 35 million.





- Eligible Budget: € 20.000 € 1.000.000
- In the framework of this action the following measures could be invested:
 - Installation of new or replacement of the already existing heating or/and cooling system, along with the hot water system, integrating RES.
 - o Installation of high efficiency CHP system taking advantage of RES for self-consumption operation.
 - Supportive actions, such as Energy Consultants.

3) Modern manufacturing*

- The main goal of this programme is to finance business plans for SMEs. One of its three distinct choices was to improve energy efficiency. In particular, the energy efficiency component for SMEs, focused on providing support to boost the energy efficiency of their production processes. Also, on their preparation for the implementation of future Community standards on energy consumption in the production of goods and related services.
- Approved budget: € 100 million, with 40% being public subsidy.
- Eligible budget: € 250.000 3.000.000
- Subsidy amount for small enterprises: 30-45% of the total investment costs.
- Subsidy amount for medium-sized enterprises: 20-35% of the total investment costs.

4) Competitiveness Toolkit for SMEs

• This programme does not aim solely at the improvement of energy efficiency, but among other types of expenditure, the expenditure on equipment for the improvement of energy efficiency-environmental protection is also foreseen. Specific energy costs are foreseen, such as equipment to improve energy efficiency, supply-transport-installation of equipment to improve energy efficiency of building infrastructure, supply-transport-installation of equipment to improve energy efficiency of the generation process, supply-transfer-installation of equipment and systems for environmental protection, costs for certification, along with costs for services and studies conducted by engineers.





- Total estimated public expenditure: € 400 million
- Funded by the European Regional Development Fund and National funds

5) **Energy efficiency in SMEs**

This Programme is about to include:

- Public subsidies through PA or other Community sources,
- Private banks loans
- SMEs own funding
- Tax exemptions
- The contribution of 'Enforcement Regime', which was introduced in Article 9 of Law 4342/2015. According to this, energy retailers and distributers should implement actions concerning the improvement of energy efficiency, so as to boost the effort towards achieving EU goals on energy savings, while customers could be favored by the reduction of energy costs.

Further information regarding this support scheme for energy efficiency in SMEs is about to be announced by the Ministry of Environment and Energy in the near future.

6) Development Law (Law No.4399/2016)

- The new Development Law that came into force in July 2016, foresees support for CHP plants, small-scale hydro-power plants, and self-production using other RES (art.9 par.7 and par.8 Law No.4399/2016) in a form of an income tax relief and stabilization of income tax coefficient. They can be substituted with other support mechanisms, i.e. subsidies, under the Development Law (s. "Subsidy" below).
- To be eligible for support, minimum investment should amount to
 - i. Large enterprises: € 500.000
 - ii. Medium enterprises: € 250.000





iii. Small enterprises: € 150.000

iv. Very small enterprises: € 100.000

v. Social cooperatives/ cooperatives: € 50.000

• The following types of support are alternatively offered by the Development law (Law No. 4399/2016):

i. Income tax relief and

ii. Stabilisation of income tax coefficient RES are supported in the following investment categories:

1. General entrepreneurship: Only income tax relief is eligible

2. New independent SMEs: Only income tax relief is eligible

3. Supporting innovation for SMEs: Only income tax relief is eligible

4. Major investment plans: Tax relief can be provided for 12 years and stabilization of income tax coefficient is provided for 10% of the total investment cost, up to a **maximum amount of € 5 million.**

• RES are eligible for support, subject to the following limitations (art. 11 par.2 subpar.2h and 2z Law No. 4399/2016): For biofuels, there are two options:

Option 1

If extra investment costs are necessary to promote the production of energy from renewable sources are eligible costs under art. 41 par. 6 cases a and b of the EU Regulation 651/2014:

i. 45% of the eligible expenditure for large enterprises.

ii. 55% of the eligible expenditure for medium enterprises.

iii. 65% of the eligible expenditure for small enterprises.





<u>Par. 6 case a:</u> where the costs of investing in the production of energy from renewable sources can be identified in the total investment cost as a separate investment, for instance as a readily identifiable add-on component to a pre-existing facility, this renewable energy-related cost shall constitute the eligible costs.

