

# Provision of information to occupants to improve the energy performance of buildings

## Examples of information and advisory services

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### Introduction

EPBD Article 20 requires that Member States (MSs) take necessary measures to inform the owners or tenants of buildings and building units of different methods and practices that lead to enhanced building energy performance. This includes the effective sharing of the information available in energy performance certificates and inspection reports as well as provision of information on cost-effective ways to improve the energy performance and available financial instruments for energy renovation.

Article 10 requires Member States to take the appropriate steps for a development of relevant financial instruments to facilitate the improvement of building energy performance across Member States. The information and financing activities support at least cost-optimal energy performance level in new buildings and renovation as well as (Art. 9) gradual refurbishment of existing building stocks to NZEB levels.

The Concerted Action EPBD (CA EPBD) carried out an overview of activities in countries, which showed that the implementation of core EPBD requirements was supported by a range of national policies and measures. These include awareness raising and information programmes, energy advisory services, training and up-skilling programmes for various professional profiles, financial incentives and advanced financial mechanisms. Countries' long-standing experience in implementing such measures shows that many support policies work best when combined into policy packages. This is why the EPBD focusses on a holistic policy approach through its articles on finance and on information (Articles 10 and 20).

The policies supporting the EPBD's central articles address the implementation of minimum requirements in new and existing buildings, energy performance certification and recommended cost-effective measures, cross-linking of certification and inspections, as well as financial incentives for the major renovation of existing buildings and for the construction of NZEBs.

This factsheet covers the main characteristics of information programmes in countries of the CA EPBD and presents a representative selection of various policy packages that countries have put in place over the period of 2015-2017 to support occupants in EPBD implementation. Policy packages are often developed around financial incentives from EU and national funding, with common targets of increasing the comprehensive renovation of existing buildings (at cost-optimal level or beyond) and of facilitating early construction of NZEBs. In most countries, the information on policy packages is shared via energy advisory services for end users.

### Information and advisory services

#### Advisory services in countries of the CA EPBD

The overview carried out by the CA EPBD revealed that information and advisory services supporting building energy renovation are currently present in the majority of countries (Figure 1) and that they represent the communication basis of the whole package of policies prepared for a specific group of buildings. Eighteen (18) countries (IE, UK, EE, CZ, SI, HR, AT, SK, LV, NL, DE, IT, NO, PL, BG, MT, RO, GR) reported having energy advisory services linked to energy renovation of buildings in place, while 5 others (ES, CY, BE, PL, HU) do not have a formal energy advisory service, however this does not exclude various bottom-up organised services.



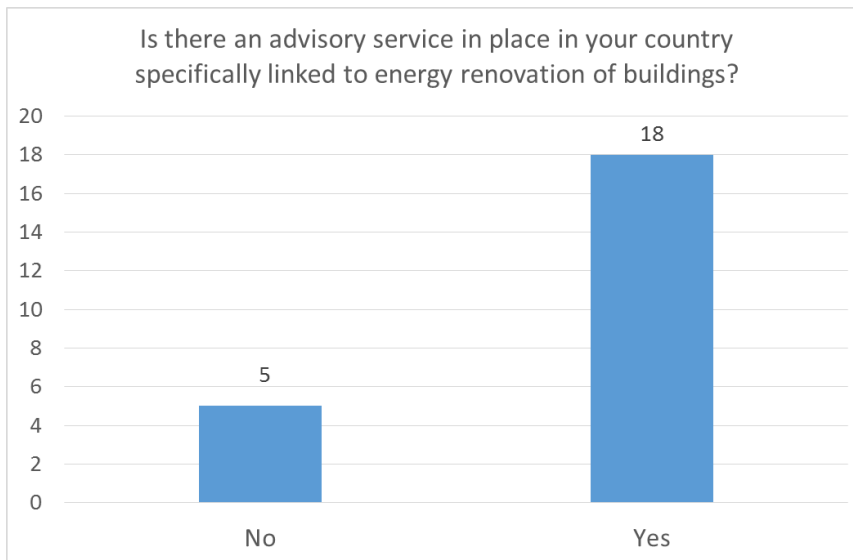


Figure 1. Eighteen (18) countries reported they have energy advisory services linked to energy renovation of buildings in place, while 5 others have no formal energy advisory service organised (number of countries that responded to the survey question: 23).

