



advancing with ESIF financial instruments



The potential for investment in energy efficiency through financial instruments in the European Union

Portugal in-depth analysis

May 2020



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Objective of the document

The objective of this report is to give an overview of the state and progress of energy efficiency developments in Portugal, and a preliminary assessment of investment needs and potential use of ESIF financial instruments to cover them. This report would serve as an input to the negotiations of operational programmes for the period 2021-2027.

This document is based on data and information released prior to the outbreak of the Coronavirus (COVID-19) pandemic. Although it is still not possible to properly estimate the impact of COVID-19, a severe economic recession is currently (May 2020) forecasted for year 2020 in the European Union (EU).

The recession may have deep repercussions in the years to come in the economic and financial systems of EU Member States (MS), therefore economic and financial context reported in the document may sharply deteriorate in the near future. Cohesion Policy resources, and public resources in general, are expected to play a crucial role to support the economic recovery in the next programming period.

Energy efficiency (EE) investments can play an important role to support the economic recovery, as (i) they have a considerable job creation effect; (ii) they contribute to reduce energy costs and greenhouse gas emissions; and (iii) they increase MS energy security.

There is a risk that, at least in the short run, the crisis will lead to lower energy costs due to a lower demand, thus can create lower incentives for EE investments. An appropriate use of financial instruments to support EE investments enables the use of Cohesion Policy resources in a revolving way and to generate leverage by crowding-in private co-financing in order to meet significant investment needs.

Information reported in the following sections is based on publicly available sources, in particular:

- Eurostat national statistics;
- Portugal, Cedru, Avaliação ex-ante dos Instrumentos Financeiros de programas do Portugal 2020 – Lote 3 – instrumentos financeiros para a eficiência energética e gestão eficiente das águas e dos resíduos, Relatório final; 2015
- Final version of the National Energy and Climate Plan of Portugal;
- EC assessment of the draft National Energy and Climate Plan of Portugal;
- Odysee-mure, Energy Efficiency Trends and Policies in Portugal, 2018
- Odysee-mure, Portugal country profile
- Ibroad project, Portugal: Current use of EPC and potential links to iBRoad
- INS Statistics Portugal, data on building stock
- INS Statistics Portugal, Publication on construction and housing statistics
- EU building stock observatory
- EU Energy Poverty Observatory Member State Report Portugal
- National Renewable Energy Action Plan for Portugal, 2019
- National Law (Portaria) 332/2018
- JRC Science for Policy Report, Accelerating energy renovation investments in buildings 2019



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- JRC Science for Policy Report, Synthesis report on the assessment of member states' building renovation strategies, 2016
 - Commission staff working document. The EU Environmental Implementation Review 2019 Country Report Portugal 2019
 - Commission Staff Working Document Country Report Portugal 2020
 - National Renewable Energy Action Plan Portugal 2017-2020
 - <https://certus-project.eu/portugal>
 - Allocation of Cohesion policy funding to Member States for 2021-2027. European Court of Auditors. March 2019
 - Research on the Portuguese building stock and its impacts on energy consumption-an average U-value approach, Archives of Civil Engineering 2013
 - European Social Policy Network, In-work Poverty in Portugal, 2019
 - EC, Spring economic forecast 2020

The following interviews were conducted:

- IFD
- PME Investimentos
- SPGM
- Portugal Turismo
- IAPMEI
- Portugal Ventures
- DG REGIO- Portugal desk



1. Context overview

Portugal has a population of **10 291 027 inhabitants** (2.00% of the EU27). The population of the country has decreased in the last 10 years by 2.57%.

It is important to mention that the country underwent a difficult period during the crisis with a strong economic slowdown and high unemployment rates (more than 17% in 2013)¹.

During the crisis period and especially between 2010 and 2014, the country was unable to repay or refinance its public debt and was obliged to request financing from the IMF and the EU to prevent an insolvency situation. This so called bailout programme was accompanied by austerity measures and a very tight fiscal consolidation process. In the last few years the country underwent a process of economic recovery with an increase of GDP per capita (10% in the last 5 years) that has managed to supersede the pre-crisis levels.

Impact of the COVID crisis

Based on the European Commission “Spring 2020 Economic Forecast”, released in May 2020, due to the COVID-19 outbreak, Portugal will suffer a sharp recession in 2020 with the gross domestic product (**GDP**) **expected to contract by 8.25%**, before rebounding and grow by 7.5% in 2021. The **unemployment rate** is expected to increase from 6.5% (2019) to 9.7% (2020) and it is expected to decrease again in 2021 (7.4%).

To support the national economy an important public fiscal stimulus will be deployed, with the **Government deficit** expected to reach 6.5% of 2020 GDP and 1.8% in 2021. Due to the combined impact of the decrease of the GDP and the increase in the government deficit, the **debt/GDP ratio is expected to reach 131.6% in 2020** (it was 117.7% in 2019) while it is expected to be 124.4% in 2021.