<u>Par. 6 case b</u>: where the costs of investing in the production of energy from renewable sources can be identified by reference to a similar, less environmentally friendly investment that would have been credibly carried out without the aid, this difference between the costs of both investments identifies the renewable energy-related cost and constitutes the eligible costs.

Option 2

If additional investment costs necessary to promote the production of energy from renewable sources are eligible costs under art. 41 par. 6 case c of the EU Regulation 651/2014:

- i. 30% of the eligible expenditure for large enterprises.
- ii. 40% of the eligible expenditure for medium enterprises.
- iii. 50% of the eligible expenditure for small enterprises.

<u>Par. 6 case c:</u> for certain small installations where a less environmentally, friendly investment cannot be established as plants of a limited size do not exist, the total investment costs to achieve a higher level of environmental protection shall constitute the eligible costs. The costs not directly linked to the achievement of a higher level of environmental protection shall not be eligible.

^{*} Those measures were presented publicly, however they were not implemented till this date. As there are not specific targets for energy savings in the SMEs and energy audits are not obligatory by the EU Directive and the local legislation, subsidy funding has been used in other sectors.





	☐ Support Schemes for RES	☐ Grant for RES	☑ Quota obligations with	☑ Education/Training		
Italy			tradable green certificates			
	☐ Tendering schemes	☑ Grant for EE	□ Tax incentives	☐ Transport		
	1) National Plan for Industry 4.	<u>0 (14.0)</u>				
	 The National Plan for Indu 	ustry 4.0 (I4.0) was launched by the Italian Ministry of Economic Development in February 2017. It supporting industrial change through a series of conjunctional measures. The Plan provides a				
	 The I4.0's strategy aims a 					
	wide array of measures in the short and medium term for the period 2017-2020, as well as long term, collectively ensuring					
	the foundation of an effic	ient framework (European Com	nmission, 2017).			
	 There are several energy 	incentives dedicated to the SM	Es and industrial sector such as:			
	o Tax deductions					
	 Thermal account Gas bonus Electricity bonus Energy diagnosis 					
	o Ecobonus					
	 These are all summarised and constantly updated within the webpage of the Ministry of Economic Development dedicated to companies: https://www.mise.gov.it/index.php/it/incentivi. 					
	2) Tax regulation mechanism (1		//> Company of the data of the company of the compa	Calana and a same and all and		
			") for expenses related to energy ef	-		
			rivate individuals, this availability is			
	up to 31 December 2017	and in the case of common buil	dings the disposition is valid up to 3	1 December 2021.		





- For energy refurbishment works aimed at improving the winter and summer energy performance of common buildings, the tax deduction will amount to 75% and works can be undertaken between 1st January 2017 and 31 December 2021.
- **Beneficiaries:** Any party installing eligible plants.

3) National Fund for Energy Efficiency (Legislative Decree No 102/2014, article 15)

- The fund facilitates the interventions necessary to achieve the national energy efficiency targets, promoting the involvement of financial institutions, national and community, and private investors on the basis of adequate risk sharing.
- The Fund supports energy efficiency measures carried out by businesses, including ESCOs and local authorities, on buildings, plants and production processes.
- Specifically, the funded interventions must concern:
 - The reduction of energy consumption in industrial processes.
 - o The construction and expansion of district heating networks.
 - o The efficiency of public services and infrastructures, including public lighting.
 - o The energy requalification of buildings.
- In support to the SMEs that intend to benefit of the fund, the web platform InvItalia has been launched in May 2019.
- The Fund is divided into two sections which operate for:
 - o the granting of guarantees on individual financing transactions
 - o the provision of subsidized rate loans.
- The financial resources allocated for the incentive amount to 310 million euros, divided as follows:
 - 30% guarantees
 - o 70% subsidized loans.
- The guarantees section also provides a 30% reserve for interventions concerning networks or district heating systems, while 20% of the resources allocated for the granting of loans is reserved to the PA.





4) White Certificates or Energy Efficiency Shares (TEE)

- TEE's are tradable shares which certify energy saving achievement in final use, through activities and projects to improve the energy efficiency.
- This system has been introduced by the Ministerial Decree 20th July 2004 and the Ministerial Decree 28th December 2012. The system foresees that in order to have a white certificate, electricity and natural gas distributors must achieve set targets for primary energy saving, expressed in TEP, equivalent tonnes of petroleum.
- Certificates can be generated by energy managers implementing savings measures in industry, thus creating incentives for putting energy management systems in place.
- More than 14,000 projects were completed and 5 million White Certificates issued, resulting in € 600 million in investment during 2013.

