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DIRECTIVE

National EED Implementation Reports (NIR)

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Introduction

The 2012 Energy Efficiency Directive establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020. Under the Directive, all EU countries are required to use energy more efficiently at all stages of the energy chain from its production to its final consumption.

This report contains National EED Implementation Reports for all EU Member States providing insights into the specific new measures and policies countries have introduced over the years to implement the EED.(EU countries were required to transpose the Directive's provisions into their national laws by 5 June 2014). The reports reflect the very different ways in which legislation has been implemented and provides a wealth of information to those directly involved in the implementation of energy efficiency improvement policies and measures as well as those wishing to get a better feeling for national approaches to national energy efficiency policy making in general.

Per country report there is an introduction describing where the responsibilities lies for implementation of the Directive, a chapter containing the legal context and the status of the implementation divided into two categories: legislative (summary by article) and non-legislative provisions.

The purpose of the report is to provide both national administrations and stakeholders alike with insight into the status of EED implementation as well as the options available when considering how to strengthen the role of energy efficiency in the policy mix.

EED implementation in the EU Member States

in alphabetical order

EED implementation in Austria

Introduction

The implementation of the EED lies in the responsibility of the Federal Ministry of Science, Research and Economy. Other important public authorities in the implementation of the EED are the Federal Ministry of Agriculture, Forestry, Environment and Water Management and the nine Austrian Federal Provinces who have many legal competences as regards energy efficiency policy.
The Austrian Energy Agency was appointed as the National Energy Efficiency Monitoring Body observing and evaluating the progress of Austria in the implementation of the EED.

1. Legal context

The Federal Energy Efficiency Act, which was enacted in 2014, is the main instrument to transpose the EED. The Energy Efficiency Act introduces an EEO for energy retail sales companies and defines among others requirements for public buildings and non-SMEs.
The legal text can be found here:
https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20008914

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	An evidence-based estimate was carried out on the basis of the national building stock and the ongoing activities of the federal states and the federal government, particularly in the context of residential building subsidies. This estimate (not taking into account any additional, as yet undefined future measures) produced an annual renovation rate relevant to energy savings of approximately one percent of the total old building stock. It should be expressly noted that this is merely the first version of an estimate of expected energy savings, which in subsequent years will be supplemented and refined by additional information on current developments in the building sector, at least with regard to • the development of the provisions in building law for major renovations • new financing models • changes in the energy mix • rebound effects • changing rates of increase in the use of solar thermal systems and heat pumps in the building stock. This estimate indicates a potential of 2,185 GWh/a for residential buildings and 1,130 GWh/a for non-residential building after 2020
Article 5	In relation to Article 5 of the EED Austria chose the alternative approach. The determination of savings to be achieved started with an analysis of the building stock owned and occupied by the central government. This analysis eventually resulted in the creation of a building inventory. Public bodies are starting to enter data into this centralised data base. It was decided to start with buildings over 250m^2 from the beginning. The analysis resulted in a cumulative energy savings target of 48.2 GWh until 2020. In the year 2014 4.018 GWh of energy savings mainly coming from contracting projects could be reported.
Article 6	The obligation contained in Article 6 EED requiring certain contracting authorities to purchase only products and services with a high energy-efficiency performance was transposed into Austrian law with the amendment to the Federal Procurement Act (BVergG), Federal Law Gazette I No 128/2013. Pursuant to the new Article 80a of the Federal Procurement Act, the central contracting authorities referred to in Annex V of the Act must, when awarding supply or service contracts in the upper threshold region, ensure

EED Article	Implementation status
	that the purchased goods or the goods used in the performance of the service comply with certain requirements on energy efficiency, insofar as this is consistent with the basic principles of the procurement procedure, in particular the principles of free and fair competition and cost-effectiveness. The requirements on energy efficiency contained in Annex III of the Directive were transposed into Austrian law in Annex XX of the Federal Procurement Act. www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20004547 In addition the Federal Energy Efficiency Act foresees in §16 that the Federal Government, when purchasing or leasing immovable property, must pay increased attention to the impact on energy efficiency and include energy consumption values in the purchasing or leasing decision.
Article 7	Austria implements Article 7 with a mix of an EEO and alternative measures. The EEO Each energy retail sales company with energy sales of more than 25 GWh has to achieve savings at final customers in Austria that amount to 0,6% of energy sales of the preceding year. 40% of these savings have to be achieved in households. The EEO was introduced with the enactment of the Federal Energy Efficiency Act and is formulated in §10. Alternative measures The alternative measures comprise housing subsidies of the Federal State and Federal Provinces, energy taxes and investment subsidies for companies.
Article 8	The Federal Energy Efficiency Act foresees in §9 an obligation for non-SMEs to conclude a regular external energy audit or to implement an energy management system including a regular internal or external energy audit. The minimum criteria for external energy audits are defined in Annex III of the Federal Energy Efficiency Act. The Federal Energy Efficiency Act also defines quality criteria for energy auditors.
Article 9-11	The Electricity Act 2010 lays down the rules for smart meters. In principle, all information, promotional material and bills from energy suppliers must be transparent and customer-friendly. Bills must also show the meter readings used for the bill, as well as information on how the meter was read. It should therefore indicate whether the meter was read by the network operator, the customer supplied his/her own reading, the meter was read remotely or the meter reading was estimated. The information provided to the final consumer on the details of the roll-out of smart meters includes in particular technical aspects of the smart meter, the timing of the roll-out, consumer rights etc. In addition §22 of the Federal Energy Efficiency Act contains provisions on the installation of meters for heat and cooling.
Article 12 and 17	There is a comprehensive range of consumer information and education programmes available in Austria. These programmes are aimed at both private individuals and professionals. Measures relating to education, training, information and awareness-raising are in principle offered by the Austrian Government and the federal states. At federal level, klimaaktiv (the Austrian Climate Initiative) is one of the most important information and awareness-raising programmes. Under the umbrella of klimaaktiv, a large number of programmes have been launched to promote the topics of climate protection, energy efficiency and renewable energy sources, in the personal, commercial and public spheres, by means of information, advice, education, training, quality standards and networking. See www.klimaaktiv.at/ The energy agencies of the federal provinces offer a comprehensive range of information and services. This includes educational programmes for members of the public on a more efficient use of energy (evening events and excursions) as well as advanced training courses for professionals (ranging from one-day seminars to training courses). In addition, numerous activities are provided to inform the public about the careful use of energy. These activities include special events, appearances at trade shows, newspaper ads, brochures,

EED Article	Implementation status
	website info etc.
Article 13	§31 of the Federal Energy Efficiency Act defines penalties for non-compliance with the EEO.
Article 14	For the comprehensive assessment a scientific study by the Vienna University of Technology involving all relevant stakeholders, was used. The study can accessed here: https://ec.europa.eu/energy/sites/ener/files/documents/Austria_MNE%282016%2950514.pdf
Article 15	The study on energy efficiency potentials in energy transformation, transmission and distribution can be accessed here: http://www.bmwfw.gv.at/EnergieUndBergbau/Energieeffizienz/Documents/Bewertung%20der%20Energieeffizienzpotenziale%20der%20%C3%B6sterreichischen%20Gas-%20und%20Strominfrastruktur.pdf
Article 16	See also text on auditors in the section on Article 8. §17 of the Federal Energy Efficiency Act define quality criteria for energy service providers. A public list of qualified energy auditors is available here: www.monitoringstelle.at/index.php?id=708 A list for other energy service providers is under development.
Article 18	In 2013 the association of 'Austrian Energy Efficiency and Performance Contractors – DECA' was established, which plays a networking function in the further dissemination of high-quality energy services. In addition, the federally funded klimaaktiv contracting portal provides interested parties with information on the topic of energy performance contracting. www.deca.at/view_site/site.php?nid=1&lang=de www.contracting-portal.at/show.php For the quality assurance of contracting projects, the Ministry of Agriculture, Forestry, Environment and Water offers the Energy Performance Contracting Eco-label in Austria. This certificate formulates the requirements on the contractor, the course of the project and the energy performance contract necessary for awarding of the 'Energy Performance Contracting' ecolabel. www.umweltzeichen.at/cms/de/produkte/gruene-energie/content.html?rl=33 In the public sector, the market for energy services is supported by the comprehensive Federal Property Contracting programme for the renovation of more than 200 federal buildings since 2001. As part of this programme, more than 600 buildings have been optimised and modernised in terms of energy efficiency. This makes the Contracting programme one of Europe's largest contracting authorities for energy performance contracts. www.bmwfw.gv.at/Tourismus/energieeinsparungen/Seiten/Bundescontracting.aspx
Article 19 and 20	With regard to the measures required by Article 19(1a) EED, the work programme of the Austrian Federal Government 2013–2018 include a section on affordable housing. The two planned measures are: • Changes in the rules to form funds to reserve which make it easier to carry out renovations • Changes in the decision-making process in the residents meeting

2.2. Non-legislative provisions

None

3. Future activities

At the moment none are planned. Future changes depend mainly on the contents of the recast of the EED

4. Relevant information

Energy efficiency section on the website of the Federal Ministry of Science, Research and Economy:
http://www.bmwfw.gv.at/EnergieUndBergbau/Energieeffizienz/Seiten/default.aspx
In this section you can find all relevant information on the Federal Energy Efficiency Act and the implementation of the EED.

EED implementation in Belgium

Introduction

In Belgium the implementation of the EED is mainly the responsibility of the three regions, which are competent for the rational use of energy. But the federal level has also certain competences, such as fiscal policy and products standards, which supports the regional policies in this topic.

In the Flemish Region the implementation of the EED is coordinated by the Flemish Energy Agency (Ministry of Energy).

In Wallonia the implementation of the EED is coordinated by the ministry of Energy and Sustainable Buildings.

1. Legal context

Please describe legal context here, which national laws have been introduced for transposition EED?

Walloon Region
Energy efficiency policies are implemented since the early 80s in Wallonia.

The EED implementation induced changes in several already existing decrees and application laws, like the building codes, the PEB decree, the RUE decree, the gas & electricity decrees, the green electricity, the SMEs & nonSME financial incitative decrees, the RES certification decree.

The EED implementation also impacted existing non legislative tools like for example the Voluntary Agreement with the industry, communication or financial instruments.

EED is now fully implemented in the Walloon legislation.

Flemish Region
Energy efficiency policies were already implemented since the previous EU-directives in Flanders. The EED implementation induced changes in several already existing decrees and application decisions, like the Energiedecreet (the Energy Decree of 8 May 2009), the Energiebesluit (the Energy Decision of 19 November 2010), technical regulations for the distribution of electricity and natural gas, the environmental licensing regulations (VLAREM), Technical Specifications (STS), etc.

The EED implementation also impacted existing non legislative tools like for example the Agreements with the industry, communication or financial instruments.

Brussels Capital Region
To meet all the challenges related to energy, renewable energy, climate change, air quality, the Brussels-Capital Region has developed an integrated approach which has already been declined into a regulation document (Brussels Air, Climate and Energy Code - COBRACE). The COBRACE came into force 2nd of May 2013 and aims to:

- Minimise energy needs and energy dependence;
- Use energy from renewable sources and promote rational use of energy (RUE);
- Improve the energy performance of buildings;
- Reduce the environmental impacts of mobility needs;
- Evaluate and improve air quality;
- Reduce the emission of atmospheric pollutants;
- Highlight the exemplary role of the public authorities with regard to both buildings and transport.

The “COBRACE” deals with these different subjects while taking into consideration both the social implications and the various aspects of sustainable construction.
In the building sector, this legislation thus aims to exploit the enormous existing potential in terms of energy savings. Among other things, the “COBRACE” includes provisions aimed at the current regulation of energy performance of buildings while simplifying it and guaranteeing transposition of Directive 2010/31/EC. On the basis

of the excellent results obtained in the framework of the "Exemplary Buildings" call for projects and the energy subsidies, the Brussels-Capital Region established an energy standard close to the passive concept as a regulatory framework in 2011 for any new construction as of 2015.
The Code also provides for establishment of effective, high-quality energy audit systems for large enterprises and contains the obligation to draw up a local action plan for energy management "PLAGE" to ensure monitoring and efficient management of buildings stock with high energy performance.
In addition to that, the decree of 15 December 2011 stipulating that it is mandatory to perform an energy audit for establishments of more than 3500m² not allocated to housing on the occasion of any request for renewal or extension of the environmental permit.