The crisis could have a dual negative impact on EE investments, by both **reducing the demand** (e.g. households and enterprises may decide/be forced to postpone investments) **and the financial supply** (e.g. financial intermediaries may become more selective in their lending activity) **therefore increasing the importance of EE related supporting schemes**.

Final energy consumption (FEC) in Portugal in **2018** was 16.470Mtoe (1.5% of EU 28 consumption)². In the last decade it seems that FEC has been influenced by the economic crisis. More specifically, consumption fell steadily in the last 10 years by close to 13%. Especially in the period from 2008 to 2014, consumption fell from 18.40Mtoe to 15.77Mtoe³. A slight increase is reported in the last three years aligned with the economic recovery.

Consumption per capita (1.61toe/person) is 27% lower than the EU average (2.2 toe/person) moreover in the last 10 years, this rate decreased by 7.9%, slightly more than the EU average (-7%)⁴.

Energy productivity (GDP over the gross available energy) is 7.28 Euro per Kg of oil equivalent (close to the EU average), showing a moderate reliance on energy to generate GDP.

Sectors contributing to final consumption are: transport (5 794 toe), households (2 572 toe), industry (4 526 toe) and services (1 899 toe)⁵.

The building sector (residential and non-residential) accounts for about 16% of the final energy consumption with high energy saving potential remaining. Regarding energy efficiency (EE), during the 2001-2016 period, Portugal reported about 4.7 Mtoe of cumulative (technical) final energy savings⁶.

It is important to note that the available information in the bibliography on the structure of the national building stock is very scarce. The JRC reported accordingly⁷, that the Portuguese national Strategy on building renovations does not provide the required information on existing buildings and their breakdown in categories. According to the National Energy and Climate Plan (NECP), this strategy is being updated and will be available in the following months.



1.1. Overview of the residential sector

The stock of dwellings⁸ is 6m, of which residential households account for about 4m (representing 2% of EU27). More specifically:

- Residential buildings correspond to 86% of the total building stock
- About 3m buildings consist of 5 to 9 flats
- 82% of buildings were built before 1990 since the largest boom in construction started after the war and lasted until 1990
- The construction of buildings has been following a downward trend since 2000 and this trend became more intense in the following years (about 2% of buildings were built after 2010)⁹.

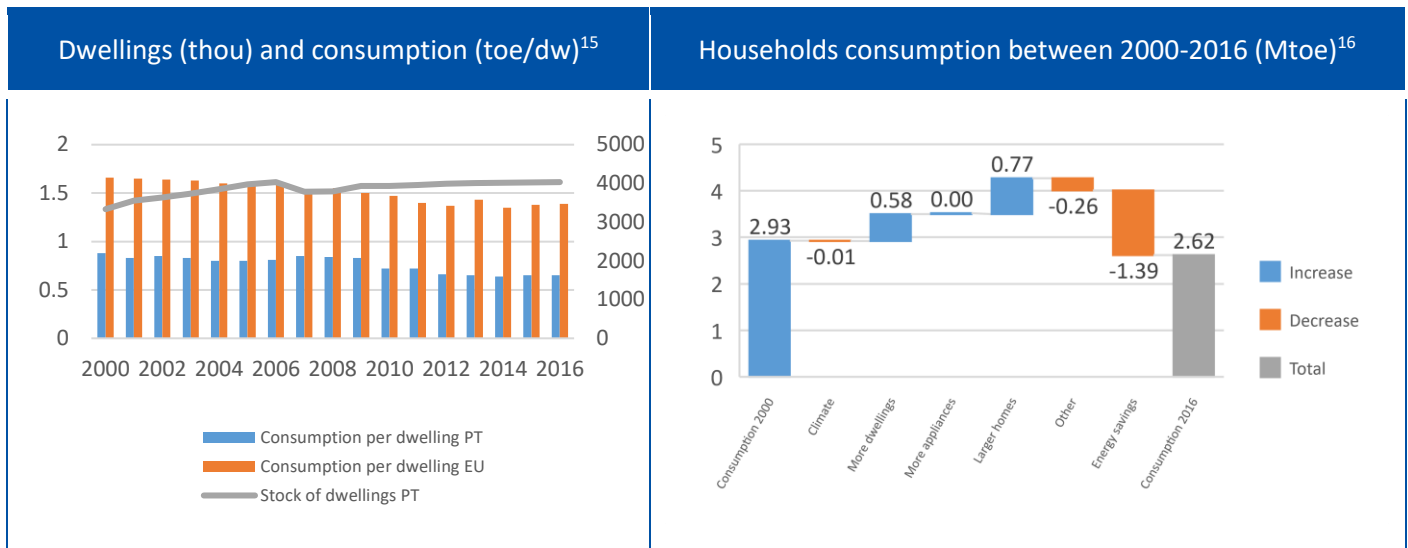
Regarding energy consumption in the residential sector, it is important to highlight that the Portuguese landscape presents some contradictions. More specifically, although the building stock in the country (especially regarding households) has been gradually aging (with limited new constructions and limited renovations) according to the Odysee-mure methodology, the residential sector noted a significant development in EE gains between 2000 and 2016. This contradiction is not easily interpreted. It could be attributed to energy poverty factors and overall reduced household incomes (because of the crisis) which lead to an inability to consume rather than an improvement of insulation and equipment.