### Organisation of advisory services

In 15 countries (IE, EE, CS, SI, HR, AT, SK, NL, DE, IT, NO, BG, RO, GR, BE-Flanders), the advisory service is a centrally operated and controlled service (by the state, region, or municipality), all to a greater or lesser extent supported by the state.

In 2 countries (UK, PL), the information / advisory service has been set up prevalently as a bottom-up initiative by private market actors, supported by industry and commercial banks. In 5 countries (IE, LV, IT, NO, BE-Flanders), the centrally operated advisory service is complemented by private market initiatives.

The delegates of CA EPBD responded to an interactive questionnaire on energy advisory services during the Plenary meeting in Valetta, in February 2017. A prevailing opinion of the delegates was that a combination of private- and governmentally-driven energy advisory service for occupants / housing is the best approach (Figure 2). Many countries felt that non-profit organisations are also a key provider of energy advice and information.

When asked whom do building owners and tenants trust most when they need information and advice for renovation, countries responded they mostly trust advisors from the national programme and/or independent experts (Figure 3). However, they also felt that the impact of commercial advice should not be neglected.

Many countries expressed the importance of the community in spreading renovation advice and information. Anecdotally, people put more trust in the advice of family, friends, neighbours and actual renovation workers rather than 'official' sources.

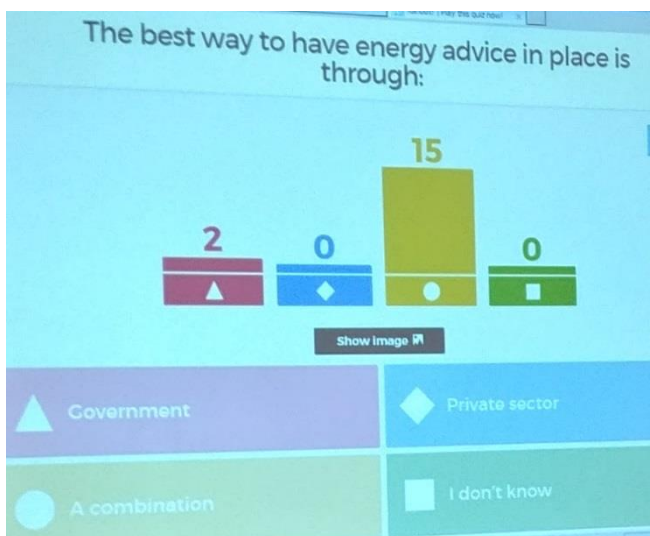


Figure 2. Organisation of energy advisory service (number of countries that responded to the survey question: 17)

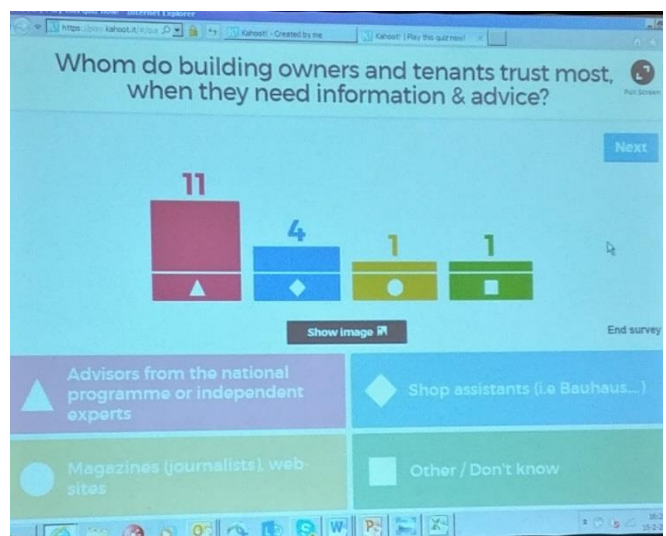


Figure 3. Trustworthy providers of energy advice (number of countries that responded to the survey question: 17).