5) Information and training programmes (Legislative Decree No 102/2014, article 13)

This was designed by ENEA involving various parties such as Regions, consumer associations, ESCOs and ESCO associations. The information and training programme and the strategies identified were organised following an in-depth analysis of the economic, social and regulatory climate. The programme is divided into three different stages, each lasting one year:

- Stage 1. Start-up (first year): involves mass information/communication to provide a basic introduction to energy efficiency and energy savings.
- Stage 2. Specific targets (second year): the midpoint of the programme, which involves maximising information coverage and launching targeted actions for the recipients identified under Article 13 of Legislative Decree No 102/2014.
- Stage 3. Consolidation and testing (third year): consolidation of initiatives, communication of results and analysis of the communication impact.

6) 'Energy Efficiency Month' initiative.





	This initiative was launched by t	he Ministry of Economic Deve	lopment which declared November	to be the 'Energy Efficiency		
	Month'. Throughout the month, businesses, industry bodies, public authorities and schools are encouraged to organise events, promotions and seminars of varying lengths to foster a more environmentally conscious use of energy.					
	7) Stakeholder forum					
	To educate businesses on how to present documentation, special stakeholder forums are organised with the help of the Italian					
	National Agency for New Techno	logies, Energy and Sustainable	Economic Development (ENEA) to ide	entify effective, efficient and		
	replicable solutions in accordance	e with the Legislative Decree N	o 102/2014, Article 8. This decree ide	entifies the parties obligated		
	to conduct an energy audit by	the 5th of December of eac	h year from 2015, as large enterp	rises and 'energy-intensive'		
	enterprises. ENEA is also in charg	e to check the conformity of au	dits with the requirements of the Art	icle 8. The legislation further		
	specifies that this obligation doe	es not apply to large enterprise	es that have adopted management	systems in compliance with		
	EMAS and ISO 50001 or EN ISO 1	4001, provided that the manag	gement system in question includes	an energy audit.		
		☑ Grant for RES	☐ Quota obligations with	☐ Education/Training		
Romania			tradable green certificates			
	☐ Tendering schemes	☑ Grant for EE	☐ Tax incentives	☐ Transport		
	1) Open calls for European Fun	ds as non-reimbursable financ	cial support, up to 80% for SMEs:			
	POIM 6.1 – Call for pro	jects to support investments	in the production of electricity and	nd/or thermal energy from		
	biomass/biogas and geothermal energy.					
	 Total Budget: 83,86 million Euro 					
	 The intensity and volume of the grants: 					
	- The maximum	value of the grant awarded is	15,000,000 Euro.			
	- The intensity of	of the support measures canno	t exceed:			
	■ 80% of	the project's eligible costs, for	micro-enterprises and small enterp	rises;		





- 70% of the project's eligible costs, for medium-sized enterprises;
- 60% of the project's eligible costs for large enterprises.
- The maximum amount of the financing granted for the total eligible costs: 85% of the European Regional Development Fund and 15% from the state budget.
- o Call closing date: 31 December 2020.
- POIM 6.2 Reducing energy consumption for industrial consumers, within a period of maximum 5 years from the completion of the project;
 - Programme objectives:
 - Strengthened capacity for industrial producers to identify and implement energy efficiency measures by introducing monitoring systems;
 - Advanced metering within the technological processes on all the energy fluxes (electricity, thermal, water, compressed air, etc.) to identify the energy losses and the savings potential and thus locate the implementation points for maximising the efficiency of the energy efficiency measures;
 - Promoting an on-line measuring instrument of the positive effects of the energy efficiency measures' implementation, and thus encouraging the further use of these applications at industrial level.
 - o Total Budget: € 17.6 million
 - The intensity and volume of the grants
 - The maximum grant per project will be € 200.000 or its equivalent in lei.
 - The funding intensity is up to 100% of the value of the eligible costs.
 - o Eligible beneficiaries:
 - Industrial enterprises with a consumption of over € 1.000 toe/year, for whom, as per law 121/2014 regarding energy efficiency, it is necessary to implement measures to improve their energy efficiency.
 - o Call closing date: 31 December 2020.
- POIM 6.4 Call for projects to support investment in high efficiency cogeneration.