Further information on residential buildings is provided below:

- Households¹⁰ are responsible for 2.5Mtoe (1% of EU28) or 18% of the national consumption¹¹ (in 2018)
- Consumption per dwelling is 0.65 toe (53% lower than EU average)¹²
- Consumption reduced by 6.3% in the last 10 years (11% in the last 5 years)
- The residential building stock is the third largest consumer of energy
- The average energy consumption is lower than the EU average to an extent because of economic constraints of households from the crisis

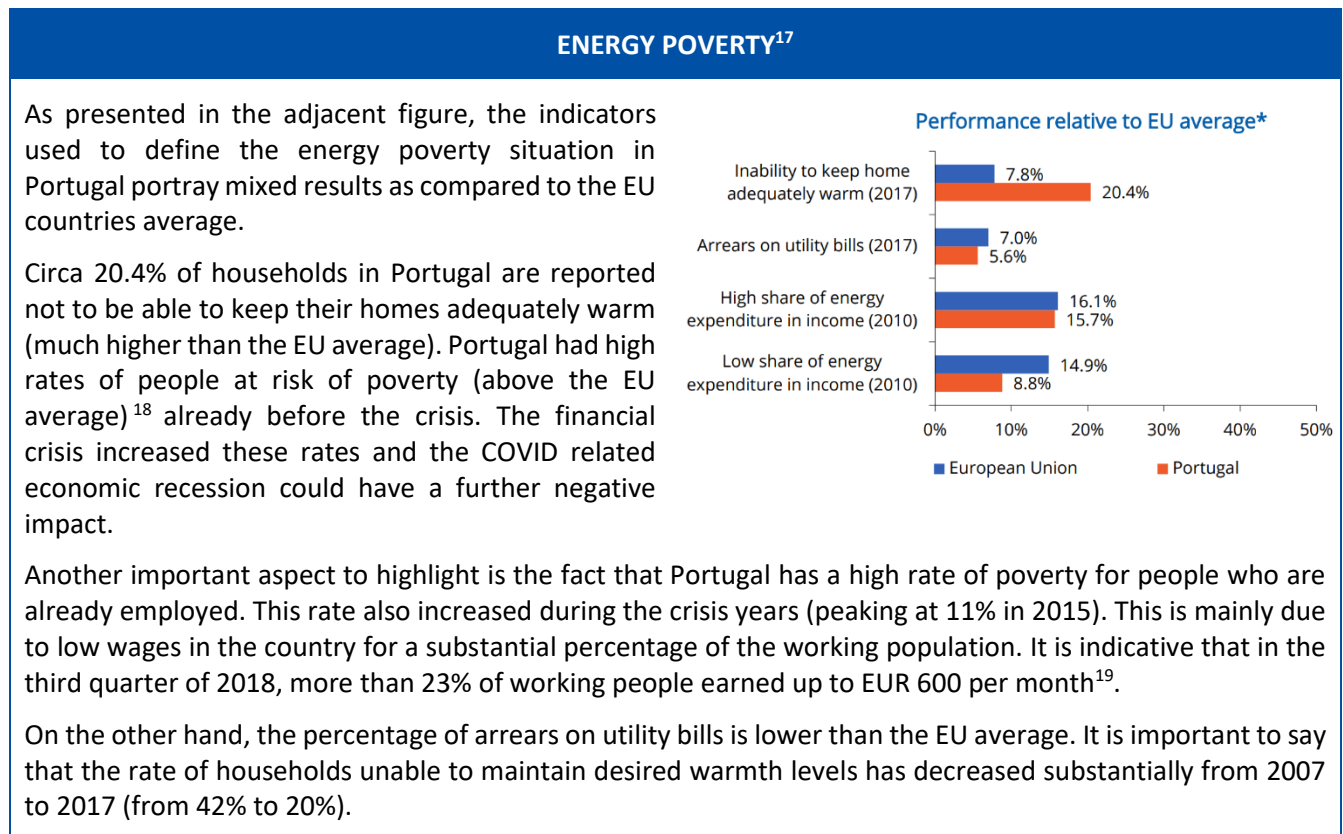
From 2006 to 2016, the renovation work in family households decreased by around 70%. In 2016, 10.661 new dwellings were completed in Portugal of which 3.348 corresponded to renovations (or alterations). Moreover:

- The potential for EE is very high, since 86% of buildings were built before 1990
- A large percentage of the building stock was built without thermal regulations in place¹³ (energy efficiency requirements were defined after 1991)
- Buildings built between 1960 and 1980 have the highest energy saving potential
- 44% of heating in households is generated from electricity with very low use of natural gas (9%) and solar thermal (1%)¹⁴



As seen in the graphs above, consumption decreased between 2000 and 2016, with the building stock remaining more or less at the same levels. Due to the crisis, renovation works were postponed with families having to deal with other priorities. As such, the potential for the renovation of buildings is very wide. Taking into account the positive forecasts for the economy, and the overall recovery process having improved the income situation of families, an increase in the construction activities could be expected.

The NECP does not refer to specific targets such as the number of renovations to be conducted in the following years. Such targets will be provided after the finalization of the long-term strategy for the renovation of the building stock in residential and non-residential buildings.





One of the main measures in place to address energy poverty problems is financial assistance extended by the state through the social tariff. Since 2016, the social tariff is being awarded automatically to households receiving certain social benefits and to low-income households.

1.2. Overview of the public sector

About 1m buildings in Portugal are considered as non-residential covering a floor area of 104sqm. Out of this floor area, about 34% correspond to public sector activities. More specifically, out of the 104sqm, 6% is occupied by public offices, while 21% correspond to education and about 7% to hospitals²⁰. Similar to the residential sector, the public sector buildings have wide potential for EE improvements due to the lack of investment in previous years from the financial crisis.

It has been acknowledged in the NECP that public buildings seem to have a high dependency on oil and electricity and a low use of natural gas. In addition, public buildings suffer from poor insulation as per the majority of the national building stock.

According to the NECP, the objective is to promote the decarbonisation of the building stock owned by the state. In order to achieve this, a review of the Public Administration Energy Efficiency Programme will be carried out. However, the NECP has a lack of information on the numbers and specific objectives related to renovation of public buildings and the measures proposed remain high level and vague.

1.3. Overview of services and industry sectors

The **services sector** account for about 74% of the national GDP while its energy consumption in 2018 was 2.3Mtoe (1.8% of EU28) increasing over time (31.6% last 5 years VS +0.3% in EU28).

Although the service sector was affected by the crisis as all sectors of the economy, the recovery process and the overall performance of the economy lead to a sharp increase in energy consumption in the last 10 years and especially the last 5 years.

The **industrial sector** accounts for 23% of the national GDP and in 2018, industry consumed 4.5Mtoe (0.5% of EU28) with a decrease by 17% in the last 10 years²¹.

The economic slowdown overall reduced the contribution of industry in the energy consumption in the country.

During 2000-2016, energy savings achieved in industry were worth 1.51Mtoe or 26% of 2000 consumption.



2. EE targets, measures in place and proposed

Portugal is currently implementing a number of policies (covering the period from 2016 to 2020) and planning additional measures to reach the 2030 targets. The NECP mentions a number of policy objectives without a high degree of granularity in terms of actual measures. These policy objectives are intended to be achieved with the support of financing schemes including grant schemes and financial instruments. However, it has to be noted that the measures are not directly linked to specific financing schemes.

The NECP lists a number of measures and then in a separate section a number of financing sources. The targets of the NECP are presented in ranges and are outlined below.

NECP overall targets	EE targets (Mtoe)	2017 data	Target 2020	Target 2030
	Primary energy consumption	22.8	19.6 - 22.6	15.6 – 21.5
	Final energy consumption	6.9	15.4 - 15.6	14.4 – 14.9

Under the **existing policy measures**, the objective for Portugal is to achieve energy savings of at least 35% until 2030²². Currently, the state is promoting the review of the relevant legal framework to strengthen the monitoring systems and energy requirements. Moreover, the requirements for energy audits and energy management systems have been reinforced, while in terms of awareness efforts, more active consumer information programmes and trainings are being implemented. According to the NECP, the strategy for renovation of the building stock will soon be finalised and will define the main objectives in improving buildings in the country. Moreover, a target will be defined in order to gradually require that all buildings are built at Near Zero Energy levels. In order to achieve this, special trainings will be provided for technicians and specialists in the building sector

On the financing side, a dedicated financial instrument called IFE2020²³ was planned to be implemented in the beginning of the programming period using ESIF but eventually was suspended. Eventually, a financial instrument was put in place using ESIF but also financing from EIB and CEB. This financial instrument, called IFRRU2020, is mostly targeting urban regeneration but it also includes an EE component (more details provided in a following section). In addition, financing programmes in the form of grants are being implemented by a state owned entity called Energy Efficiency Fund (more information presented in the table below).