Federal Gouvernement
Article 6: Federale Overheidsdienst van de Kanselarij van de Eerste Minister, Wet van 15 mei 2014 tot wijziging van de wet overheidsopdrachten en bepaalde opdrachten voor werken, leveringen en diensten van 15 juni 2006 en van de wet van 13 augustus 2011 inzake overheidsopdrachten en bepaalde opdrachten voor werken, leveringen en diensten op defensie- en veiligheidsgebied, gepubliceerd in het staatsblad op 28 mei 2014.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Art3	The three regions and the federal level contribute to the Belgian target of 18% reduction in the primary energy consumption in 2020. (Belgian objective sent to European Commission in May 2013)
Art 4	Walloon Region: The 1st draft of the long term renovation strategy of the Walloon building stock has been annexed to the NEEAP3 in April 2014 and will be revised in the NEEAP4 of April 2017. This renovation strategy builds upon existing support schemes (subsidies and 0%interest loans for the citizens, subsidies in the public sector, large renovation scheme in the social housing sector, education of skilled people in the construction sector, network of energy managers and auditors, …) . Flemish Region: A first reporting of the renovation strategy was provided to the Commission in April 2014 annexed to NEEAP3. https://ec.europa.eu/energy/sites/ener/files/documents/Flemish%20NEEAP_en_0.pdf. An important objective of Flemish energy policy is to improve the energy performance of the existing building stock systematically by means of an active promotion and public awareness policy, innovations in the building sector and the gradual introduction of obligations. To fulfil the Flemish policy target for the energy consumption of existing buildings, two strategies are being followed: a basic strategy and a leaders' strategy (p. 44-49 of the Third Flemish Energy Efficiency Action Plan). Brussels Capital Region: A first reporting of the renovation strategy was provided to the Commission in April 2014. The cost-effective approach for refurbishment of building was awarded as best practice by the commission (see p.60 http://bpie.eu/uploads/lib/document/attachment/86/Renovation_Strategies_EU_BPIE_2014.pdf) The reflection on the improvement of that strategy is on-going in thematic working groups.
Art5	Walloon Region The Belgian central governments have opted for the alternative approach and report their progress towards the 3% renovation targets each year in the EED annual report. For other public authorities in Wallonia, the UREBA subsidy scheme incentivises EE investments and audits or feasibility studies, and large . Flemish Region: The target is set on the basis of the consumption and surface area information of the buildings falling within the scope of the Directive, as specified by articles 5(1-4). As the Flemish government is opting for the alternative approach, the target is not calculated as 3% of the total useful floor area of these buildings. However the equivalence of the saving that will be achieved must be demonstrated. Equivalence is demonstrated by comparing the standard approach, i.e. renovation of 3% a year of the useful floor area and the associated energy

EED Article	Implementation status
	saving, with the energy saving to be achieved under the alternative approach. Brussels Capital Region: Alternative approach chosen: notified to the Commission end December. Federal government: Several federal actors are involved in the implementation: the "Régie des Bâtiments" as the real estate expert of the Federal State and the users of the federal government buildings themselves who gather within the EMAS network. (http://www.regiedesbatiments.be/index2_fr.cfm) Pursuant to the choice of an alternative approach, the federal government has several tools available: a combination of investments, rationalizations and behavioural changes.
Art6	Federal competence Wallonia supports the federal action in the public procurement procedures through the Walloon Sustainable Development Strategy, including technical specifications for buildings, formal notes on sustainable purchase, and inclusions of environmental, social & energetic clauses… There is a guide for public procurement of supplies and services available for the contracting authorities of the Federal Public Services. In this guide voluntary guidelines and technical requirements are included to promote and improve energy efficiency. This guide can be found in Dutch or French on the following website: http://www.gidsvoorduurzameaankopen.be
Art7	Alternative approach chose by the three regions: notified to the Commission the 5th December 2013. The annual reports were done in April 2015 and April 2016 and showed that the Region is on track with its target for 2014 and 2015. Walloon Region Wallonia notified a cumulative target of 25 675GWh for the 2014-2020 period, to be reached with alternative measures covering the residential sector (grants & loans), public sector (subsidies & renovation scheme), and industrial sector (voluntary agreements). EED 2016 annual report showed that by the end of 2014, the results were on tracks with the expectations. Flemish Region On 22 November 2013 the Flemish Government formally acknowledged the communication notifying the European community of the alternative approach, which was notified on 10 December 2013. The full notification can be found at: http://ec.europa.eu/energy/sites/ener/files/documents/article7_nl_belgium.pdf. Flanders inserted detailed information sheets into the notification demonstrating compliance with the criteria for each policy measure.
Art8	Walloon Region: PAE (residential), AMURE (industry) & UREBA (public sector) audit schemes have been revised to comply with EED requirements. Their accreditation procedures ensure the quality requirements for these audits. More than 85% of the industry consumption is covered by Voluntary agreements based upon extensive energy audits and implementation of measures with a payback time up to 5years. Many communication channels & a wide network of counsellors also support energy audits. Flemish Region: This article has been fully implemented in the environmental licensing regulations (VLAREM). Brussels Capital Region This article has been fully implemented in the CORBACE end 2015.
Art9 Art10 Art11	Walloon Region: Even if Wallonia did not opt for a systematic rollout of smart meters, consumers are provided with competitively priced accurate individual meters. All EED requirements have been duly incorporated in the electricity & gas Walloon legislation. The heat metering requirements are incorporated in the new NZEB and the SOLTHERM Walloon legislation. Even if Wallonia did not opt for a systematic rollout of smart meters, the Walloon legislation for gas & electricity provide minimal requirements about customer's consumption information. Moreover, the Walloon energy regulator informs about electricity & gas prices in Wallonia. Information about billing and consumption are free of charge in Wallonia. Flemish Region: Implemented in the Energy Decision of 19 November 2010 and in the technical regulations for the distribution of electricity and natural gas. A decision is also in the process of adoption (implementation article 10). Brussels Capital Region: The ordinances for the organisation of the electricity market and the gas market have been modified in order to take into account those articles provisions. A decree is in the process of

EED Article	Implementation status
	adoption, it has been adopted in first reading.
Art12	Walloon Region: Several legislative and non-legislative tools ensure the information of the Walloon consumer to support EE investment: The Rational Use of Energy Decree, the PRIMES order, The ECOPACK order, the electricity and gas regulations (Progressive & Solidarity-Based Tariff for electricity order, the low revenues energy order. Non legislative tools are for example the extensive counsellors network, communication campaigns such as BATEX (exemplary building projects) or CALE (building with energy), as well as TV, web or radio spots, or participation to thematic fairs. Flemish Region Implemented in the Energy Decree, the Energy Decision and in alternative measures. Brussels Capital Region: Already existing in Brussels legislation Federal Government: • The energy guzzlers website (Dutch: www.energievreters.be / French: www.energivores.be) is a sophisticated but handsome internet-based CO2 calculator • Make available a database allowing manufacturers to declare environmental impacts over the full life cycle of construction product. As a result, one will also be able to take into account the "embedded-energy", the energy required to produce, install, maintain and remove a construction product. • Eco-checks for energy saving light bulbs • Survey on insulation materials • Drivers of vehicles of the group 2 (vehicle categories C and D) must follow a periodic training which contain at least one module of defensive or economical driving (eco-driving module) • Promotion of modal shift by: 1. Promotion of public transport: roadway lane reserved for buses; Free train services are funded by the Federal Government for civil servant commuters; 2. Promotion of car-sharing: "Cambio" with the participation of regional carriers STIB, De Lijn and TEC. Promotion of employee commuter plans: Free train service are funded by the Federal Government for civil servant commuters; Extension of the fiscal deduction of expenses incurred for homework travel, when using alternative transport (foot, bicycle, public transport, etc.).
Art13	Walloon Region: Wallonia opted for the alternative approach in art 7. The Walloon Government will take the necessary corrective measures when needed. Specific articles in the electricity & gas decrees ensure provisions in case of eventually needed sanctions for other articles. Flemish Region: Specific articles in the Energy Decree and in the environmental licensing regulations (VLAREM) ensure provisions in case of eventually needed sanctions for other articles. Brussels Capital Region: Implemented in Brussels Capital Region
Art14	Walloon Region The Walloon potential assessment has been duly communicated to the Commission. The costs & benefits analysis at the individual level has been implemented in the environmental permit regulation, without any exemption. Besides specific requirements in the environmental and PEB building permits procedures, the Walloon legislation supports the district heating and cogeneration through the Green Certificates mechanism, and through specific grants like AMURE, UREBA, PRIMES, ... or through a network of skilled counsellors (facilitators). Implemented in the Energy Decree, the Energy Decision, the environmental licensing regulations (VLAREM), and in alternative measures. Flemish Region Brussels Capital Region: Implemented in Brussel Capital Region
Art15	Walloon Region: The electricity decrees provides provision for the relative roles of the Walloon Regulator (CWAPE) and the OSD regarding the network energy efficiency and DSM aspects and

EED Article	Implementation status
	regarding the priority for the green electricity (including quality cogeneration). Flemish Region Implemented in Energy Decree and the environmental licensing regulations (VLAREM). Brussels Capital Region Implemented in Brussels Capital Region The ordinances for the organisation of the electricity market and the gas market have been modified in order to take into account those articles provisions
Art16	Walloon Region The high quality of Walloon energy services is ensured by qualification mechanisms such as described in the orders PEB, Certification, AMURE, UREBA, PAE, and heating. Flemish Region The high quality of Flemish energy services is ensured by qualification mechanisms such as described in the Energy Decree, the Energy Decision and Technical Specifications (STS), e.g. recognition scheme for energy experts for buildings, qualification scheme for cavity wall insulation, qualification scheme for enterprises, recognition scheme for energy experts within the framework of energy policy agreements with energy-intensive companies, etc. Brussels Capital Region Implemented in Brussels Capital Region
Art17	Walloon Region No specific legislative instrument needed for communication, but plenty of communication channels are used by Wallonia to rise end-users awareness about energy efficiency Flemish Region Cfr. Article 12 EED. The Flemish Energy Agency has developed a number of instruments which can provide citizens with customised advice on a number of energy saving investments, such as roof insulation, wall insulation, replacement of single glazing, replacement of old central heating boilers, installation of a solar boiler or photovoltaic solar panels(called 'energy profit calculators', see www.energiesparen.be/energiewinst). There are also energy consultancy projects, demonstration projects and supporting surveys. Brussels Capital Region: Implemented in Brussels Capital Region
Art18	Walloon Region No specific legislative instrument, but in order to support the federal action to promote energy performance certificates and labels,, Wallonia dedicated a specific page to energy services on its website "energie.wallonie.be" Flemish Region The expansion of the grant schemes for energy-saving investments has given a strong boost to the energy-saving investments market as can be seen from the evolution of grants paid by the system operators for the period 2008-2012. Cfr. the list of energy services at p. 34-37 of the Third Flemish Energy Efficiency Action Plan. There are energy services for companies, for local councils, for public buildings and for vulnerable families. Brussels Capital Region: Implemented in Brussels Capital Region Federal Governement *Belesco is the "Belgian ESCO Association" (www.belesco.be)*
Art19	Walloon Region PEB decree and housing legislation ensure minimal energy requirements for buildings, and the performance of the building is communicated to the buyer or tenant. 0%-loans ECOPACK or Energy grants also incentivise the energy efficient renovation of buildings. Flemish Region The energy efficiency measures undertaken or planned to implement Article 19 are e.g. energy performance requirements in the Flemish Housing Code from 2015, measures in the social housing sector and public awareness measures. Brussels Capital Region: Implemented in the Brussels Capital Region
Art20	Walloon Region: Wallonia has set up several funds for financing energy efficiency investments: the Energy Fund in the electricity decree, the Kyoto Fund. These funds are complemented by specific financing instruments like EPURE or SOWAFINAL for public lighting, Ecopack for the renovation of residential houses or PIVERT for the renovation of social housings

EED Article	Implementation status
	Flemish Region: The Flemish government has set up the *Energy Fund*, which is a budgetary fund as defined in Article 12 of the Accounting Decree of 8 July 2011. The Flemish government has set up the *Climate Fund*, which is a budgetary fund as defined in Article 12 of the Accounting Decree of 8 July 2011. The Climate Fund was established by the Decree of 13 July 2012 containing provisions to accompany the second amendment of the 2012 budget. Brussels Capital Region: Implemented in the Brussels Capital Region
Art24	The Belgian NEEAP has been duly communicated to the Commission. It consisted of a chapter of the three regions and the federal government. NEEAP4 is already in preparation.

2.2. Non-legislative provisions

In addition to legal implementation, what other measures are taken, are there any additional instruments? Are there any national co-operation mechanisms: working together with others in order to enhance EED implementation? Voluntary agreements?

There is national cooperation between the Federal Government and the Regions in working groups to enhance EED implementation.

Walloon Region
The Industrial federations have committed themselves to a 2nd phase of voluntary agreements in 2013.