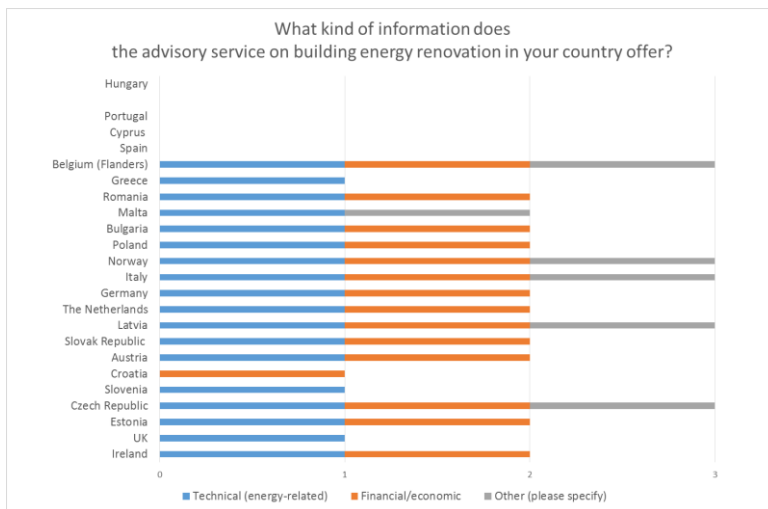


Figure 4. Differences among MSs in the scope of advisory service on building renovation (number of countries that responded to the survey question: 19)

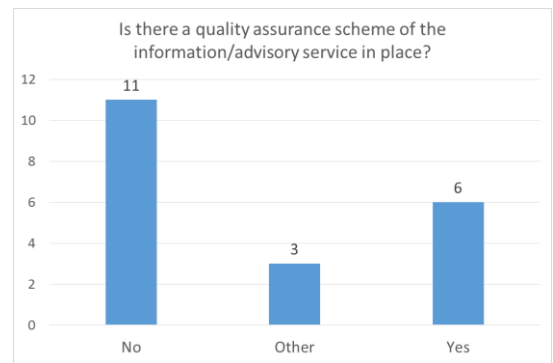


Figure 5. Quality assurance and quality control of the information / advisory services in MSs (number of countries that responded to the survey question: 20)

Where information and advisory services are in place, they primarily cover technical aspects as well as finance. A few countries also offer advice on other areas, such as on legal aspects of renovation and other building related regulations, although a broader approach (advice also on structural enforcement, earthquake resistance, water barrier, condensation and mould growth, etc.) can offer a more holistic support for the end-user (Figure 4).

Countries generally view advisory services as beneficial to achieving deep renovation, however they also noted an issue with ensuring adequate financing of advisory services as well as ensuring their quality and independence (Figure 5).