In the following table, information regarding the main measures for the residential, industry and public sector are presented.

	Context/targets	Existing and planned actions/priority objectives
Residential Sector	<ul style="list-style-type: none"> There are about 4m residential household buildings in Portugal with poor overall insulation and a high percentage of families unable to achieve comfortable heating conditions in their homes 	<p><u>Existing measures:</u></p> <ul style="list-style-type: none"> The certification system for building defines specific requirements for residential buildings Almost 500k residential buildings have been issued energy audits Awareness campaigns have been launched in order to induce behavioural changes. For the residential buildings, ADENE (Portuguese Energy Agency) is responsible for these campaigns One of the main financing schemes available is the grant scheme of the Energy Efficiency Fund



		<ul style="list-style-type: none"> • Casa Efficiente is a dedicated financial instrument for EE financed by the national budget, however the uptake from the market has been rather slow <p><u>New planned measures/priority objectives (NECP):</u></p> <ul style="list-style-type: none"> • A dedicated programme will be implemented to replace inefficient household appliances and other electrical equipment. Also, the household appliances sold in the market will be required to have energy labelling. • The Energy Efficiency Fund already provides grants for replacement of windows and solar thermal systems and will continue in the future <p>IFRRU2020 also targets residential buildings and building on this experience, it is expected that similar financial instruments will be implemented in the future</p>
<p>Industry</p>	<ul style="list-style-type: none"> • From the overall building area in Portugal, 26% correspond to offices (including government buildings), 13% hotels and restaurants, 4% sport buildings and 28% commercial buildings 	<p><u>Existing measures:</u></p> <ul style="list-style-type: none"> • Energy audits framework in place for companies • Intensive energy consumption management system established for high consuming companies with requirements for regular energy audits • Requirements for high consuming companies to deliver rationalisation plans • The energy certification system for buildings includes special requirements for commercial and service buildings • Awareness campaigns for interventions in private buildings in industry and services by the Directorate General for Energy and Geology • A financing initiative was recently announced to support the renovation of buildings in industry and services through ERDF and Cohesion Fund grants with a budget of EUR 24.5m • The Energy Efficiency Fund also implements programmes whereby the cost of audits and the cost for rationalisation of energy consumption in companies is subsidised • IFRRU2020 is supporting industry buildings for rehabilitation <p><u>New planned measures/priorities (NECP):</u></p> <ul style="list-style-type: none"> • The improvement of buildings in the industry and services sectors will constitute a priority of the long term strategy for the renovation of the national building stock currently being drafted.



		<ul style="list-style-type: none"> • It is expected that financing schemes such as the ones provided by the Energy Efficiency Fund and IFRRU2020 will continue to play a leading role
<p>Public Sector</p>	<ul style="list-style-type: none"> • From the overall building area in Portugal, 21% correspond to schools, 7% to hospitals and government buildings are included in the overall office space (26%) 	<p><u>Existing measures:</u></p> <ul style="list-style-type: none"> • Awareness campaign for the improvement of public buildings implemented by the state owned company Government Shared Services Entity (eSPap). This company is mandated to provide diverse services to public authorities towards a more sustainable governance • The Energy Efficiency Fund covers 100% of costs for all types of public buildings to improve their energy management systems and acquire certifications and conduct audits • Continuous training provided to senior technical staff of public buildings in Energy Management Systems • Recently an ERDF grant programme was announced for public buildings and more specifically EUR 19m for local government buildings (in regions) and EUR 25m for social housing buildings • IFRRU2020 combines a loan and a guarantee and is mostly targeting public buildings at regional level • The initiative ECO AP is a mapping exercise in order to identify public building that require renovation and EE upgrade. The purpose is to match these projects with ESCOs. There is no financing component under this exercise. <p><u>New planned measures/priorities (NECP):</u></p> <ul style="list-style-type: none"> • The Improvement of buildings in the public sector will constitute another priority of the long term strategy for the renovation of the national building stock currently being drafted. In this context, the Public Administration Energy Efficiency Programme will be implemented. • In order to attain the objectives (that will be set) in the renovation of public buildings, an Energy Efficiency Barometer will monitor the energy performance of such buildings. • It is expected that financing schemes such as the ones provided by the Energy Efficiency Fund and IFRRU2020 will continue to play a leading role



3. Market failures, main issues and barriers to investment

A number of specific issues hindering EE activities in Portugal are briefly reported in the following table. To the extent possible, the main potential implications of the COVID crisis on barriers to EE investments have been considered.