The 2014 Walloon NEEAP3 listed all existing EE measures, and evaluated their contributions to the Walloon & Belgian EE targets. Next year NEEAP4 will update them.

The recently adopted (April 2016) Walloon Air Climate & Energy Plan is also supporting EED implementation.

Flemish Region
Energy Policy Agreement with the industry.

The Third Flemish Energy Efficiency Action Plan (2014) listed all existing EE measures, and evaluated their contributions to the Flemish & Belgian EE targets. Next year NEEAP4 will update them.

Brussels Capital Region
The plan is dedicated to help Brussels to achieve its 30% reduction (40%/capita) of CO_2 emissions between 1990 and 2025. It declines Brussels Region objectives to 10 years and measures for 5 years regarding energy, including renewable energy, climate change mitigation and adaptation and air quality.
The plan defines 144 actions into 64 measures which are declined into 10 axes : building, transportation, renewable energy, economy, global city planning, consumption, social dimension, climate change adaptation, air surveillance and international mechanisms.
The Brussels air-climate-energy plan should be definitely adopted by the Government for the last reading by the end of June 2016.

3. Future activities

Please provide any information on planned changes in relation to EED implementation.

In Wallonia, the NEEAP4 preparation.

4. Relevant information

Flemish Region: www.energiesparen.be

Brussels Capital Region
- New call for project of exemplary buildings http://www.beexemplary.brussels/
- Alternative measures article 7 :
    - The Energy houses have a new structure but are still functioning http://www.maisonenergiehuis.be/

- Grants are adapted each year http://www.environnement.brussels/thematiques/energie/primes-et-incitants/les-primes-energie-en-2016

A low carbon development strategy is under development as requested by the decision 529/2013/EU

EED implementation in Bulgaria

Introduction

The implementation of the Energy Efficiency Directive (EED) (2012/27/EU) is the responsibility of the Ministry of Energy. The activities implementing the State energy efficiency improvement policy are carried out by the executive agency under the Minister of Energy - Sustainable Energy Development Agency (SEDA). SEDA is also responsible for the control over the observance of legislation in the field of energy efficiency and for the conformation of the amount of energy savings as a result of energy efficiency services provided and other energy efficiency improvement measures by issuing energy savings certificates.

2. Legal context

To implement the EED, changes have been made to several national laws:

- Energy Efficiency Law, adopted May 2015
- Energy Law, last amended July 2015

In Bulgaria the EED obligations are also subject on secondary legislation under the Energy Efficiency Law as:

- Ordinance for the methodologies for setting the national energy efficiency target, the setting of the total cumulative target, the setting up of an energy savings obligation scheme and the allocation of the individual energy savings targets to the obligated parties.
- Ordinance for the eligible measures for obtaining energy savings in final consumption, the manner of proving the energy savings obtained, the requirements to the methodologies for evaluation of energy savings and the manner for confirming energy savings.
- Ordinance for the eligible energy efficiency improvement measures in energy production, transmission and/or distribution, the procedure and terms for assessment of the state, as well as the procedure and terms for the evaluation of energy savings obtained as a result of such measures.
- Ordinance for the cost-optimal levels of minimum energy performance requirements for buildings or parts thereof, the energy efficiency technical requirements and indicators, as well as the method/standards for determining annual energy expenditure in buildings, including of nearly zero-energy buildings.
- Ordinance for the circumstances subject to entry of the qualified energy auditors into the public register, the procedure for entry into the register and for obtaining information, as well as the terms and procedure for the attainment of qualification of the auditors.
- Ordinance for the terms and procedure for performing an energy efficiency audit and certification of building, of parts of buildings, as well as the terms and procedure for preparing an energy savings evaluation.
- Ordinance for the terms and procedure for performing the energy efficiency inspection of heating systems with hot-water boilers and of air-conditioning systems, the terms and procedure for preparing an energy savings evaluation.
- Ordinance for the indicators of energy expenditure, the energy performance of enterprises, industrial systems and outdoor lighting systems, as well as the terms and procedure for performing an energy efficiency audit and preparing an energy savings evaluation in industrial enterprises.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 3	National Energy Efficiency Target is set in the National Energy Efficiency Action Plan and is: - Energy savings at FEC level: 716 ktoe/y - Energy savings at PEC level: 1 590 ktoe/y, including 169 ktoe/y in energy transformation, transmission and distribution processes. The Annual report on the implementation of the NEEAP in 2015 contains an evaluation of the progress towards the achievement of the National target – 26% of the whole target is achieved in the period 2014-2015.
Article 4	Article 4 of the EED requires European Member States to establish a long-term strategy for the renovation of buildings. Bulgarian National long-term programme for

EED Article	Implementation status
	the mobilization of Investments in the implementation of measures to improve the energy performance of buildings is Annex to the NEEAP. It includes overview of the national building stock (housing and public buildings), formulation of economically efficient approaches to improving the energy performance of buildings, taking into account the building types and the climate zone and the state policy in the area of technical regulation and harmonization of energy-efficiency legislation for the buildings sector. The Programme creates a financial framework for guiding the investment decisions of investors, builders and financial institutions. Currently the Programme is under process of revision and update.
Article 5	According to Bulgarian Energy Efficiency Law (adopted May 2015) to help reach the national energy efficiency target, measures to enhance the energy performance of at least **5 per cent** of the total floor area shall be taken annually in all heated and/or cooled State-owned buildings occupied by the State administration. For these purposes, the State bodies shall develop and adopt energy efficiency programmes and are bound to implement energy efficiency management, including to submit annual reports on energy efficiency management and the energy efficiency programmes to SEDA.
Article 6	The central government and the local authorities have been purchasing sustainably since 2010 when "Instructions for implementation of the requirements for energy efficiency and energy savings in public procurement for the supply of equipment and vehicles to minimize costs for the duration of their exploitation" were adopted. The Instructions were developed jointly by SEDA and Public Procurement Agency. Currently the Instructions are under process of revision and update.
Article 7	Bulgaria has active Energy Efficiency Obligation Scheme (EEOS) under Directive 2006/32/EU since 2010. The scheme covers the period 2010-2016. The National EE target was allocated as individual targets between the obligated persons. The obligated persons are separated in three groups: Energy Traders, owners of state and municipal buildings and owners of industrial enterprises with annual consumption more than 3 000 MWh. According to the requirements of the EED the EEOS was adapted and notified to the Commission with the National Methodology for the Operation of the Energy Efficiency Obligation Schemes. This national methodology has been drawn up in line with the framework provided in paragraph 4 of Annex V to the EED. This methodology was developed by a team of experts from Bulgarian Ministry of Energy and SEDA. According to the Energy Efficiency Act the total cumulative target for the 2014-2020 period shall be set as a cumulation of new energy savings each year of at least 1,5 per cent of the average annual value of the total volume of energy sales to final customers within the territory of the country in 2010, 2011 and 2012, excluding the volume of sales of energy used in the transport sector, under Eurostat Code B_101900. Bulgarian EEO target is set to 1 942,5 ktoe. The target shall be reduced by up to 25 per cent by excluding the volume of sales of energy used in industrial activities listed in Annex 1 to the Climate Change Mitigation Act and by applying the options in EED article 7 (2) a) and d). The obligated parties are: – End suppliers, suppliers of last resort, traders with issued Operating license "electricity trading", selling electrical energy to final consumers more than 20 GWh per year; – District heating companies and suppliers, which sell heat to final consumers more than 20 GWh per year; – End suppliers and traders of natural gas selling to end consumers more than 1 million m^3 per year; – Liquid fuels traders selling to the end consumers more than 6,5 kt liquid fuels per year, with the exception of fuel for transport purposes; – Solid fuel traders who sell to end consumers more than 13 kt solid fuels per year. In order to reach their individual targets, the obligated parties may implement energy-saving measures in all final customer sectors - industry, transport, households, commerce, civil society organizations, agriculture, forestry and fishery, services, etc. The obligated parties may implement measures that achieve energy savings in the energy transformation, distribution and transmission sectors, including by means of efficient district heating and cooling systems infrastructure.

EED Article	Implementation status
	In order to reach their targets, the obligated parties may implement horizontal measures aimed at increasing the energy efficiency of final customers, such as awareness and promotional campaigns. They may also pay contributions to the Energy Efficiency and Renewable Sources Fund or other specialised funds, programmes, measures, schemes and mechanisms used to finance measures to increase the energy efficiency of final customers, including agreements concluded with beneficiaries. Annually, not later than the 1st day of March, the obligated persons submit reports to SEDA on the implementation of the EE measures and the progress towards the achievement of their individual EE targets. Based on the reports submitted to SEDA by 01 March 2016 the evaluation of the EEOS results were included in the Annual report on the implementation of the NEEAP. For the period 2008-2015 the obligated energy traders achieved 43 % of their total energy savings target.
Article 8 (1)	Energy Efficiency legislation in Bulgaria provides a set of very strict criteria ensuring the qualification and accreditation of the energy auditors. They should be listed in SEDA's public register only after proving the following: 1. they are merchants within the meaning given by the Commerce Act or under the legislation of another Member State of the European Union, or of another State which is a Contracting Party to the Agreement on the European Economic Area, or of the Swiss Confederation; 2. to have at their disposal the requisite technical devices, specified in special ordinance under EE Law; 3. to have at their disposal the requisite staff: energy efficiency consultants who meet the requirements of a special ordinance under EE Law and: (a) to have completed higher education in the field of technical sciences in a professional field and specialties, which is recognized in the Republic of Bulgaria or in another Member State of the European Union, or in another State which is a Contracting Party to the Agreement on the European Economic Area, or in the Swiss Confederation, or have completed secondary technical education; (b) to have acquired a length of service in a relevant position of not less than two years for holders of an educational qualification degree of Master, not less than three years for holders of an educational qualification degree of Bachelor, and not less than six years for persons who have completed secondary technical education; (c) to hold a certificate on a successfully passed examination for the attainment of the qualification necessary to perform energy efficiency audits of industrial systems at higher technical schools specialized in the professional fields of Energy, Electrical Engineering, and Architecture, Civil Engineering and Geodesy, accredited according to the procedure established by the Bulgarian Higher Education Act or according to the procedure of the relevant legislation of another Member State of the European Union, or of another State which is a Contracting Party to the Agreement on the European Economic Area, or of the Swiss Confederation. SEDA is the authority responsible for the control on the energy auditors' qualification and for the quality of the conducted by them energy audits.
Article 8 (4)	According to the Energy Efficiency Law: All of the following shall be subject to mandatory energy efficiency audit: 1. enterprises in the production sector that are not small and medium-sized enterprises within the meaning given by Article 3 of the Small and Medium-Sized Enterprises Act; 2. enterprises in the services sector that are not small and medium-sized enterprises within the meaning given by Article 3 of the Small and Medium-Sized Enterprises Act; 3. industrial systems with annual energy consumption exceeding 3,000 MWh; 4. outdoor lighting systems, located in a nucleated settlement with population exceeding 20,000 residents. The energy audit shall be performed at least every four years only by qualified and accredited by SEDA auditors.
Article 8 (5)	The energy audits requirements, the indicators of energy expenditure, the energy performance of enterprises, industrial systems and outdoor lighting systems, as well as the terms and procedure for performing an energy efficiency audit and preparing an energy savings evaluation are subject to special ordinance under EE Law that fulfils the requirements of the EED. Currently the Ordinance is under process of updating.
Article 8 (6)	According to the Energy Efficiency Law: The enterprises and the owners of industrial systems subject of mandatory energy