### Focus and opportunities over the building project's lifetime

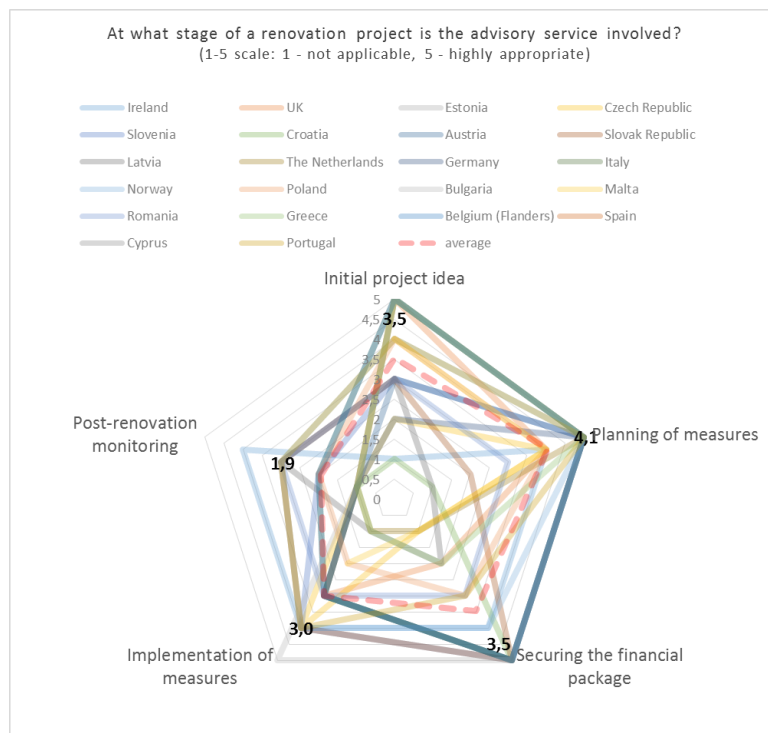


Figure 6. Advisory service and lifetime stages (number of countries that responded to the survey question: 23). (Source: CA IV, CCT2, Plenary meeting in Valletta, 2017)

Formal advisory programmes organised in countries primarily focus on three stages of the building project's lifetime (Figure 6):

- ❖ initial project idea, when investment decisions about renovation of existing buildings or construction of new high energy performance buildings are taken;
- ❖ planning of measures, in order to guide the occupants towards the optimal set of renovation measures over the building lifetime and towards constructing new NZEBs;
- ❖ identifying available financing opportunities for occupants and building owners to support the improvement of building stocks' energy performance.

On the other hand, it was concluded that there is less information given on technical aspects and administrative procedures for permission needed and less advisory support offered during the renovation process itself as well as that the lowest support is given during the post renovation and monitoring stage.

The fact that building occupants and owners are less well supported with information and advice during and after the implementation of measures as well as during the operational phase may inspire countries to extend the services and thus support a higher quality of the works. This could also help to finetune the systems as well as ensuring more reliable monitoring of any savings that are achieved.

## Lessons learnt from information and advisory programmes

### Energy advice for building renovation

Building owners and users need energy advice and information to achieve the energy renovations foreseen in their national Renovation Strategies – especially in order to gain the confidence to undertake a deep renovation. Putting the consumer at the heart of the energy system depends on the consumer being well-informed.

The [Energy Advice Exchange](#), an informal group of consultants, has produced discussion and briefing [papers](#) to highlight the relevance of energy advisory services to achieving energy efficiency in buildings, present the state of the art, and highlight delivery and policy issues, with specific reference to the European Commission's [Clean Energy for all Europeans](#) legislative proposals. The aim of these activities is to ensure that energy advisory services are fully integrated in the revised proposals, and that existing knowledge and good practice is shared as widely as possible.

The experts are concerned that while there are pockets of excellent practice and practitioners, and some policy makers recognise the essential contribution advice makes to achieving energy policy goals, energy advice programmes in general suffer from difficulties in sustaining funding, a lack of medium to long-term sustainability, and a lack of concrete evidence of impact (which can in turn lead to a lack of long-term commitment). Reference to advisory services within the winter package are not consistent or well defined, and there is a risk that energy advisory services are undervalued or taken for granted, and that renovation strategies can fail without them.

Energy Advice Exchange is an informal group recently established by three consultants, i.e., Catrin Maby, Louise Sunderland and Rod Janssen, who have been working together to assess and promote the provision of energy efficiency advice and information within policy and practice. More information: <https://energyindemand.com/energy-advice-exchange/>.

### Building Renovation Passports

Despite the proven economic and technical feasibility of building renovation and the societal and environmental benefits it could bring, renovation rates in Europe are still low and considerably below the required level. Owners and investors continue to face multiple barriers to improving the energy performance of their buildings. Together with difficulties in accessing finance, one of the most often quoted barriers is a lack of knowledge about what to do, where to start, and which measures to implement in which order. In order to overcome these barriers, certain governments are implementing Building Renovation Passports to support building owners with personalised advice on their renovation options and a record of the changes made. Building Renovation Passports can be complementary with EPC's and support mechanisms, and may thus offer a voluntary, long term and building owner specific renovation roadmap with tailored advice for the end-user (<http://bpie.eu/publication/renovation-passports/>).

Even though there is no common definition for Building Renovation Passports across Europe, a Building Renovation Passport is a long-term, step-by-step renovation roadmap for a specific building based on quality criteria, following an energy audit, and outlining relevant measures and renovations that could improve the energy performance of a building.