- o Programme objectives:
 - Promote activities that reduce carbon emissions and increase energy efficiency by installing new capacity / modernising existing capacity for high-efficiency cogeneration;
 - Increase in installed capacity;
 - Decreasing the use of natural gas in the total consumption of fuels.
- o Total Budget: € 63,6 million
- o The intensity and volume of the grants:
 - The maximum value of the grant awarded for a project is € 15.000.000.
 - The intensity of the support measures cannot exceed:
 - 80% of the project's eligible costs, for micro-enterprises and small enterprises
 - 70% of the project's eligible costs, for medium-sized enterprises
 - 60% of the project's eligible costs for large enterprises
- Eligible beneficiaries:
 - Industrial SMEs and large enterprises which have an energy consumption exceeding 200 toe/year and that can prove the useful necessity of thermal energy for its industrial processes with a duration of at least 4.000 hours/year.
 - The appointed representative of an industrial park, a legal person that has an energy consumption exceeding 200 toe/year and that can prove the useful necessity of thermal energy for its industrial processes with a duration of at least 4.000 hours/year, and for investments in energy production from high-efficiency cogeneration.
- Call closing date: 31 December 2020.
- Up to December 2019, approx. 23% has been covered by project applications for three projects, out of which one
 is an SME.





2) "Measure 4": Investments in physical assets - Electricity, Heating & Cooling

- "Measure 4" is part of the National Rural Development Programme and it is financed by the European Agricultural Fund for Rural Development (EAFRD). The National Rural Development Programme's new financing period operates from 2014 to 2020. The programme targets are to promote the use of renewable energy sources for the farm's own consumption.
- Under the current call for proposals, the subsidy programme's total budget is € 150.000.000. The subsidy is to a certain percent (30 to 50%) irreversible. The percentage depends on the size of the farm or the project. The maximum eligible sum is € 2 million.

3) Support scheme for less exploited energy sources

- The state aid scheme has been approved by Government Decision no. 216/2017 in April 2017 to promote energy production from less exploited energy sources, namely biomass, biogas and geothermal energy. The new support scheme is supported by the Ministry of Regional Development, Public Administration and European Funds, and aims to increase the electricity and thermal energy production from these sources by 60 MW until the end of 2023.
- The budget for the subsidy programme is € 100.630.533. Each project can receive a maximum amount of € 15 million of non-refundable costs which can not exceed 45% of the total amount of eligible expenses.
- Small enterprises, including the microenterprises, can benefit from an additional 20 % of non-refundable funding, whereas the medium sized enterprises from an additional 10 % points. Additionally, the aid intensity may be increased by 15 % points for investments located in assisted areas fulfilling the conditions of Article 107(3)(a) of the Treaty on the Functioning of the European Union. For the same beneficiary and the same eligible costs, the aid received through this support scheme can not be combined with other state aids.
- Beneficiaries: Large, medium, small and micro enterprises, including newly established ones, or public municipalities (or their subdivisions or inter-community development associations) that carry out production of electricity and/or thermal energy.





	☐ Support Schemes for RES	☐ Grant for RES	☐ Quota obligations with	☐ Education/Training		
Slovenia			tradable green certificates			
		☑ Grant for EE	□ Tax incentives	☐ Transport		
	1) Financial Incentives of the Ed	co Fund				
	The Eco Fund (Ekosklad, Slovenian Ecological Fund) provides funding for investments in RES through public calls. New					
	rounds of tenders and public calls are usually open at the beginning of the year.					
	 Eligible technologies: 					
	The calls promote differe	nt technologies. Various incenti	ve options are open for RES such as	the installation of:		
	 Central heating de 	vices that use wood biomass.				
	 Distribution heating 	ng systems using wood biomass				
	 Heating pumps (water and geothermal energy). 					
	 Power plants using aerothermal technologies. 					
	 Solar (thermal) technologies. 					
	 Recuperation technologies. 					
	 Building restoration and renovation. 					
	 Renewable energy generation technologies for electricity production. 					
	Usually each technology has specific requirements that are detailed in the call document (e.g. standards of the heating					
	boiler that need to be met in order to be eligible for co-financing, the volume of the boiler, emission values etc.).					
	• Eco Fund has also issued 76FS-PO19 "Financial subsidies for new investments in energy efficiency and renewable energy					
	sources" on 26.8.2019. Eco Fund offers combined financial subsidies; grants up to 20% of the value of investment and/or					
	subsidized 0% interest rate loans. SME's are offered financial subsidies in investments in energy efficiency and renewable					
	energy sources and they a	are allocated for entities on the	territory of Republic of Slovenia by	"de minimis" rule.		
	Amount:					