EED Article	Implementation status
	audit, which and who implement an energy or an environmental management system subject to certification by an independent body for conformity to European or International Standards, shall be exempted from the requirements for mandatory energy efficiency audit, provided that the management system implemented thereby includes an energy audit of the enterprise or industrial system concerned.
Article 9	→ Electricity: The 2003 Energy Act stipulates that for the purpose of measuring quantities of electricity the TSOs and operators of distribution networks in accordance with the issued licenses provide: 1. technical and metrological provision, development and modernization of the commercial metering devices; 2. maintaining database registration of commercial metering devices. → District heating: One of the main approaches for reading the consumed heat energy in households, so called "heat accounting" system, was introduced in Bulgaria the Energy Act in 1999. Using the devices for share distribution - valves, water meters, apartment meters, the total energy for heating and hot water can be divided between individual properties. The share distribution of heat in the building condominium (multi-residential buildings) is subject of special methodology - application of Decree № 16-334 for Heating. The DH substations in Bulgaria are equipped with meters, which are reported at the end of each month by a representative of DH Company. The reported heat is distributed between customers on the basis of consumption of each property from the previous heating season. Each month the DH Company sends to their consumers invoices reflecting these data. After reading the data at the end of the heating season, the heat accountant prepares balance bill. It is calculated based on actual consumption for each property. Engineering evaluations of the district heating companies on the energy savings achieved by the introduction of this measurement approach suggest that the real effect is within the 30% reduction in heat consumption. Of these, no less than 15% are savings without compromising thermal comfort, only at the expense of regulation of energy consumption. → Natural Gas: Reporting of quantities of natural gas transported in the gas network is carried out in gas measuring points owned by the transmission company, located on the transmission network complied with the statutory requirements for network's design, construction and operation. The quantity of natural gas transported through the gas distribution network is measured by gas metering device placed before the user, but owned by the gas distribution company. The servicing of the commercial metering of gas transmission and distribution network is the responsibility of the operator of the network in accordance with the regulations for commercial measurements. Also according to the Energy Efficiency Act the obligated parties under EEO, jointly with the owners of commercial metering devices of the energy supplied to final customers may provide, as a competitively priced energy service for the purpose of ensuring traceability of energy costs by final customers, replacement of the existing commercial metering devices by intelligent measurement and control systems or other technical solutions visualizing the current energy consumption; the previous current bill and the momentary energy load.
Articles 10 and 11	The methods and conditions for billing the end users are regulated by the Energy Act. According to the law the energy companies are obligated to provide their customers energy services information for: 1. Methods of payment, prices for suspension or restoration of supply, prices for services which provide for maintenance and other service charges associated with the licensed activity; 2. The procedure for switching and information that users of energy services do not owe additional payments when changing supplier; 3. Actually consumed quantities and costs incurred with no obligation for extra payment for this service; 4. Preparation of a final closure account following any change of supplier;

EED Article	Implementation status
	5. The share of each source of energy in the total energy supplied by the provider during the preceding calendar year in an understandable and clearly comparable manner; 6. Existing sources of publicly available information on the environmental impact in terms of at least emissions of carbon dioxide and radioactive waste - resulting from the production of electricity from different energy sources in total energy supplied by the provider during the preceding year; 7. information on the means of settling disputes. Also the Energy Act obliges the end supplier to inform the customer every six months together with the invoice when the reported consumption of electricity or natural gas by this final customer for the period is higher than 50 percent of the reported consumption for the corresponding period of the previous calendar year.
Articles 12 and 17	Consumer Council and Consumer Day, and numerous campaigns in regional and municipal centres where customers can learn about how to save energy were created and organized. Consumer Council is an independent body and has the primary purpose of improving the quality of services offered by the energy companies and promotes understanding of the priorities of energy end users. It examines the difficulties and challenges facing electricity users, discuss and forms policies and actions as recommendations to the energy companies. The energy suppliers publish on their website energy saving advises and, in some cases, information about the estimated consumption of the most frequently used households appliances. The Internet pages of almost all energy suppliers provide an energy calculator which customers can use to calculate the energy consumption in their homes. Some examples of successful information campaigns organised by energy suppliers are: – "Energy Saver" (by electricity supplier company); – "The energy and the children" Campaign (by electricity supplier company); – Information video clips "Advices for the households" (by natural gas supplier company); – "Energy efficiency projects - funding sources" Brochure (by natural gas supplier company).
Article 14	The development of the comprehensive assessment of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling is required by the Energy Act. Bulgaria has made the Assessment in 2008, in accordance with the requirements of Articles 6 and 10 of Directive 2004/8/EU which also contains forecasts for the technical potential for combined heat and power (CHP) production in 2020. Currently the comprehensive assessment is subject of review and update according to the requirements of Directive 2012/27/EU.
Article 15	In the Energy Act it is regulated that the operators of electricity and gas networks should evaluate the energy efficiency potential of the networks by reducing the technological costs. The assessment includes an analysis of transmission, distribution, load management, efficient operation of networks and opportunities for connection of installations for decentralized energy production. Based on this evaluation the development plans of the networks is required including concrete measures and investments to improve energy efficiency in the gas and electricity networks and timetable for their implementation. In 2015, the State Energy and Water Regulatory Commission have prepared a National annual report to the Agency for the Cooperation of Energy Regulators and the European Commission in accordance with the reporting obligations in Directive 2009/73/EU. The report contains information and analysis on the market for electricity and natural gas and network regulations. Demand response: In Bulgaria the amendments to the Energy Act include texts related to the optimization of the energy consumption. For the promotion of transmission and distribution networks the law requires services to optimize electricity consumption, dynamic pricing optimization measures as well as optimization of consumption from decentralized sources of production through energy aggregation to be offered by the operators of the energy networks. The optimization of consumption is related to the pricing in real time,

EED Article	Implementation status
	as well as incentives for reduced consumption during peak periods. In its simplest form such incentives are day and night tariffs for power consumption that are already in place in the country.
Article 16	The level of competence, objectivity and reliability of energy auditors in Bulgaria is very high (see Article 8 (1) of the current table). The qualification and certification process of the auditors is ensured by the control activities of SEDA covering all the aspects of the qualification and the competence of the energy auditors and the reliability of the companies they represent. The needed technical education of the energy auditors is ensured by the Bulgarian technical universities and is as follows: 1. Architecture or industrial and civil construction, or construction of buildings and facilities; 2. Heating technology or power systems; 3. Electrical Power Engineering and / or Electrical Power } Energy auditors for buildings 1. Power systems; 2. Heating technology; 3. Electrical power engineering or electric equipment engineering and/or Electrical Power supply and electric equipment engineering. } Energy auditors for Industrial systems In addition to the University or college education Qualification for energy efficiency audit of industrial systems is acquired after a full workload training according to certain curriculum and after successful exam in Bulgarian higher technical schools specializing in professional directions "Energy" and "Electrical Engineering". The List of Universities, that deliver training for certification of buildings and energy efficiency auditing of Industrial system is published on the SEDA's Web page.
Article 18	Energy Services providing is regulated by the Energy Efficiency Act. According to the law energy services are aimed to combine the supply of energy with an energy efficient technology and/or an action encompassing the operation, maintenance and management necessary for the delivery of the service, and leading to verifiable, measurable or estimable energy efficiency improvement and/or saving primary energy resources. EE Act also defines the persons who can perform energy services - natural or legal persons who or which are merchants within the meaning given by the Commerce Act or within the meaning given by the legislation of another Member State of the European Union, or of another State which is a Contracting Party to the Agreement on the European Economic Area, or of the Swiss Confederation. Vital role in stimulating the market for energy services is the implementation of energy performance contracts (ESCO). The conditions and procedures for determining the amount and payment of funds planned under energy performance contracts, leading to energy savings in buildings - state and / or municipal property are set in special Ordinance under the EE Act.
Article 20	In Bulgaria Energy Efficiency and Renewable Sources Fund (EERSF) was established pursuant to the Energy Efficiency Act, with intergovernmental agreements between the Global Environment Facility (through the World Bank), the Government of Austria and the Government of Bulgaria. The fund operates according to the provisions of the Energy Efficiency Act and the Energy from Renewable Sources Act. EERSF has the combined capacity of a lending institution, a credit guarantee facility and a consulting company. It provides technical assistance to Bulgarian enterprises, municipalities and private individuals in developing energy efficiency investment projects and then assists their financing, co-financing or plays the role of guarantor in front of other financing institutions. The underlying principle of EERSF's operations is a public-private partnership. According to the requirements in Art. 20 (6) of EED the Bulgarian Energy Efficiency Act foresees the opportunity for the EEOS obligated parties to make contributions to the Energy Efficiency and Renewable Sources Fund or to other financial intermediaries for financing energy efficiency activities and measures in the amount of the investments necessary to implement measures to reach the individual targets of the said obligated parties. The development of the methodology for assessment of the amounts of contributions by obligated parties to the Energy Efficiency and Renewable Sources Fund and to other financial intermediaries, necessary to reach the individual targets of

EED Article	Implementation status
	the said obligated parties, is responsibility of SEDA. Currently the Methodology is in process of development.

2.2. Non-legislative provisions

In Bulgaria schemes and mechanisms such as the following may be applied to encourage energy efficiency:
1. Energy performance contracts;
2. Energy savings certificates;
3. Financing from the Energy Efficiency and Renewable Sources Fund or from other financial intermediaries;
4. Other national or European support schemes and mechanisms.

The National Energy Efficiency Target is also formulated based on fulfilment of the individual targets of energy traders under the obligations scheme and optimal usage of financial resources available. The National target includes the energy-saving effects achieved by optimising the national budget's contribution to the use of financial resources from EU programmes and funds, maximising the involvement of local financial sources in the use of financial resources from EU programmes and funds, and supporting energy traders in their efforts to accomplish their individual targets under the obligations scheme.
Some of the financial resources on which the target relies most are the EU Structural funds in Bulgaria:

- The Operational Program "Innovations and Competitiveness" 2014-2020 (OPIC) is the basic program document on national level outlining the aid envisaged for the Bulgarian business from the European structural and investment funds for the period 2014-2020. The Program's main objective is the achievement of dynamic and competitive economy through the development of innovations, entrepreneurship, growth capacity of small and medium-sized enterprises (SME), energy and resource efficiency of enterprises. The total budget of OPIC amounts to € 1,39 billion, with financing from the ERDF almost € 1,18 billion (85% of the budget), and national cofinancing € 209 million (15% of the budget).
- Operational Programme "Regions in Growth" 2014-2020 is a continuation of the program "Regional Development" 2007-2013. Specific objectives of the program are to increase the quality of life, social inclusion and improving the ecological environment by upgrading the physical environment in cities improvement of economic activity in cities by restoring areas with potential for economic development, relations "city-region".
- Rural Development Programme 2014-2020 aims to the improvement of living conditions in rural areas by facilitating access to quality infrastructure. The activities eligible under the Programme include investments for the improvement of energy efficiency in municipal buildings or other buildings used for the provision of public services.
- Operational programme on "Transport and Transport Infrastructure" 2014-2020 aims mainly to construction, reconstruction and modernization of the transport infrastructure of the country as part of the Pan-European Transport Network. Specific measures for environment, climate change and energy efficiency were included under the relevant thematic objectives within the scope of other programmes for 2014-2020 period.

The main programme in Bulgaria that aims to the energy efficiency measures in households is the National Programme for Energy Efficiency of Residential Buildings. One billion leva under the programme are provided by the Government in the form of a bank guarantee, which the Council of Ministers provides to the Bulgarian Development Bank to attract the resources and secure the financing for the programme's activities.
The programme includes all municipalities and will last for a period of two years, with the option to be extended given that it has financial resources. Financing will come in the form of a State grant for all buildings which meet the requirements. Eligible are residential buildings, constructed by industrial means, with more than 36 apartments.

Another actual programme directly aimed to energy efficiency measures is Programme BG04 "Energy Efficiency and Renewable Energy" is financed by the Financial Mechanism of the European Economic Area based on the signed Memorandum of Understanding between the Republic of Bulgaria and Kingdom of Norway, Iceland and Principality of Liechtenstein. Program BG04 "Energy Efficiency and Renewable Energy" includes two program areas "Energy Efficiency" (Program Area 5) and "Renewable Energy" (Program Area 6) of the European Economic Area.

3. Future activities

In 2016 Bulgaria plans to update some of the Ordinances under EE law related to the implementation of EED. The main focus are the two ordinances that set the total cumulative target, the setting up of the energy savings obligation scheme and the allocation of the individual energy savings targets to the obligated parties as well as the eligible measures for obtaining energy savings in final consumption, the manner of proving the energy savings obtained, the requirements to the methodologies for evaluation of energy savings and the manner for confirming energy savings.
The eligible energy efficiency improvement measures in energy production, transmission and/or distribution, the procedure and terms for assessment of the state, as well as the procedure and terms for the evaluation of energy savings obtained as a result of such measures, shall be determined by a completely new ordinance of the Council of Ministers.
Also 50 specific methodologies for energy savings assessment are expected to be adopted. The Methodologies were developed in the frames of a project, managed by SEDA. They are based on “Bottom-Up” approach and are an instrument for support for the obligated energy traders for the evaluation and proving of the achieved energy savings.

4. Relevant information

Sustainable Energy Development Agency: http://seea.government.bg/en/
Ministry of Energy: http://me.government.bg/en
Energy Efficiency Act: http://seea.government.bg/documents/ZEE_EN.pdf
Energy Strategy of the Republic of Bulgaria till 2020 for Reliable, Efficient and Cleaner Energy: http://www.mi.government.bg/files/useruploads/files/epsp/23_energy_strategy2020%D0%95ng_.pdf
Proposal for white certificates trading system in Bulgaria (BG only): http://whitecertificates.bg

EED implementation in Croatia

Introduction

The implementation of the Directive on Energy Efficiency (EED) (2012/27/EU) is the responsibility of the Ministry of Economy. Also the Ministry of Construction and Physical Planning is involved in the implementation of the EED. National Energy Efficiency Authority as part of Center for Monitoring Business Activities in the Energy Sector and Investments is national administrator for SMiV - System for measuring and verifying energy savings

1. Legal context

To implement the EED, changes have been made to two national laws.