Building Renovation Passports could, on a voluntarily basis, assist the renovation of the European building stock by providing tailor-made information to building owners, provided that they will not duplicate information already included in EPCs.

The most well-known schemes for Building Renovation Passports are the German "Individual Renovation Roadmap", The Belgian (Flemish) "Building Passport" scheme and the French "Energy Efficiency Passport". The key elements for the success of these schemes are their acceptability and the credibility and reliability of the data.

The H2020 iBRoad project "Individual Building Renovation Roadmap" for single-family houses looks at the building as a whole and provides a customised renovation plan over a long-term horizon (15-20 years) combined with building logbook or 'passport' that keeps a record of energy related interventions based on the occupant's needs and specific situation (e.g., age, financial situation, composition and expected evolution of the household, etc.).

## Case studies

One-stop-shops are a tool covering the whole customer journey that can provide integrated energy renovation services to homeowners with the necessary financing to renovate their buildings and to overcome the problems due to national legislation. Centralising the information and procedures, one-stop-shops accompany the individuals all along their administrative proceedings.

In France the “[Rénovation Info Service](#)” support network provides independent, tailored technical and financial advice. The whole of France is covered through a one-stop-shop website and phone service, which directs households towards a network of 450 local support centres. The service records 100,000 – 500,000 website visits and 3,000 phone calls at a national level each month. The service was built upon existing platforms with the aim of increasing the knowledge of households. A national communication campaign has been carried out each year from 2014 with the involvement of local authorities.

“Better Houses” – is a Danish one stop-shop initiative, financed by the Danish Energy Agency. The scheme (running from 2013 to 2016) included education of Better Houses consultants, which could guide homeowners in prioritising a holistic and hopefully deep refurbishment, gradually and through all of the building process. The scheme was conceived as a voluntary and market driven system, aiming at promoting refurbishment of private residential buildings.

The programme “Habiter Mieux” (Living Better), implemented by the French national housing agency ANAH aims to combat fuel poverty. Households identified as suffering from fuel poverty are appointed energy efficiency ambassadors who visit the home to carry out an audit based on the building fabric and needs of the occupants. In parallel to this, a subsidised loan scheme and tax credit system (subsidising up to 30% of expenses) are used to encourage renovation further.

In Croatia, the information and advisory service supports renovation of multi-family buildings from EU Structural Funds. It thus targets building managers and authorised representatives of building occupants and offers an information and advisory system. Approximately 20 workshops were held throughout Croatia in order to promote renovation, give information on available funds and identify eligible applicants and measures. Information was also disseminated through media, leaflets and other marketing.

In Slovenia, an energy advisory network is in place since 1993 and fully publicly funded, since 2016 managed by Eco fund. Around 70 part-time advisors operate in municipal offices, giving altogether over 6,000 individual advices (oral and written) on recommended measures and incentives per year.

(More information on one-stop-shop initiatives is available at: <http://www.go-refurb.eu>)

## Success factors of an advisory service

Who pays for the service largely determines the scope of the service and type of advice offered, how it is delivered and the quality / accuracy of the service. Most countries have some combination of government and building owner funded advice. A truly independent and transparent service would need to either be government funded or funded entirely by the homeowner employing an independent consultant. Anything else would require at least partial funding from industry, installers, etc.

## Information and advisory services in selected countries

Country	Link to information and advisory service supporting building renovation
Bulgaria	A list of financing mechanisms and schemes promoting energy efficiency in buildings: <a href="http://seea.government.bg/bg/finansirane">seea.government.bg/bg/finansirane</a>
Croatia	Information hub: <a href="http://www.mgipu.hr">www.mgipu.hr</a>
Czech Republic	<a href="http://www.prukaznadum.cz">www.prukaznadum.cz</a> Official campaign led by the Ministry of Industry and Trade: <a href="http://www.vitekolikusetrite.cz">www.vitekolikusetrite.cz</a> Network of Energy Consulting and information centre: <a href="http://www.mpo-efekt.cz/cz/ekis">www.mpo-efekt.cz/cz/ekis</a>
Denmark	'save energy' information and tools: <a href="http://www.sparenergi.dk">www.sparenergi.dk</a> EPC search: <a href="http://sparenergi.dk/forbruger/boligen/energimaerkning-boliger">sparenergi.dk/forbruger/boligen/energimaerkning-boliger</a>