	Financial issues	Non-financial issues
Residential Sector	<ul style="list-style-type: none"> • Households are still recovering from the crisis and trying to cope with lack of liquidity²⁴; the COVID crisis could have a further negative impact as it could reduce further households' disposable income/ financial resources • Portugal has a very high energy poverty rate, demonstrating that renovations are not a priority for households • The liquidity problems of the banking system²⁵ increased the difficulties for households to acquire credit • Banks remain reluctant to lend to multi apartment buildings and ESCOs. 	<ul style="list-style-type: none"> • In apartment buildings, asymmetry of needs and priorities between owners renting out their apartments and owners living in their apartments • Low awareness of EE benefits in urban and rural areas • High dependency on electricity and kerosene fuelled central heating systems with high cost • Low use of natural gas • The economic crisis changed the dynamic on the housing market with most families looking to rent rather than own a house²⁶ • ESCOs are active in the market but their accreditation process from the state is lengthy and their credibility in the market remains low²⁷ • Lack of awareness on alternate contracting solutions such as EPCs
Industry	<ul style="list-style-type: none"> • Predominance of SMEs in the market which by default have limited access to finance. • During the crisis, and especially in the period from 2009 to 2014, access to finance became very scarce due also to the liquidity problems of the banking system²⁸ • The COVID triggered economic recession will have negative impacts on enterprises that could have more difficulties to access the credit sector (due to the less performing economic and financial ratios). Due to future uncertainty, enterprises may moreover reduce further their investment plans and they could postpone non-core investments 	<ul style="list-style-type: none"> • Very low awareness on the benefits of EE improvements • The use of ESCO remains low with some projects being reported in the case of hotels and shopping centres²⁹ • Lack of awareness on alternate contracting solutions such as EPCs



Public Sector	<ul style="list-style-type: none">• Portugal has limited debt capacity to support EE investments with own resources, moreover to face the COVID related recession, the debt/GDP level of Portugal is expected to further increase	<ul style="list-style-type: none">• Political priorities during the crisis years were focused on fiscal recovery• Low awareness for the benefits of EE amongst public stakeholders managing public buildings• Lack of awareness on alternate contracting solutions such as EPCs
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4. Investment needs, gaps and implications for financial instruments

The NECP includes estimates for investment needs, summarised in the following table. It needs to be highlighted that the Portuguese NECP provides investment needs only until 2040.

The actual needs are presented in ranges. The main scenario does not consider additional investments to achieve energy neutrality by 2050. In the table below, additional investment needs are also defined for the scenario of achieving energy neutrality by 2050.

Investment needs (EUR bn)	2016 - 2030	2031 - 2040
Overall investment without neutrality target		
Electricity	22.4 – 22.1	16.6 – 19.6
Transport	193.7 – 201,3	74.5 – 62.3
Buildings	165.0 – 176.4	124.0 – 138.3
Industry	14.0 – 16.0	14.4 – 14.7
Other	0.7 – 0.8	0.2 – 0.1
Total	395.9 – 416.6	229.7 – 235.1
Additional investment needs to achieve neutrality		
Electricity	1.2 – 2.2	9.0 – 11.3
Transport	5.1 – 6.2	17.3 – 17.6
Buildings	3.1 – 4.8	5.6 – 6.1
Industry	1.0 – 1.3	1.2 – 0.9
Total	10.8 – 14.7	33.7 – 37.9
Grand Total	406.6 – 431.3	263.4 – 273.0

The NECP does not provide granularity as per the investment needs within the sub area of buildings. As such, information is limited also in this case. According to the table below, the state considers the transport sector of higher priority than buildings for the period until 2030. For the period 2031 to 2040, investment needs for buildings become higher than those for transport.

Taking into account the table above and the information provided in the previous section, the possible implications for financial instruments are outlined below.



Horizontal implications for financial instruments

- The financial crisis affected most stakeholders and although the situation has largely improved, there is still a lack of liquidity in the market and the COVID related crisis could have a further negative impact
- There is still very low awareness on the benefits of EE improvements and low capacity in the market. Further capacity building but also technical assistance in the use of financial instruments could be beneficial
- Although there is experience in the country with the use of financial instruments, these remain mostly generic in nature. As such, there is a lack of past experience in implementing a dedicated financial instrument for EE in all sectors.
- Currently, two instruments are being implemented targeting EE, namely “Casa eficiente” financed with national funds and IFRRU2020 with ESIF. Their implementation could produce some lessons learned in the following months.

Residential sector

- There is no experience in the sector with dedicated financial instruments due to availability of grant programmes
- Financial instruments could support bridging the financing gap reported in **multi-apartment-buildings** (where banks tend to be reluctant to lend to **Home-Owner-Associations**);
- Financial instruments could support innovative financing solutions (e.g. **ESCO model**), not developed in the residential sector also due to the reluctance of banks to finance them (mainly due to risk)

Public sector

- IFRRU2020 is a positive case study for the promotion of building regeneration especially targeting social housing or very old public buildings
- Financial instruments could support the **development of the EPC model** in the public sector, providing **technical support and financial support** both directly to Public Sector Entities (e.g. municipal lending) and to private or public-private entities (loans and/or equity financing).