- Act on Energy Efficiency (National gazette 127/2014)
- Building act (National gazette 153/2013, 56/2014),
- Act on Thermal Energy Market (National gazette 80/13, 14/14, 95/15)

Also respective ministers had brought several subordinate regulation acts

- Regulation on Contracting and Implementation of Energy Services (National gazette 11/2015)
- Ordinance on the Methodology for Monitoring, Measurement and Verification of Energy Savings (National gazette 71/2015)
- Ordinance on the Requirements of the Energy Efficiency of Energy-Related Products in Public Procurement Procedures (National gazette 70/2015)
- Ordinance on the Environmental Protection Label in the European Union - EU ECOLABEL (National gazette 110/2014)
- Ordinance on Determining Ecodesign Requirements for Energy-Related Products (National gazette 50/2015)
- Ordinance on the Systematic Energy Management in the Public Sector (National gazette 18/2015, 6/2016)
- Ordinance on the Method of Local Distribution and Billing of Thermal Energy (National gazette 99/14,027/2015, 124/2015)
- Ordinance on Energy Audit of a Building and Energy Certification (National gazette 48/2014, 150/2014, 133/2014, 22/2016, 49/2016)
- Ordinance on Energy Audits for Large Companies (National gazette 123/15)

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	Article 4 of the EED requires European Member States to establish a long-term strategy for the renovation of buildings. On 11th of June 2014. Croatian Government has brought a National Long-term Strategy for renovation of national fund of buildings. In Croatia several strategic documents were brought, a government introduced four programmes for energy renewal of buildings (public buildings, commercial, non-residential, buildings, family houses and multi-apartment buildings. In each of those programmes Environmental Protection and Energy Efficiency Fund participated with financial support either to investor or to energy service provider. Ministry of Construction and Physical Planning participate on the Build Upon project as the main partner of the Croatian Green Building Council. Build Upon is two year Horizon 2020 project, aimed at helping European countries design and implement strong, long-term national strategies for the renovation of their existing buildings. The results of this project will be used in updated version of long term strategy which shall be adopted by 30 April 2017.
Article 5	Croatia has chosen alternative approach for the target of Article 5, in an amount of 0.00489 PJ annually. For the year 2015, energy savings are 0.06136 PJ, which is more than the planned target of 3% renovation of buildings. A significant contribution to achieved results is implementation of the integral restoration of buildings through the Government's Program for Energy Renovation of Public Buildings
Article 6	To ensure that central governments purchase only products, services and buildings with high energy-efficiency performance, insofar as that is consistent with cost-effectiveness, economic feasibility, wider sustainability, technical suitability, as well as sufficient competition on June 24th 2015 Minister of Economy had brought *Regulation on the Requirements of the Energy Efficiency of Products Related To Energy In Public Procurement Procedures*.
Article 7	Croatia has chosen the combined approach to the Art.7 target. This target amounts 54.25 PJ cumulative or 1.938 PJ annually. Combined approach consist of: – Energy efficiency obligation schemes in part of: 22,156 PJ (41 %) – Implementation of alternative EE policy measures in part of: 32.094 PJ (59 %) This target and approach was officially notified to European Commission on July 2014 within the notification of the 3rd National EE Action Plan.
Article 8	Energy audits for buildings are conducted since year 2009 in compliance with EU directive 2002/91/EC (EPBD), latest change happened with new *Building act* (2013) and *Regulation on Energy Audit of the Building and the Energy Certification* (2014). On 11th of November 2015 Minister of Economy had brought *Regulation on Energy Audits for Large Companies* which completes EED Article 8 obligations. Five institutions are authorized to conduct training programs for energy audits of large companies
Article 9-11	Several laws and bylaws that precede EED concerning the real-estate ownership and billing of energy and water are proscribing that each unit in new multi-apartment building has its own meter for energy and water

EED Article	Implementation status
	consumption. For existing multi-apartment buildings connected to district heating *Act on Thermal Energy Market* requires mandatory installation of equipment for individualized heat consumption. *Regulation on the Method of Local Distribution and Billing of Thermal Energy* describes a standardized way of distributing the cost of heating per dwelling. Legislation concerning supplying, distributing and billing of the energy and water enables each consumer to have exact data about amount of energy and water consumed per month. Additionally *Act on Energy Efficiency* thru Article 18, proscribes detailed obligations for all stakeholders in final energy consumption. For public sector *Act on Energy Efficiency* proscribes even stricter rules concerning monitoring of energy water consumption: in accordance to *Act on Energy Efficiency* and *Regulation of Systematic Energy Management in the Public Sector. National information system for energy management (EMIS)* enables public sector institutions to keep track on energy consumption on hourly base. Equipment for hourly reading of meters is mandatory for all the buildings included in Government's *Energy Renewal for Public Buildings Programme*
Article 12	In compliance with National Energy Efficiency Action Plan: Fiscal incentives, and access to finance, grants or subsidies for small energy consumers are shared to both commercial and domestic small energy consumers, also national and local information campaigns are supported.-
Article 16	Technical competence, objectivity, and reliability are ensured by law and bylaw legislative. Registers for providers of energy audits are administrated by respective ministry (Ministry of Economy and Ministry of construction and special planning), and are public. Conditions to gain accreditation for energy auditor are transparent and publicised on respective Ministry web page. Register for energy service providers are part of project "Industrial energy efficiency network" conducted in compliance with *National Energy Efficiency Plan*
Article 17	Transparency and information dissemination is ensured by national and local institutions responsible for planning, public procurement and financing. Respective institutions are publishing all relevant information on their web sites and are organizing various thematic workshops.
Article 18	Energy services market started with energy services contracts between state and contractor chosen in compliance with national Public Procurement Act, after first energy service contracts has been signed within the Program of energy renovation of public sector buildings.

2.2. Non-legislative provisions

In addition to legal implementation of EED Croatian government initiated programs to facilitate investments in energy efficiency.
Namely programmes are:

- Programme of energy renovation of public sector buildings 2014-2015
- Programme of energy renovation of family houses 2014-2020
- Programme of energy renovation of multi-apartment buildings 2014 -2020
- Programme of energy renovation of commercial buildings 2014 -2020
- Programme of energy renovation of public sector buildings 2016-2020 shall be adopted this year.

3. Future activities

Future activities will depend on the review of the National Energy Strategy, 4th National Energy Efficiency Action Plan (2017.-2019.) and the outcome of the revision of the EED by European Commission.

4. Relevant information

Relevant information about energy, energy efficiency are available on respective websites:

- https://www.enu.hr/
- http://www.mingo.hr/
- http://www.fzoeu.hr/
- http://www.mgipu.hr/default.aspx?id=14520
- http://www.apn.hr/
- http://cei.hr/nacionalno-koordinacijsko-tijelo-za-energetsku-ucinkovitost/

EED implementation in Cyprus

Introduction

In Cyprus, the implementation of the EED is under the responsibility of the Energy Service of the Ministry of Energy, Commerce, Industry and Tourism (MECIT). For transposing the provisions of the Directive several laws have been amended and secondary legislation has been adopted.

1. Legal context

For transposing the Directive to the national legislation, three laws have been amended in 2014 and 2015: The amending Law for Energy efficiency in End-Use and Energy Services (N56 (I)/2014, N.149 (I)/2015), the amending Law for the Promotion of Combined Heat and Power Generation (N.150 (I)/2015) and the amending Law for regulating the Electricity Market (N. 206 (I)/2015). Secondary legislation for transposing some provision of the Directive has also been adopted (K.D.P. 436/2015, K.D.P. 437/2015, K.D.P. 438/2015, K.D.P. 208/2015, K.D.P. 210/2014, K.D.P. 184/2012, K.D.P. 185/2012, K.D.P. 155/2012).

2. Status of the implementation

2.1 Legislative provisions

The table contains information on how the EED has been implemented by main Articles:

EED article	Implementation status
Article 3	Cyprus has set an indicative national energy efficiency target of 14,5% to be accomplished by the year 2020 , which corresponds to a reduction of primary energy consumption by 375,000 TOE by comparing the national scenarios for energy efficiency . The national indicative target for energy efficiency is also expressed in achieving primary energy consumption of 2.2 Mtoe at the year 2020.
Article 4	Law N.149 (I)/2015, provides for the development of a national long-term strategy for mobilizing investments in the renovation of the national building stock. The national strategy has been prepared in 2014 and included in the Third National Energy Efficiency Action Plan (NEEAP) of Cyprus (Chapter 3.2 and Annex F). The strategy has been prepared following extensive consultation with stakeholders. It provides an overview of the existing building stock as well as identification of different type of energy efficiency measures for different type of buildings, based on a cost effectiveness approach. The strategy also provides description of a comprehensive set of policy measures to stimulate renovations. Three types of policy measures are listed: legislative measures, financial incentives, training measures. The strategy also provides an assessment of the main financial barriers to investments and an estimation for the positive impacts related to the implementation of the strategy. The strategy is available in English, on http://ec.europa.eu/energy/en/topics/energy-efficiency-directive/buildings-under-eed
Article 5	Law N.149 (I)/2015 provides for the exemplary role of the buildings owned and used by central government. For upgrading the energy efficiency of the buildings owned and used by central government, the following actions are being taken: • Record all buildings owned and used by the central government • Set the national approach to achieve the target by implementing other cost effective measures. The approach is available at http://www.mcit.gov.cy/mcit/mcit.nsf/All/5D6DEF111AE3CF55C22575C5002BFED5?OpenDocument • Establish a working group, which includes MECIT and the other competent departments of the Ministry of Transport, Communications and Works • Ministerial decision approved on the 13th of April 2016, for setting the operational terms and responsibilities of the working group towards the implementation of article 5 of EED • Prepare an annual plan for energy renovations • Prepare the calls for public tenders for energy renovation • Promote measures for behavioral change • Utilize 20 mill. Euro of secured European and structural funds of the period 2014-2020 to be used in upgrading the energy efficiency of public buildings

	• Through the co-funded project entitled «Sustainable Energy Development at regional, interregional and cross-border level: Greece – Cyprus 2007 – 2013 – ENERGEIN», four public buildings have been renovated in 2015 to improve their energy efficiency – savings estimated to exceed 50%)
Article 6	Law N.149 (I)/2015 provides for the purchasing by public bodies, taking into account energy efficiency. A circular was sent to all contracting authorities in the public sector, indicating to them the new purchasing framework related to energy efficiency and guidance on the methodology that can be used by them. A methodology has been agreed between MECIT and other competent governmental authorities, for setting the energy efficiency criteria that must be fulfilled for new rental agreements for public building.
Article 7	Law N.149 (I)/2015 provides for the development of a national energy efficiency program (NEEP), for setting the national measures for achieving the national target under article 7. The NEEP has been prepared and communicated to the European Commission. It includes measures for improving the energy efficiency in residential, public and tertiary sector, as well as measures for net -metering and smart meters. The national energy efficiency program is currently being updated aiming to incorporate necessary changes and developments. Cyprus NEEP and its update of July 2014 can be found at the Webpage of the European Commission http://ec.europa.eu/energy/en/topics/energy-efficiency-directive/obligation-schemes-and-alternative-measures
Article 8	Laws N.149 (I)/2015, N.31(I)/2006, N53(I)/2012 and K.D.P. 436/2015, K.D.P. 437/2015, K.D.P. 184/2012 regulate issues related to energy audits and energy management systems. MECIT has approved educational training programs for energy auditors for buildings, industries and transport and provided licenses to energy auditors and energy services provider. Non-SMEs are obliged by the law to perform energy audits. In this framework, MECIT has prepared a preliminary list of non-SMES and monitors the implementation of this obligation. SMEs are encouraged to perform energy audits. For this purpose informative measures and financial schemes are available for promoting energy audits, energy management systems and energy efficiency investments in SMEs.
Articles 9, 10, 11	Laws N.149 (I)/2015 and N. 206 (I)/2015 and K.D.P. 208/2015 regulates issues related to metering, billing information and the allocation of cost to metering and billing information. MECIT is about to initiate a study for examining the economic feasibility and technical suitability for installing individual consumption meters in multi-apartment and multi-purpose buildings.
Article 12 and 17	Law N.149 (I)/2015 provides for information and training issues. Various measures are taken by MECIT and other organizations, such as the Cyprus Energy Agency, aiming to enhance the dissemination or adequate information to schools, households, enterprises and to financial institutions. MECIT is about to initiate a study in order to design an Energy Efficiency Awareness Campaign in the Republic of Cyprus.
Article 13	Law N.149 (I)/2015 provides for penalties any non-compliances to the provisions of the Law and the relevant secondary legislation.
Article 14	Laws N.150 (I)/2015 and N. 206 (I)/2015 regulate issues related to the promotion of efficiency in heating and cooling. MECIT has completed the comprehensive assessment on the potential of application of high efficiency cogeneration and efficient district heating and cooling. The national exemptions to paragraph 5 have been communicated to the Commission in December 2013.
Article 15	Laws N.150 (I)/2015 and N. 206 (I)/2015 regulate issues related to energy transformation, transmission and distribution.
Article 16	Laws N.149 (I)/2015, N.31(I)/2006, N53(I)/2012 and K.D.P. 184/2012 and K.D.P. 210/2014 regulate issues related to qualification and accreditation schemes. Such schemes are already in place for energy auditors and energy service provides. More schemes are about to be launched for energy manages and for installers of energy related building elements.
Article 18	Laws N.149 (I)/2015, N64(I)/2014 and K.D.P. 210/2014 regulate issues related to energy services. The legislation in place sets, amongst others, the qualification scheme for energy service companies (ESCOs), minimum elements to be agreed at the energy performance

	contracting and the procedure that has to follow for verifying savings. Pilot projects are planned for energy efficiency in public buildings and street light utilizing ESCOs and energy performance contracting.
Article 19	Laws N.149 (I)/2015 regulates issues for others measures to promote energy efficiency. In this framework, MECIT in cooperation with JRC, are executing a study that will examine, amongst other, the split incentives between tenant and owners of building for energy efficiency investments. Upon the completion of the study, MECIT will prepare secondary legislation.
Article 20	Its provisions are being implemented since they are in line with existing legislation (Laws N33(I)/2003, N112(I)/2013)
Article 21	K.D.P. 438/2015 regulates issues related to the conversion factors