<b>Estonia</b>	<p>Fund KredEx (renovation grants for residential buildings): <a href="http://kredex.ee/energiatohususest/">http://kredex.ee/energiatohususest/</a>  Ministry of Economic Affairs and Communications:  Energy efficiency  <a href="https://www.mkm.ee/et/eesmargid-tegevused/ehitus-ja-elamumajandus/hoonete-energiatohusus">https://www.mkm.ee/et/eesmargid-tegevused/ehitus-ja-elamumajandus/hoonete-energiatohusus</a>  Housing sector  <a href="https://www.mkm.ee/et/eesmargid-tegevused/ehitus-ja-elamumajandus/elamumajandus">https://www.mkm.ee/et/eesmargid-tegevused/ehitus-ja-elamumajandus/elamumajandus</a>  Technical Regulatory Authority:  Energy Performance Certificate  <a href="http://www.tja.ee/hoonete-energiaklassid/">http://www.tja.ee/hoonete-energiaklassid/</a></p>
<b>Finland</b>	<p>Energy Performance Certificate information for homeowners:  <a href="http://energiatodistus.motiva.fi/mika-on-energiatodistus/">http://energiatodistus.motiva.fi/mika-on-energiatodistus/</a>  Frequently asked questions:  <a href="http://energiatodistus.motiva.fi/usein-kysyttya/">http://energiatodistus.motiva.fi/usein-kysyttya/</a>  Information for professionals:  <a href="http://energiatodistus.motiva.fi/energiatodistustenlaatijat/patevyyksivaatimukset/">http://energiatodistus.motiva.fi/energiatodistustenlaatijat/patevyyksivaatimukset/</a></p>
<b>Germany</b>	<p>DENA Expert Tool: <a href="http://www.zukunft-haus.info/tools/expertentool-wirtschaftlichkeit.html">www.zukunft-haus.info/tools/expertentool-wirtschaftlichkeit.html</a>  Federal Ministry for Economics and Energy "Sanierungskonfigurator":  <a href="http://www.sanierungskonfigurator.de/">www.sanierungskonfigurator.de/</a>  CO2-Online "Modernisierungs Check" (funded by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)):  <a href="http://www.co2online.de/modernisieren-und-bauen/sanierung-modernisierung/sanierungsratgeber/">www.co2online.de/modernisieren-und-bauen/sanierung-modernisierung/sanierungsratgeber/</a>  BBSR website about economically reasonable renovation of existing buildings launched in 2017 shall in 2018 provide information on how to calculate the economic advantages of an improvement using simplified approaches, including an Excel-tool:  <a href="http://www.bbsr-energieeinsparung.de/EnEVPortal/EN/Economics/Economics-node.html">http://www.bbsr-energieeinsparung.de/EnEVPortal/EN/Economics/Economics-node.html</a></p>
<b>Italy</b>	<p>Energy efficiency information: <a href="http://www.enea.it/it">www.enea.it/it</a>, <a href="http://www.ufficienzaenergetica.enea.it/Cittadino">www.ufficienzaenergetica.enea.it/Cittadino</a></p>
<b>Norway</b>	<p><a href="http://www.enova.no">www.enova.no</a>  Information for homeowners: <a href="http://www.enova.no/privat">www.enova.no/privat</a>  Renovation example:  <a href="http://www.enova.no/download?objectPath=upload_images/9D4F34915948430E8A1BFA29C76A0675.pdf">www.enova.no/download?objectPath=upload_images/9D4F34915948430E8A1BFA29C76A0675.pdf</a>  Information for contractors: <a href="http://www.lavenergioprogrammet.no/">www.lavenergioprogrammet.no/</a></p>