Industry

- IFRRU2020 is a positive case study for a financial instrument targeting building regeneration but still not targeting the typical SME company
- SME financial instruments remain generic in nature not targeting EE but there is extensive experience in the market in the use of guarantees for SMEs
- Dedicated financial instruments for EE could also support the development of the EPC model in the industry sector and in the business sector at large



5. ESIF resource, existing financial instruments and main grant programmes

Portugal has been allocated **EUR 25.79bn** in ESIF in the current programming period 2014-2020. The ESIF funds are implemented through 16 national (thematic) and regional programmes. The allocations³⁰ from the 5 ESIF funds are:

- ERDF: EUR 10.7bn
- Cohesion Fund: EUR 2.8bn
- ESF: EUR 7.7bn
- EAFRD: EUR 4.0bn
- EMFF: EUR 392m

One of the main Operational Programmes (OPs) financed by the Cohesion Fund is the OP Sustainability and Efficiency in the Use of Resources identified with the acronym POSEUR with a budget of EUR 2.6bn. POSEUR is the main source of ESIF targeting EE in the country. Other OPs with EE aspects are mainly the ERDF OPs such as the OP Competitiveness.

As already mentioned, most widely used financing schemes targeting EE are implemented in the form of grants (available ESIF for EE grants amount to EUR 260m in the current period) mainly through the Energy Efficiency Fund. A purely dedicated financial instrument for EE with **ESIF** has not yet been designed in Portugal. However, there are several other financial instrument initiatives financed by national funds worth highlighting.

5.1. Financial Instruments

Portugal has extensive experience in the set up and implementation of financial instruments. Currently there are several state owned institutions specializing in financial instruments namely IFD, PME Investimentos, Portugal Turismo, SPGM, IFFRU2020, and Portugal Ventures.

Overview of financial instruments implemented in the current period

The EIB is currently conducting an analysis on the set up and implementation of financial instruments in Portugal for another project. This analysis has highlighted 35 financial instruments currently implemented in the country by all the public institutions mentioned above.

- Half of the identified financing products (17) correspond to a combination of counter-guarantees and guarantees for loans extended to final beneficiaries (SMEs and mid-caps) through the banking system.
- 14 products correspond to Equity financing while 4 products are deployed in the form of loans.
- Most financing products (20) use national funds while 13 products are financed through ESIF, and four through the EIB and CEB.

Portugal has a long standing and well tested guarantee system which is focussed on SME financing and which supports all types of investments for companies. This system is based on the experience of SPGM but often the different institutions cooperate to implement the diverse instruments. SPGM operates as a national counter-guarantee organisation taking part of the risk from 4 underlying guarantee societies which in turn guarantee individual loans extended by commercial banks. In the current period 3 guarantee lines are financed by ESIF:

- Capitalizar mais is supporting SME investments including EE investments undertaken by SMEs.
- Economia circular is targeting SMEs for investment projects relevant to circular economy, which could potentially include EE components



- IFFRU2020 is an urban regeneration fund which also covers EE (described in the next section)
- It is important to note that the NECP refers to an SPGM dedicated guarantee product for EE. However, this product has not been confirmed by SPGM in the conducted interviews.

Loan products (financed by national funds) are mainly generic in targeting with a focus on investments undertaken by SMEs and mid-caps. One important instrument worth mentioning is a risk sharing loan facility implemented by Portugal Turismo. This scheme is supporting investments by small hotels and although detailed information on the nature of investments is not available, interviews conducted with the management of the institution confirmed that EE components are often included in the investment plans of these hotels.

Several equity instruments are also implemented in Portugal with a focus on supporting technological start-ups and existing companies. These instruments promote also the cooperation between the private sector and research institutions supporting projects in efficient use of resources, including efficient use of materials and energy.

5.2. Financial instruments with a closer focus on EE

In the beginning of the programming period a dedicated financial instrument for EE was being set up namely IFE2020. This instrument was meant to be managed by the EIB and would target EE investment in all sectors (financed by ESIF). However, in 2018 a political decision was made not to implement the financial instrument. It was assumed by the government that due to the still sensitive financial situation especially of households, such a dedicated financial instrument would not motivate investments.

On the positive side, another initiative namely **IFRRU2020** was created, with the ability to initiate investments in EE. IFFRU2020 is a building rehabilitation financial instrument combining different sources of funding including ESIF, EIB financing and CEB financing. This financial instrument has been set up in the form of a FoFs with 4 underlying funds (in the model of JESSICA). Although this financial instrument should be considered more as an urban development financing scheme rather than an EE dedicated instrument, it is still prioritising the improvement of the efficiency of buildings. The instrument is targeting private and public buildings but in practise it is seeking projects in cooperation with municipalities for the rehabilitation of abandoned buildings, or the improvement of public housing. The instrument is being implemented through 3 commercial banks and the total available funds are about EUR 1.4bn. The end product for the project promoters are loans with long tenures and below market interest rates combined also with a guarantee provided through the SPGM network.