2.2 Non- Legislative provisions

The non-legislative measures currently in place are:

1. Implementation of energy efficiency measures in the buildings occupied and used by the central government including deep renovations, utilizing EU structural and cohesion funds. A working group has been established between the Ministry and the Public Works Department (Ministry of Transport and Works) for this purpose, financing of EUR 20 million has been secured for the period of 2014 – 2020.
2. Operation of the financing scheme "Save – Upgrade", which is the main incentive in upgrading the energy efficiency of the existing private sector's buildings. It is co-financed by EU funds and it targets deep renovation of households and buildings used or owned by small and medium size enterprises. The scheme promotes simultaneously all policy objectives, such as the involvement of qualified experts and auditors, extensive use of the Energy Performance Certificates by the market, the promotion of NZEBs, as well as higher subsidies for vulnerable consumers.
3. Promotion of projects of energy efficiency in street lighting utilizing national funds.
4. Pilot projects for high efficient heat and power generation, utilizing EU structural and cohesion funds.
5. Pilot projects for energy efficiency in public buildings and street light utilizing ESCOs and energy performance contracting.
6. Implementation of pilot projects for energy efficiency in public buildings in the framework of the co-funded EU Programs.
7. Implementation of measures in transport sector, utilizing EU structural and cohesion funds.
8. Promotion of Pilot Projects for installing smart meters.
9. Provision of information and training to the public sector aiming to raise awareness on more efficient energy use.
10. Certification of professionals in the field of energy efficiency.
11. Provision of information / education to energy professionals and final consumers about energy efficiency. This is done through the publication of promotional material and workshops, as well as the organization of exhibition fairs such as the "SAVENERGY" exhibition which takes place annually, with the participation of all companies and organizations who are actively involved in the energy efficiency sector.
12. Support of the installation of photovoltaic systems in residential buildings and buildings of local authorities through the net metering scheme which was launched in 2013. Photovoltaic systems can also be installed in commercial building to produce electricity for their own use.
13. Promotion of buildings with higher energy efficiency than what's legally demanded, by providing the incentive of an increase of the maximum space allowed by the building permits[1]. This measure is implemented in collaboration with the Ministry of Interior.

Future activities

The plan for the future is to further enhance the implementation of all EED provisions at national level.

Relevant information

Relevant information can be found on the website of the Ministry of Energy, Commerce, Industry and Tourism (www.mcit.gov.cy).

[1] Valid for buildings achieving A' energy class rating with at least 25% contribution from RES

EED implementation in the Czech Republic

Introduction

Ministry of Industry and Trade is responsible not only for the implementation of the EED, but also for defining the overall strategic framework to increase energy efficiency. The Ministry of Environment and the Ministry of Regional Development are also involved in the implementation of the EED; they above all implement European Operational Programmes and national support programmes.

1. Legal context

The EED was fully transposed into the Czech law in 2015. The main national laws, in which the EED was transposed, are Act n. 406/2000 Coll., on Energy Management, Act n. 458/2000 Coll., on business conditions and public administration in the energy sectors and Act No. 165/2012 Coll., on subsidised energy sources.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	Article 4 of the EED requires to establish a long-term strategy for the renovation of buildings. Building Renovation Strategy of the Czech Republic is the document that examines the building stock and opportunities for energy savings therein. The strategy studies various scenarios for the renovation of the building stock, the costs and benefits thereof, and proposes policy, legislative and economic instruments to implement them. It focuses in detail on residential buildings. It has been possible to obtain high-quality statistics on this building stock and to classify measures leading to energy savings by type. It also supplements estimates for non-residential buildings. Scenarios for the renovation of the building stock in the Czech Republic were drawn up on the basis of outputs under the preceding chapters of this report by Buildings Performance Institute Europe (BPIE) using its own model. Five scenarios have been defined. The various scenarios naturally make different contributions to the pursuit of the Czech objective up to 2020 in accordance with the EED. Scenario 5 will save 36.4 PJ with total costs of EUR 11.5 billion on model buildings (residential stock) alone; if we were to add to this, in the manner described above, the potential savings in other buildings, the saving could be as much as 49.9 PJ. In contrast, in the pursuit of the Czech objective, Scenario 1 would contribute a mere 12.3 PJ for the residential stock with the costs of EUR 3.4 billion, and 16.8 PJ for all types of buildings outside industry. The Building Renovation Strategy will be updated in 2016 according to art. 4
Article 5	On the basis of the Art. 5(6) the Czech Republic has opted for an alternative approach, i.e. it will take other cost-effective measures to achieve savings in the buildings owned and occupied by the central government. This approach was chosen due to the fact that buildings owned and used by central government are mainly buildings officially protected as part of a designated environment or because of their special architectural or historical merit. In second half of 2015 the Ministry of Industry and Trade in cooperation with other stakeholders prepared the Building Renovation Plan pursuant to art. 5 of the EED for the year 2016 with a view to the year 2020. The plan includes a specification of buildings being included in the inventory according to art. 5 para. 5 (buildings with a total useful floor area over 250 m^2 not meeting the minimum energy performance requirements). Report that summarises the progress in building renovation is being annually submitted to the Government. In view of alternative approach annual energy consumption monitoring has been introduced (Act n. 406/2000 Coll., on energy management, para 9b.3) in order to assess the impact of non-investment

EED Article	Implementation status
	measures such as implementation of energy management systems. Renovation of central government buildings: http://www.mpo.cz/dokument145673.html Energy consumption monitoring in central government buildings: http://www.mpo.cz/dokument157128.html
Article 6	Since November 2010, 'Rules for the application of environmental requirements in central and local government procurement procedure and purchasing' have applied in the Czech Republic. These rules were adopted by the Government to promote green procurement in the public sector. The rules only define basic parameters, i.e. they state the bodies for which they are binding, and how and when evaluations of their implementation are to be evaluated. Selected product groups are regulated by more detailed methodologies. These methodologies establish environmental requirements for products and services procured, and also include detailed instructions on how to incorporate these requirements into public procurement. At present, methodologies are available for the purchase of furniture and office computer equipment, which, as of 1 November 2010, should govern the procedure followed by central bodies of state administration (the Government Office, ministries and other institutions, such as the Energy Regulatory Office, etc.). Further to international developments, methodologies that are also significant from the perspective of energy consumption are also incorporated into the rules. Act No 406/2000 on energy management define new special technical conditions that central institutions must observe in the public procurement procedure. These rules are in accordance with Article 6 and Annex III of the EED. Only to contracts with a value equal to, or greater than, the thresholds laid down in Article 7 of the Public Procurement Directive (2004/18/EC).
Article 7	On the basis of the Art. 7(9) the Czech Republic has opted to take other policy measures to achieve energy savings among final customers. Energy savings will be achieved through aid schemes (European operational programs and national programs) and financial engineering instruments, therefore the funding will come from operational programs and state funds including revenue from emission allowances. Four operational programs (OP) provide financial support to improve energy efficiency: - OP Enterprise and Innovation for Competitiveness – focuses on industry and service sectors - OP Environment – aims to improve heating systems in households and public buildings - Integrated Regional OP - supports energy efficiency by smart energy management systems and the use of energy from renewable sources in public buildings and in households - Prague Growth Pole OP – supports energy efficiency in buildings and renovation of buildings There are supplementary state programs funded from the state budget: - EFEKT – aims to promote energy savings and projects to educate public and professionals - New Green Savings 2016 – 2020 – supports enhancing energy performance of buildings - Program PANEL 2013+ - provides low-interest loans for renovation of apartment buildings In the current version of the NEEAP (2016) the measures to achieve the targets pursuant to art. 7 were extended. Regarding the new measures voluntary agreements exploiting the potential of EPC for public administration and energy management for private companies will be supported. Implementation of codes of energy efficient building construction among banks and building developers will be promoted.
Article 8	Energy Management Act 406/2000 Coll. as amended by Act. 103/2015 Coll. and supplemented by Ministerial Decree 480/2012 Coll., fully transposes the requirements of Article 8 of the EED. Decree 480/2012 Coll. lays down the details for energy auditing and energy assessments. Under the Energy Management Act enterprises that are not SMEs must carry

EED Article	Implementation status
	out energy efficiency audits at least every four years. Above that, energy audits are mandatory for any enterprise consuming overall more than 35,000 GJ per annum to be included each building with consumption exceeding 700 GJ per annum (Decree n. 480/2012 Coll., on energy audit and energy assessment). This obligation applies to all enterprises including SMEs. Exemption from mandatory energy audits can be granted if an energy management system certified to ISO 50001 or an environmental management system certified to ISO 14001 is in place *and* includes an energy audit. The State Energy Inspectorate is responsible for the enforcement of this obligation. Energy audits can only be carried out by certified energy specialists.
Article 9, 10, 11	As already mentioned in the NEEAP 2014, the current system of metering and billing in the Czech Republic is well established and provides sufficient information to final customers on actual consumption over a given period. Metering and billing requirements under art. 9, 10 and 11 has been implemented by Act. n. 458/2000 Coll., on business conditions and public administration in the energy sectors, Act n. 406/2000 Coll., on Energy Management and Decree n. 82/2011 Coll., on electricity metering. Metering of electricity, gas and heating is provided for final customer. Payments are made usually in advance in form of monthly deposits and the billing is done annually or quarterly. Information on billing consist of detailed data from which the bill was derived and comparison of actual and previous consumptions. Payment method is optional (by cash, on-line, etc.). Regarding smart meters the Czech Republic has analyzed the benefits and disadvantages of their installation and decided not to install them widely. However installation of smart meters will be possible on customer request which allows customers to decide whether smart meter is advantageous despite additional costs compared to conventional meter. Schedule of smart meters deployment was approved by the government in National Action Plan for Smart Grids. Regarding heat metering individual meters must be installed at final customers if it is technically possible and cost effective. In case of district heating and district hot water supply metering is done at transfer stations, which are being built close to final customer. Billing is then derived from the data measured at transfer station and ration meters at final customers and is done transparently. Obligation to install meters for district heating and cooling is set in Act n. 406/2000 Coll., on Energy Management (para 7.4.g) and specified in Decree n. 194/2007 Coll., on rules for district heating and hot water supply and metering. Meters help to reduce energy intensity by providing information about energy consumption, but they are also indispensable for billing purposes. Decree n. 269/2015 Coll., on heat and hot water billing specifies the way how to derive the bill in case owners do not set their own way of deriving the bill.
Article 12	Art. 12 requires Member States to promote and facilitate an efficient use of energy. In the Czech Republic there is programme EFEKT - since1999 support began to be channelled into energy-saving projects from the State Programme on the Promotion of Energy Savings and the Utilisation of Renewables (Programme EFEKT). Projects focused on increasing public awareness are supported. The budget of the programme was significantly increased in 2015. The program EFEKT is defined by act 406/2000 Coll., on energy management, para 5. The aim of the EFEKT Programme is to achieve energy savings by raising awareness among small customers, by increasing the quality of energy services, and by supporting the public sector in the economic management of energy. It focuses on raising awareness and disseminating information (with a stress on energy-saving measures and the use of renewable sources of energy). The examples of supported activities: - energy consulting provided by energy consulting and information centres; - courses and seminars about the energy sector; - publications, guides and informative materials about the energy sector; Information about the supported projects are available here http://www.mpo-