<b>Slovenia</b>	<p>ENSVET - Energy advisory network for buildings and households:  <a href="http://www.ekosklad.si/fizicne-osebe/en-svet">www.ekosklad.si/fizicne-osebe/en-svet</a>, <a href="http://ensvet.ekosklad.si">ensvet.ekosklad.si</a>  Eco fund - Subsidies for physical persons, (companies and public sector):  <a href="http://www.ekosklad.si/fizicne-osebe">www.ekosklad.si/fizicne-osebe</a>  Financing buildings energy renovation: <a href="http://www.energetika-portal.si/javne-objave/">www.energetika-portal.si/javne-objave/</a>  Energy performance certificate and advice; FAQ for end-users, as well as the portal for independent experts elaborating EPCs: <a href="http://energetskazkaznica.si/nasveti/">energetskazkaznica.si/nasveti/</a></p>
<b>Portugal</b>	<p>EPC Brochures – Main steps and Benefits:  <a href="https://www.sce.pt/wp-content/uploads/2018/07/afM_Triptico_passos_obter_ce1.pdf">https://www.sce.pt/wp-content/uploads/2018/07/afM_Triptico_passos_obter_ce1.pdf</a>  <a href="https://www.sce.pt/wp-content/uploads/2018/07/afM_Triptico_beneficios_ce.pdf">https://www.sce.pt/wp-content/uploads/2018/07/afM_Triptico_beneficios_ce.pdf</a>  EPC examples – residential and non-residential:  <a href="https://www.sce.pt/wp-content/uploads/2018/06/ADENE_certificado_energ%C3%A9tico_habita%C3%A7%C3%A3o.pdf">https://www.sce.pt/wp-content/uploads/2018/06/ADENE_certificado_energ%C3%A9tico_habita%C3%A7%C3%A3o.pdf</a>  <a href="https://www.sce.pt/wp-content/uploads/2018/06/ADENE_certificado_energ%C3%A9tico_com%C3%A9rcio_e_servi%C3%A7os.pdf">https://www.sce.pt/wp-content/uploads/2018/06/ADENE_certificado_energ%C3%A9tico_com%C3%A9rcio_e_servi%C3%A7os.pdf</a>  10 Energy Efficiency guides: <a href="https://www.sce.pt/certificarevalorizar/sabia-que.html">https://www.sce.pt/certificarevalorizar/sabia-que.html</a>  EPC main campaign - Certify is to value: <a href="https://www.youtube.com/watch?v=oB7U3xelYAM">https://www.youtube.com/watch?v=oB7U3xelYAM</a>  ON-OFF Videos – Special dedicated to the homeowner:  <a href="https://www.youtube.com/watch?v=wc37rQ3SKs8">https://www.youtube.com/watch?v=wc37rQ3SKs8</a>  <a href="https://www.youtube.com/watch?v=H7pJ0QJl8U">https://www.youtube.com/watch?v=H7pJ0QJl8U</a>  <a href="https://www.youtube.com/watch?v=eU2hrzIR2UY">https://www.youtube.com/watch?v=eU2hrzIR2UY</a>  <a href="https://www.youtube.com/watch?v=tnmFEPCUOH8">https://www.youtube.com/watch?v=tnmFEPCUOH8</a>  <a href="https://www.youtube.com/watch?v=sjLdSjn07ZA">https://www.youtube.com/watch?v=sjLdSjn07ZA</a>  <a href="https://www.youtube.com/watch?v=VCeCdVW7vKk">https://www.youtube.com/watch?v=VCeCdVW7vKk</a>  Família+ – Special dedicated to families:  <a href="https://www.youtube.com/watch?v=rO2et9X5NH8">https://www.youtube.com/watch?v=rO2et9X5NH8</a>  <a href="https://www.youtube.com/watch?v=GTisjfG8luM">https://www.youtube.com/watch?v=GTisjfG8luM</a>  <a href="https://www.youtube.com/watch?v=EYOCGKqbfh0">https://www.youtube.com/watch?v=EYOCGKqbfh0</a></p>

<b>United Kingdom</b>	Official EPC register where pdf reports can be searched and downloaded by address. Also includes an FAQ and energy assessor information: <a href="http://www.epcregister.com">www.epcregister.com</a> Energy Saving Trust which offers advice and information to householders and small businesses: <a href="https://www.energysavingtrust.org.uk">https://www.energysavingtrust.org.uk</a>
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