The grants for all eligible technologies are subject to a certain minimum and maximum. The specific amount of the subsidy is specified in detail for each technology and/or size of the investment or its environmental contribution and mostly given in a percentage of the investment cost and an absolute maximum.

2) SPIRIT Slovenia

- SPIRIT Slovenia (Public Agency for Entrepreneurship, Internationalization, Foreign Investments and Technology) is an agency (within The Ministry of Economic Development and Technology) that provides support to the Slovenian economy in a coordinated, transparent and comprehensive manner in important areas of the Slovenian economy.
- It has issued its 5th public tender (SPIRIT podjetniški portal, 2020) for the support of investments in processing, marketing and development of agricultural products for 2019 on 1.2.2019. The official tenderer was the Ministry of Agriculture, Forestry and Food.
- The amount of available (non-returnable) funds is up to € 15.000.000 out of which € 6.000.000 is for land (farm) owners and enterprises of secondary activities on (farm) lands; and € 9.000.000 for individual entrepreneurs, cooperatives and companies. SME's are, therefore, also eligible for procurement of such funds.
- Procuring funds are for:
 - Processing agricultural products.
 - o Processing agricultural products to non-agricultural products.
 - o Marketing of homemade (local) agricultural products.
- Measures, implemented in the company, that are eligible for this tender, are:
 - Layout of spaces (areas) and purchasing equipment for processing agricultural products.
 - o Optimization of warehouse capacities and purchasing other warehouse capacities.
 - o Optimization of water supply system, water storage system and water treatment system.
 - Purchasing and installing equipment for the production of electrical and heat energy, required for processing agricultural products (exempt: equipment for the production of electricity from solar or biogas energy).





- o Purchasing energy-efficient equipment and the optimization of equipment in the production line.
- o Purchasing equipment that increases safety at work etc.
- Example of SME, using this financial mechanism: MESARSTVO OBLAK d.o.o. The company has opted-out for the implementation of certain measures to obtain financial subsidies by SPIRIT:
 - o optimization of the technological process, modernization of the production line, optimization of the washing process, installation of energy-efficient equipment, improvement of product traceability and securing the competitiveness of the company. Those measures contribute to savings in electrical energy and in CO2 emissions reduction.

3) Support of the Ministry of Infrastructure

• The Ministry of Infrastructure of the Republic of Slovenia awards subsidies, state aid (regional aid, aid for small and medium enterprises) and "de minimis" aid through a scheme of state aids. Subsidies, state aid and "de minimis" aid for investment projects are awarded through tendering. Financial incentives for renewable electricity production are an integral part of the energy policy in Slovenia (§ 314 EZ-1). The specific tender document sets out the technologies to be supported, the tendering process and how the subsidy is paid. Tenders are launched on a regular basis (app. 2-3 Tenders per month). Currently, all tenders that would support investments into RES-E projects are awarded via state owned energy companies.

• Eligible technologies:

In general, all technologies are eligible for support (no exceptions are given in the legal documents). The subsidy/state aid requirements are set out in detail in the specific tender document. Some tenders may mandate a specific technology

Amount:

The subsidies, state aid and "de minimis" aid are intended to cover some of the costs related to the use of renewable energy instead of traditional energy sources. Please note the following important information:





	minimis" aid grant The maximum gra Certain grants are subject these cases, a report mus Tax regulation mechanism Excise duty is levied on all duty.	ts are subject to a maximum of nt is defined in each specific to t to a maximum (e.g. € 50.000 t be submitted to the Ministry	the eligible costs of an invest 30%. Exceptional projects may ender. for state aid and € 200.000 / € of Finance (LEGAL SOURCES Of	be aw 100.00 N RENE	varded 40/50% of the cost 900 for "de minimis" aid). I EWABLE ENERGY, 2019)	s. In
	=	as, bio dimethylether and bio r se in propulsion.	elief. Biofuels shall include bio nethanol. These biofuels must c		•	
Spain	□ Support Schemes for RES	☑ Grant for RES	☐ Quota obligations tradable green certificates	with	☐ Education/Training	
	☑ Tendering schemes	☑ Grant for EE	☐ Tax incentives		☐ Transport	
	 1) Quota-based support mechanisms This type of mechanism forces market actors (consumers, manufacturers or suppliers) to provide a certain share of electricity from renewable energy sources or to achieve a defined percentage of energy savings. The quota mechanism is profitable but neutral against technology and does not consider differences in generation/reduction costs. 					





- Among the disadvantages, it is worth mentioning the potential for high volatility in electricity prices and certificates and the subsequent high risk associated with investments.
- The mechanism can lead to a focus on mature technologies and a significant reduction in investments in innovative technologies with high initial investment costs.

2) Bidding systems

- The bidding system is a support mechanism that provides for the issuance of an offer or tender for a renewable energy project of a specific size.
- Financial support can lead to participation in investment capital, or to allow the bidder to set the cost of generating energy per unit of electricity. The latter is, in general, the type of intervention preferred in the framework of bidding systems.
- Tenderers are obliged to supply renewable electricity at a predefined price for a certain number of years. The offers in theory are profitable and allow the Government to control the amount of renewable energy produced under the scheme.

3) Net Balance

- The Net Balance is a service for electrical consumers in which the electrical energy generated by a particular electrical consumer in a particular installation, and which is turned over to the local distribution network, can be used to compensate the energy electricity supplied by the electricity supplier to consumers during the applicable billing period.
- If the consumer has produced more electricity than the electricity consumed before, the operator of the network or the local distribution has to buy the net production at the end of a certain period at a fixed price, or simply surplus electricity produced is withdrawn, without any cost.
- The Net Balance applies mainly to the promotion of decentralized solar electricity, in particular for small-scale projects.

4) Premiums





- This type of mechanism establishes a fixed price for the purchase of an electricity unit. The price is usually higher than the market price and the duration of the rate is often around 15/20 years.
- In addition, the network normally acquires electricity regardless of total demand (purchase priority).
- Premiums are calculated on the cost of each renewable energy technology and the technology in question. Premiums have been the main financial instrument for photovoltaic solar energy in OECD countries, especially in Europe.
- These rates are easy to manage, are transparent and convey a strong political signal. The success of the premiums depends on the security for the investments, normally insured by offering a fixed price for a long period. However, the main advantages are based on the specific technology approach. If it is not properly designed, the cost of this mechanism can be the biggest drawback.
- 5) National subsidies offered by the "Instituto para la Diversificación y Ahorro de Energía" (IDAE) with the aid program for energy efficiency actions in SMEs and large companies in the industrial sector (FNEE)
 - These grants belong to the modality of cash delivery without consideration, which have a maximum amount of 30% of the corresponding eligible investment and a maximum amount of investment eligible per request of € 4.000.000.
 - Eligible actions are those that achieve a reduction in CO2 emissions and final energy consumption, by improving energy efficiency, in either of the following two types:
 - Measure 1: Improvement of technology in industrial equipment and processes, with a maximum energy economic ratio of € 14.379 (eligible investment)/ toe (final energy savings). The eligible investment will be between € 75.000 and a maximum of € 50 million.
 - Measure 2: Implementation of energy management system, with a maximum energy economic ratio of € 14.501 (eligible investment) / toe (final energy savings). The eligible investment will be between € 30.000 and a maximum of € 50 million.
 - In the second announcement for aid from IDAE, the budget has been extended, with € 168.190.250 from the National Energy Efficiency Fund. 40% of this budget (€ 67.276.100 will be reserved for projects submitted by SMEs).