Recently, a loan instrument was launched targeting residential EE with national funds. The instrument is called **Casa Eficiente 2020** with a total budget of EUR 200m (partially financed by EIB with a EUR 100m loan). The instrument consists of extending preferential loans to single households or apartment buildings implemented through 4 commercial banks. The scheme is implemented by the Portuguese Confederation of Constructors and Property Developers under the technical support of the ADENE (Agency for Energy). According to interviewed stakeholders, the uptake has been slow in the market, with a disbursement of EUR 600 000.

Based on the financial instrument landscape in Portugal, the following lessons learned can be highlighted.

Lessons learnt	Opportunities for the post 2020
<ul style="list-style-type: none"> • There is a strong potential for EE improvement in Portugal and high investment needs in all sectors. • In the current programming period, the main EE grant schemes and financial instruments are financed by national funds 	<ul style="list-style-type: none"> • Build on the experience in implementing financial instruments especially in the form of guarantees which is the preferred and most successful form of support in the market, with a dedicated ESIF instrument targeting EE investments



<ul style="list-style-type: none">• The government was reluctant to implement an ESIF financial instrument as initially planned under the assumption that especially households would prefer to apply for grants• Portugal has a substantial experience in implementing financial instruments for SME financing• Potential financial instruments financed by ESIF could explore the combination with a grant element in order to motivate EE investments especially for households.• Most documents used in the current analysis refer to the low awareness for the benefits of EE renovations and low capacity in the market. A TA component would be a key element to incorporate in a potential ESIF financial instrument.• ESCOs are present in the market but only involved in larger scale projects (hotels, shopping malls)	<ul style="list-style-type: none">• The use of financial instruments could be focused on the promotion of ESCOs and EPC contracting
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5.3. Main ESIF grant programmes

According to the stakeholders interviewed, the implementation of ESIF grant schemes in the current period was delayed because of the change of plans related to the initially foreseen set up of the financial instrument IFE2020. The decision to not implement the specific financial instrument was taken in 2018.

By the end of that year, a law was passed namely Portaria 332/2018 (24 December 2018) outlining the implementation of the POSEUR and the regional OPs (except for Madeira and Azores). Based on this law, grant schemes should be expected to be implemented directly by MAs.

Regarding grants financed by national funds, the main example related to EE in all sectors is the case of the Energy Efficiency Fund. The specific grant scheme set up in 2010, with a purpose to support investments leading to energy efficiency in transport, residential buildings, industry, services and the public sector.



NOTES

¹ EUROSTAT

² NEPC

³ Eurostat

⁴ EUROSTAT

⁵ EUROSTAT

⁶ This data refers to technical final energy savings, which excludes savings achieved thanks to economic factors (e.g: a recession that reduces industry's production and therefore it lowers the energy consumption) or behavioural factors (e.g: higher temperature during that year).

⁷ JRC, Synthesis report on the assessment of member states' building renovation strategies, 2016

⁸ INE Statistics Portugal

⁹ Odysee-mure.eu

¹⁰ EUROSTAT

¹¹ NECP

¹² Odyssee-Mure, Database

¹³ Ibroad country factsheet Portugal

¹⁴ Odysee-mure, Energy Efficiency Trends and Policies in Portugal, 2018

¹⁵ Odyssee database

¹⁶ Odyssee database

¹⁷ EU Energy Poverty Observatory; Member State Report; Portugal. June 2020

¹⁸ EUROSTAT

¹⁹ European Social Policy Network, In-work Poverty in Portugal, 2019

²⁰ EU building stock observatory

²¹ EUROSTAT

²² NECP

²³ Interviews with stakeholders

²⁴ Research on the Portuguese building stock and its impacts on energy consumption-an average U-value approach, Archives of Civil Engineering 2013

²⁵ Portugal, Cedru, Avaliação ex-ante dos Instrumentos Financeiros de programas do Portugal 2020 – Lote 3 – instrumentos financeiros para a eficiência energética e gestão eficiente das águas e dos resíduos, Relatório final; 2015

²⁶ Research on the Portuguese building stock and its impacts on energy consumption-an average U-value approach, Archives of Civil Engineering 2013

²⁷ <https://certus-project.eu/portugal/>

²⁸ Portugal, Cedru, Avaliação ex-ante dos Instrumentos Financeiros de programas do Portugal 2020 – Lote 3 – instrumentos financeiros para a eficiência energética e gestão eficiente das águas e dos resíduos, Relatório final; 2015

²⁹ <https://certus-project.eu/portugal/>

³⁰ Commission staff working document. The EU Environmental Implementation Review 2019 Country Report Portugal 2019

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