EED Article	Implementation status
	efekt.cz/cz. The webpage is also an access to EKIS consulting centres.
Article 13	There are penalties in case of non-compliance and shall be imposed for administrative offences defined in: - Act No. 458/2000 Coll., Energy Act - Act No. 165/2012 Coll., on Promoted Energy Sources - Act No. 406/2000 Coll., on Energy Management
Article 14	The Czech Republic has carried out an assessment of the potential for the application of high-efficiency cogeneration according to Annex VIII. The report is available here: https://ec.europa.eu/energy/sites/ener/files/documents /Art%2014(1)%20assessmentCzechrepublic.pdf Requirements pursuant to para. 5 (cost-benefit analysis in accordance with Part 2 of Annex IX) has been implemented into Act n. 406/2000 Coll., on Energy Management. Guarantee of the origin of electricity produced from high-efficiency cogeneration has been implemented into Act. n. 458/2000 Coll., on business conditions and public administration in the energy sectors. Development, construction and linking the existing networks of district heating are supported by the Operational Programme Enterprise and Innovation for Competitiveness.
Article 15	Assessment of the energy efficiency potential regarding electricity transmission and distribution has been undertaken by the Czech Association of the Regulated Power Supply Companies (TSO and all DSOs). The assessment identified possibilities to reduce losses in transmission and distribution of electricity and defined requirements for large power transformers. Assessment of the system of gas supply describes concrete investment projects, which should lead to improvements in energy efficiency.
Article 16	Energy specialist qualification scheme is available in the Czech Republic. Energy specialists are natural persons holding an authorisation granted by the Ministry of Industry and Trade to: a) perform an energy audit and produce an energy assessment; b) produce a certificate; c) inspect boilers and thermal energy distribution systems in operation; d) inspect air-conditioning systems. The register of energy specialists is publicly accessible: http://www.mpo-enex.cz/experti/ To obtain an energy specialist certification it is necessary to pass the exam. Examination Committee consists of representatives of ministries, universities and professional organizations. For the person, who holds the energy specialist certification, it is obligatory to complete training course and to pass a test to proof the expertise.
Article 17	Regarding information provision, the Czech Republic disseminate of information on available energy efficiency mechanisms in different ways. Financial support and assistance is provided for the organization of information seminars, courses and conferences focused on energy savings as well as for issuing publications, studies and other information materials in order to raise the awareness about the possibilities of enhancing energy efficiency. The support is provided through the State program EFEKT, administered by the Ministry of Industry and Trade.
Article 18	Art. 18 has been transposed into act 406/2000 Coll., on energy management, para 10e – 10g. List of energy services providers: http://www.mpo.cz/dokument170967.html. Energy services and energy performance contracting in the Czech Republic are promoted by the Ministry of Industry and Trade and by the Association of energy service providers (APES) (www.apes.cz). On the website http://www.mpo.cz/dokument105425.html the following information is published: • Model contract for EPC plus technical annexes • Guidelines realisation of EPC projects and for EPC tendering procedures

EED Article	Implementation status
	The EPC model contract includes all items listed in Annex XIII of the EED. In addition, a list of energy service providers is available, as well as a list of facilitators of EPC tender procedures.
Article 19	As other measures to promote energy efficiency the Czech Republic considers in particular introducing the energy management system. There is the alternative obligation to implement energy management system in accordance with art. 8 of the EED for enterprises that are not small or medium (alternative obligation is to carry out the energy audit). Above that subsidies from the state program EFEKT are provided for public sector bodies to carry out energy management systems. Support scheme for small and medium-sized enterprises to implement energy management system is being prepared at the moment. The Czech Republic also emphasizes the use of energy services through EPC, which has a long tradition.
Article 20	The Czech Republic prepares a concept of financial instruments to be used for projects reducing energy consumption. Some instruments are ready to be used by public bodies, which may apply for grants to implement energy saving measures and for co-financing of projects.

2.2. Non-legislative provisions

In addition to legal implementation, what other measures are taken, are there any additional instruments? Are there any national co-operation mechanisms: working together with others in order to enhance EED implementation? Voluntary agreements?

There are non-legislation activities taken in relation to art. 5, 7, 14 and 15 (as the Czech Republic opted for alternative measures in case of art. 5 and 7). Here is the list of relevant analysis and plans carried out:

- Building Renovation Plan for the year 2016 with a view to the year 2020 (art. 5)
- National Energy Efficiency Action Plan (art. 24, para 2 in relation to art. 7)
- Assessment of the potential of high-efficient cogeneration and efficient district heating and cooling in the Czech Republic (art. 14, para 1)
- Assessment of the energy efficiency potential of the gas infrastructure including scheduled investment with aim to increase energy efficiency (art. 15, para 2)
- Assessment of the energy efficiency potential of the electricity infrastructure (art. 15, para 2)

3. Future activities

National Energy Efficiency Action Plan will be updated in 2017. Other activities depend on the revision of the EED announced by the European Commission for 3Q 2016.

4. Relevant information

Ministry of Industry and Trade of the Czech Republic, http://www.mpo.cz/.
For more information about the energy efficiency measures, please see the NEEAP:
http://www.mpo.cz/dokument173843.html
For more information about the progress of implementation of the EED, please see the Report on progress:
http://www.mpo.cz/dokument174519.html

EED implementation in Denmark

Introduction

The implementation of the Directive on Energy Efficiency (EED) (2012/27/EU) in Denmark is the responsibility of the Ministry of Energy, Utilities and Climate. Also the Ministry of Transport and Building is involved in the implementation of the EED. The Danish Energy Agency (ENS.dk) is implementing several instruments and programmes related to energy efficiency and is furthermore involved for calculations regarding energy efficiency (EE).

1. Legal context

To implement the EED, changes have been made to several national laws. These have been among others in the law on the electricity supply act, Natural Gas Supply Act, the Heat Supply Act, Act on subsidies to promote renewable energy in enterprises' production processes, Biofuels Act and the promotion of savings in energy consumption.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	Article 4 of the EED requires European Member States to establish a long-term strategy for the renovation of buildings. The Danish Strategy for Energy Renovation of Buildings contains 21 initiatives, and determines the government policy to promote energy renovation of the existing building stock. The strategy represents an important step in the progress towards the Government's overall objective of an energy supply based on renewable energy in 2050.
Article 5	On the basis of Article 5(6) Denmark has opted for an alternative approach, which is implemented through a government circular on energy efficiency in the governmental bodies. Furthermore, voluntary agreements have been made with both the National Association of Local Authorities in Denmark and Danish Regions.
Article 6	Is implemented through the government circular on energy efficiency in the governmental bodies and the voluntary agreements with both the National Association of Local Authorities in Denmark and Danish Regions.
Article 7	Article 7 is implemented through the Danish energy efficiency obligation scheme. Denmark is not using any of the exemptions allowed in the article.
Article 8 (1)	The Danish Government ensures that cost-effective audits of high quality are carried out, through two schemes: energy labeling of buildings and the registration system for energy consultants.
8 (2)	The Danish Government has organized three programs that encourage SMEs to undergo energy audits: the RE for production processes, the grant scheme for electricity-intensive companies and energy efficiency obligation scheme.
8 (3)	2 Denmark has introduced two programs to implement article 8 (3) : the Energy Labelling Scheme, which promotes the use of energy in the home, and energy companies energy efficiency efforts, which includes energy savings for all final customers, including households (the energy efficiency obligation scheme)

EED Article	Implementation status
8 (4)	Energy audits for non SME's is implemented through the executive order on energy audits in large enterprises.
Article 9	Denmark has implemented Article 9 through an Executive Order on individual metering of electricity, gas, water, heating and cooling (the meter Order).
Article 12	In relation to the implementation of Article 12. 2, litra a, the webpage www.Sparenergi.dk is containing a case library, which is a collection of illustrated examples from across the country on homeowners who have energy renovated their own homes. Article 12 also includes the possibility of providing access to finance, grants or subsidies in order to promote behavioral change. Denmark has implemented such measures through the energy companies saving efforts. This scheme allows all end users to obtain a subsidy for energy savings, which falls within this scheme.
Article 14 (1-4)	A comprehensive assessment of the potential for using high efficiency cogeneration and efficient district heating has been made.
Article 15	An assessment of the potential for energy efficiency in the gas and electricity infrastructure, particularly with regard to transmission, distribution, load management and interoperability has been made.
Article 17	The Danish Minister of Energy is under an obligation to implement and ensure energy conservation activities to all stakeholders, including all relevant market players. This commitment is reflected in various initiatives and measures to promote energy efficiency. From the Danish side is the primary information effort gathered around the site www.sparenergi.dk.
Article 18	Denmark has launched a number of initiatives, all of which helps to promote a market for energy services: • **The Craftsman List** (http://sparenergi.dk/forbruger/vaerktoejer/haandvaerkerlisten/). The purpose of the craftsman list is to give the end user an easy access to finding good energy solutions while pointing to some craftsmen who can perform the task of creating energy savings in buildings. • **Heat List** (http://sparenergi.dk/forbruger/varme/varmepumper/varmepumpetyper) The purpose of this list is to give an overview of the different types of heat pumps and help to choose the right one. • **Better Housing counselor**. As part of the DEA's new regime Better Housing a number of Better Residential advisers is educated through training and qualification and will be approved to be Better Housing counselors. These are trained to provide holistic advice on energy renovation of the residence.

2.2. Non-legislative provisions

"Energisparesekretariatet" was established in the autumn 2014 and aims to support the identification and dissemination of energy saving initiatives in the private sector.

Energisparesekretariatet has in close dialogue with stakeholders in the area completed some overall analysis of the commercial energy consumption, energy saving potentials in businesses and barriers to energy efficiency, behavior in relation to energy efficiency, experience with previous energy efficiency initiatives and experiences from municipalities efforts.

3. Future activities

4. Relevant information

EED implementation in Estonia

Introduction

In June 2016, the Parliament adopted a new act to transpose the main requirements of the EED – the Energy Management Coordination Act. The Act defines the roles of the public institutions and energy market participants in promotion of energy efficiency. The Ministry of Economic Affairs and Communications (MoEAC) has the key responsibility in coordination of the energy efficiency activities. The Ministry of Finance has a leading role in promotion of energy efficiency in buildings occupied by central government institutions. In addition, Technical Regulatory Authority has to ensure governmental supervision related to energy auditing in large enterprises and Competition Authority should contribute to the implementation of energy efficiency with its activities in energy market regulation. Important energy efficiency measures are carried out by implementing agencies KredEx and Environmental Investment Centre and manager of real estate owned by central government – Riigi Kinnisvara AS (State Real Estate Ltd.).