	6) FEDER and FSE funds				
	Grants are the most used mechanism in Spain.				
	 The grants are mainly granted for Energy Efficiency and Renewable Energy projects, and additionally the number of 				
	national grants, which are based on European structural funds, is growing.				
	These funds offer direct financing to SMEs to carry out their projects (e.g. FEDER and FSE)				
UK	Support Schemes for RES	☑ Grant for RES	☐ Quota obligations with tradable green certificates	☐ Education/Training	
	☐ Tendering schemes	☑ Grant for EE	☐ Tax incentives	☐ Transport	
	 Low Carbon SME Low Carbon SME is an energy advice service providing free, expert energy efficiency advice and support to SMEs in the Black Country, Greater Birmingham and Solihull. They transform businesses for a sustainable prospect by bringing together academia and industry together resulting in a holistic approach to energy efficiency leading to reduced energy costs for the SMEs. New Anglia Growth Programme New Anglia Growth Programme, funded by ERDF, provides free, confidential and impartial information and support across Norfolk and Suffolk. The support can include telephone, online and mentoring through business growth advisors. This business energy efficiency programs exists in other regions such as Anglia and Cambridge & Peterborough. There are similar support across all UK regions. 				
	•		project which aids SMEs in Derby ar e.	nd Derbyshire become more	





- Energy audits and grants of up to 65% for small and medium-sized enterprises (SMEs) in the East Midlands to increase energy efficiency measures.
- Subsidy amount: £1.000 to £15.000
- The business must be based in Derby City, Amber Valley, Bolsover, Chesterfield, Derbyshire Dales, Erewash, High Peak, North East Derbyshire or South Derbyshire.
- Grants can be used for various energy efficiency measures including:
 - i. improved lighting
 - ii. insulation
 - iii. more efficient process equipment
 - iv. renewable energy.

• Business Energy Efficiency Project (BEEP)

 Business Energy Efficiency Project (BEEP) provides independent analysis of a business existing practices by performing free simple advice and guidance, energy audit and energy analysis. This provides the SME with cost-effective options for generating financial savings by energy reductions. In addition, grants are available for up to 40% of capital costs and are paid in arrears.

The Carbon Trust Green Business Funds

The Carbon Trust has several schemes for the SMEs. These includes the Green Business Fund, offering 30% of project cost and up to a maximum of £10.000 when buying energy saving equipment.

Low Carbon Growth Support Project

• The project aims to help businesses identify and realise energy efficiency savings that will lead to reduced energy costs and lower carbon emissions.





- Grants of up to £25.000 are available to cover approximately 40% of the cost of items such as Boilers / Heating, LED Lighting, Cooling, Insulation, Plant and Equipment
- SME's can obtain free energy audits and 40% grant funding towards energy efficiency measures in Greater Birmingham, Solihull and the Black Country from the Low Carbon Growth Support Project.

• Energy Efficiency Grants for East Sussex Businesses

- An SME may apply for a grant of up to £1.000 to cover a maximum 40% of the total value of their energy efficiency project through the Sustainable Business Partnership CIC.
- The grant is available to any business, social enterprise or charity that:
 - Has fewer than 250 full time equivalent employees
 - Has a turnover less than £44 million
 - Is not owned by a group or company that does not meet the above two criteria
- To apply for a grant the SME must also have:
- A premises in East Sussex (excluding Brighton & Hove) where the energy efficiency project will be installed
- Received an Energy Audit to identify energy saving measures; provided through the LoCASE project, or through a similar scheme or a private supplier.

• Green BELLE Launch Event

- SMEs can apply for a grant to install low carbon and energy efficient measures in their premises, such as:
- Heating
- Lighting
- Heating and Lighting controls
- Insulation





- Renewable energy
- Efficient equipment
- Grants of £1,000 to £10,000 are available, with Green BELLE providing up to 50% of the total cost of the project.
- Please note that only SMEs trading business-to-business based in Leicester or Leicestershire are eligible.

• Feed In Tariffs Scheme (FIT)

• The FIT scheme is a government programme designed to promote the uptake of small-scale renewable and low-carbon electricity generation technologies. Introduced on 1 April 2010, the scheme requires participating licensed electricity suppliers (FIT Licensees) to make payments on both generation and export from eligible installations.

• Non-Domestic Renewable Heat Incentive

- The Non-Domestic Renewable Heat Incentive (RHI) is a government environmental programme that provides financial incentives to increase the uptake of renewable heat by businesses, the public sector and non-profit organisations.
- Eligible installations receive quarterly payments over 20 years based on the amount of heat generated.