1. Legal context

To ensure transposition of the EED, the MoEAC prepared a new act - the Energy Management Coordination Act. Majority of the requirements in the EED are transposed with this act and only a few other acts (the Building Code and Electricity Market Act) were changed to transpose the requirements of EED. The Act was approved in Parliament in June 2016 and secondary legislation – regulations under the Energy Management Coordination Act – will be issued during the second half of year 2016.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	Estonia's long-term strategy for the renovation of buildings was based on a draft of National Energy Strategy and preparatory studies on policy options to improve energy efficiency in buildings. The strategy for building renovation was published in June 2014. According to the strategy, measures by the Government are focused on residential buildings, particularly on multi-family buildings. The government has allocated 102 million euros for reconstruction grants of multi-family buildings and provides financing for renovation of public buildings owned by municipalities. Measures have been taken to enhance financing of single-family buildings: KredEx is providing for private persons loan guarantees to purchase new energy efficient dwellings. Other key measures taken include maintaining of the qualification systems for building energy professionals (designers, engineers, energy auditors), regular revision of Building Code, building energy performance certification, training of people managing apartment cooperatives and income tax reductions for households, who have taken a loan to renovate their building or to purchase a new dwelling. Measures for non-residential private buildings are limited, as the building market is upgrading non-residential private building stock effectively.
Article 5	Estonia has taken a default approach in renovation of public buildings. To achieve the target, roughly 30 thousand m^2 should be renovated annually. The Riigi Kinnisvara AS, appointed as a manager of state real estate services to the executors of state authority by the Ministry of Finance, has a leading role to ensure achieving the target.
Article 6	This article is transposed to national law with the Energy Management Coordination Act and its subordinate legislation. Minimum energy performance standards for products, buildings and services purchased by the government will be adopted by the Government. These standards are

EED Article	Implementation status
	compulsory in public procurements carried out by central government institutions.
Article 7	Estonia will use only alternative measures to fulfil the obligations under article 7. National target for cumulative savings under article 7 is 7,1 TWh. Most important measures to fulfil this target are taxation of energy products (with fuel and electricity excise), support schemes for energy efficiency investments in public and private sector financed from state budget. MoEAC as a coordinator of energy efficiency policy carries out annual monitoring of the results of policy measures and proposes new measures, if needed.
Article 8	The Energy Management Coordination Act includes a new obligation for large enterprises to perform an energy audit after every 4 years. There are roughly 200 companies subject to this new requirement. The first audits are requested from the companies in January 2017. As the energy audit practices in companies are not widespread so far, the requirements for the first audit are relatively simple.
Article 9	The issues related to metering are regulated in other acts on energy market (Electricity Market Act, Natural Gas Act, District Heating Act) and their subordinate regulations. In multi-apartment and multi-purpose buildings with a central heating source or supplied from a district heating network the Act foresees a procedure for further investigations by the MoEAC. The requirements to use cost allocators or individual metering may be imposed, if cost-efficiency and technical feasibility of this action is demonstrated by studies. So far, a study covering whole building stock has been completed. This study does not confirm feasibility of individual metering or cost allocation, if we are considering entire building stock.
Article 10	The billing issues are regulated in other acts on energy market (Electricity Market Act, Natural Gas Act, District Heating Act) and their subordinate regulations. The Energy Management Coordination Act adds some new requirements.
Article 11	The access to metering and billing information in internet is free of charge and every customer can use this data.
Article 12	According to the Energy Management Coordination Act, the activities to ensure consumer information and their empowerment are carried out by the MoEAC.
Article 14	The requirements of the article 14 are transposed with the Energy Management Coordination Act. Some of the activities are done by the MoEAC, but actions in connection with planning new installations (analysis of benefits from co-generation) should be carried out by the developers or operators of the energy installations.
Article 15	The requirements of article 15 are transposed mostly with existing acts on the energy market.
Article 16	The Energy Management Coordination Act states that the MoEAC should continuously analyse the situation with qualification, accreditation and certification schemes and intervene if the schemes need an upgrade.
Article 17	The Energy Management Coordination Act stipulates MoEAC to carry out information and training activities related to Article 17 implementation.
Article 18	Promotion of the energy services in Estonia is a task of MoEAC

Relevant information:

Relevant information on EED implementation in Estonia can be found at the website of MoEAC: www.mkm.ee

EED implementation in Finland

In Finland the overall responsibility for the implementation of the Directive on Energy Efficiency (EED) (2012/27/EU) is in the Ministry of Employment and the Economy (MEE). Most of the MEE´s responsibilities coming from the EED were given to the Energy Authority in 2014. Also Ministry of the Environment, Ministry of Transport and Communications, Ministry of Agriculture and Forestry, Ministry of Education and Culture and Ministry of Finance are involved in the implementation of the EED. In addition Motiva Oy, in assignment of the Energy Authority and the ministries, operates several instruments and programmes related to energy efficiency. Motiva Oy is also responsible for monitoring and verification activities on energy efficiency measures as well as for calculating the energy savings.

1. Legal context

Based on the Standing Order of the Government, the overall responsibility for energy efficiency in Finland is with the Ministry of Employment and the Economy (MEE). The Energy Authority, a special agency and regulator operating under MEE, was authorized by the Law on the Energy Authority (870/2013) to implement and/or supervise the implementation of several obligations of the EED. There are also five other ministries that have either direct responsibilities coming from the EED or are responsible for certain energy efficiency measures that are necessary to achieve full compliance.

To implement the EED, in 2014 three national laws were amended, one new law came into force and one existing law was repealed. The three laws amended former electricity and gas market legislation. The content of the repealed Law for Energy Services Offered by Companies in Energy Sector was incorporated to the new Energy Efficiency Law (1429/2014) which was needed due to the several new obligations for which there was no existing legal framework available.

The Energy Efficiency Law is in the process to be amended as a result to Reasoned Opinion received in October 2015. The focus in the amendments is in Article 2 and in Article 6.1 and Annex III.

2. Status of the implementation

2.1. Legislative provisions

EED Article	Implementation status
Article 2	Definitions defined in several national laws and notified 21.12.2015 (UM2015-01690). Full compliance requires amending the Energy Efficiency Law. This work is in process and amendments are expected to be in force 1.1.2017.
Article 3	Annual Report 2013, where the target was set, was submitted 26.4.2013.
Article 4	Article 4 of the EED requires Member States to establish a long-term strategy for the renovation of buildings. Article 4 Strategy was submitted as Annex 5 in the NEEAP-3 (the1st EED NEEAP) 29th April 2014. https://ec.europa.eu/energy/sites/ener/files/documents/2014_neeap_fi_finland.pdf (Unofficial unchecked translation by the COM http://ec.europa.eu/energy/sites/ener/files/documents/NEEAPFinland_en2014.pdf) In the *JRC - Synthesis report on the assessment of MS's building renovation strategies* the FI strategy was assessed almost fully compliant with the requirements a) to e). Only regarding the part "Cost-effectiveness approaches of renovations - Art 4 (b)" some more details to which type of buildings these requirements are addressed were proposed. Finland already, based on the implementation of the EPBD, has tight and extensive energy EE requirements for building renovations subject to construction licence. The aim of the renovation strategy is thus especially instead of new requirements to find out means to activate and include systematically EE improvements in residential and service sector building renovations both in public and private service sector.
Article 5	Finland has opted for an alternative approach 5(6) for implementation. Notification submitted 18.12.2013 http://ec.europa.eu/energy/sites/ener/files/documents/2013_fi_eed_article5_fi.pdf . (Unofficial unchecked translation by the COM)

EED Article	Implementation status
	http://ec.europa.eu/energy/sites/ener/files/documents/2013_fi_eed_article5_en.pdf) Eight alternative measures are listed. No legislation.
Article 6	Government Decision-in-Principle on the promotion of sustainable environmental and energy solutions (Cleantech solutions) in public procurement (13.6.2013) cover some of Article 6 obligations. Voluntary Energy Efficiency Agreements comply fully with 6(3). Full compliance requires amendments to the Energy Efficiency Law. This work is in process and amendments are expected to be in force 1.1.2017.
Article 7	Finland has opted alternative measures for implementation. National Energy Efficiency Programme was submitted 5.12.2013 and complemented 31.1.2014 https://ec.europa.eu/energy/sites/ener/files/documents/FI_Updated%20Art.%207%20notification%20140605_2.pdf . (Unofficial unchecked translation by the COM regarding the original 5.12.2013 version http://ec.europa.eu/energy/sites/ener/files/documents/article7_en_finland.pdf). An updated Article 7 notification (mainly complements and corrections to the Annexes) was delivered as an Annex in 5.6.2014 EED notification. National Energy Efficiency Programme includes eight policy measures. No legislation.
Article 8	Finland´s ongoing Energy Audit Program complies with Article 8(1). National minimum requirements based on Annex VI and implementation of mandatory energy audits were transposed by the new Energy Efficiency Law http://www.finlex.fi/fi/laki/alkup/2014/20141429 and its two accompanying decrees https://www.energiavirasto.fi/documents/10191/0/Energiakatselmukset/62235779-65c1-43c1-8225-6dcae2a12d81 and https://www.energiavirasto.fi/documents/10191/0/Energiakatselmukset_/b4a3024c-aeaa-4a87-a97f-825b33da8ff2 . The Energy Authority has a web page related to both voluntary and mandatory energy audits https://www.energiavirasto.fi/energiakatselmustoiminta. Energy Authority has commissioned Motiva to operate the Energy Audit Programme for SMEs and municipalities. http://www.motiva.fi/toimialueet/energiakatselmustoiminta.
Article 9	Some amendments were conducted to existing legislation http://www.finlex.fi/fi/laki/alkup/2009/20091211, http://www.finlex.fi/fi/laki/alkup/2013/20130590, http://www.finlex.fi/fi/laki/alkup/2009/20090066, http://www.finlex.fi/fi/laki/ajantasa/1999/19990132 with revision in http://www.finlex.fi/fi/laki/alkup/2008/20081129. In addition some new provisions were included in the new Energy Efficiency Law http://www.finlex.fi/fi/laki/alkup/2014/20141429 to reach full compliance with EED. A study on the cost-effectiveness of individual metering in multi-purpose/multi-apartment buildings was been carried out in 2013, as requested by 9(3). https://www.tem.fi/files/38260/EED_lammonkulutuksen_mittaus_19_11_2013_nettiversio.pdf.
Article 10 and 11	Provisions regarding billing and billing information were moved from existing legislation (Law for Energy Services Offered by Companies in Energy Sector). Provisions regarding district heating were included into the Energy Efficiency Law http://www.finlex.fi/fi/laki/alkup/2014/20141429 to achieve full compliance with EED.
Article 12 and 17	Existing measures fulfil all requirements. Existing situation is satisfactory. The Energy Authority will be responsible for monitoring the situation and taking actions when necessary. Several examples of the measures in this area are described in the 2nd NEEAP in the Annex 3 starting on page 154 (e.g. HO-07/…HO-12/). (Unofficial unchecked translation by the COM can be found https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive/national-energy-efficiency-action-plans under the heading Previous energy efficiency action plans behind the link "Second NEEAPs translated into English"). No legislation.
Article 13	Provisions are included in the Energy Efficiency Law http://www.finlex.fi/fi/laki/alkup/2014/20141429
Article 14	Provisions regarding Article 14 are included both in existing legislation (http://www.finlex.fi/fi/laki/alkup/1996/19961260 with its revision http://www.finlex.fi/fi/laki/alkup/2010/20101400, http://www.finlex.fi/fi/laki/ajantasa/1994/19941472 with its revision http://www.finlex.fi/fi/laki/alkup/2010/20101399, http://www.finlex.fi/fi/laki/ajantasa/1999/19990132 and its revision http://www.finlex.fi/fi/laki/alkup/2008/20081129, http://www.finlex.fi/fi/laki/alkup/2010/20101396 with its revision http://www.finlex.fi/fi/laki/alkup/2012/20120687, http://www.finlex.fi/fi/laki/alkup/2003/20031129 with its revision http://www.finlex.fi/fi/laki/alkup/2013/20130445 and decree http://www.finlex.fi/fi/laki/alkup/2013/20130009 as well as in the new Energy Efficiency Law http://www.finlex.fi/fi/laki/alkup/2014/20141429. Notification on exemptions 14(6) was submitted 17.12.2013.
Article 15	Most requirements were already in the existing legislation http://www.finlex.fi/fi/laki/alkup/2013/20130588 with its revision http://www.finlex.fi/fi/laki/alkup/2013/20130445, http://www.finlex.fi/fi/laki/alkup/2013/20130590 with its revision http://www.finlex.fi/fi/laki/alkup/2014/20141432 and in decrees http://www.finlex.fi/fi/laki/alkup/2013/20130635, http://www.finlex.fi/fi/laki/alkup/2009/20090066 and

EED Article	Implementation status
	http://www.finlex.fi/fi/laki/smur/2013/20130417. Some new provisions and amendments regarding Article 15 implementation were included to fulfil all EED requirements. Provisions related to Art 15(3) are not included while in Finland the social policy is not implemented via the energy policy.
Article 16	Existing situation in Finland is satisfactory. No need for supplementary actions. There are approx. 2000 trained and authorised energy auditors, 400 trained and authorised lead assessors for mandatory energy audits http://www.finlex.fi/fi/laki/alkup/2014/20141429, 2000 trained and certified Building Energy Certificate providers http://www.finlex.fi/fi/laki/alkup/2013/20130050 , roughly 100 certified RES installers http://www.finlex.fi/fi/laki/alkup/2015/20150038 and 40 authorized farm energy advisers, just to list the most relevant.
Article 18	Existing situation is satisfactory. Requires continuous work, which is being carried out. No legislation.
Article 19	Existing situation is satisfactory. Requires continuous work and follow up. Implementation is described in the NEEAP-3 (Unofficial unchecked translation by the COM https://ec.europa.eu/energy/sites/ener/files/documents/2014_neeap_en_finland.pdf chapter 4.4). No legislation.
Article 20	Constitution limits the possibility to establish funds in Finland.

2.2. Non-legislative provisions

Finland does not implement every article of the EED via legislation and mandatory measures. Since the table in chapter 2.2 covers all articles a brief answer has been given there. The following non-legislative provisions are those with significance in relation to the national transposition of the EED.

The broad Voluntary Agreement Scheme (2008-2016) http://www.energiatehokkuussopimukset.fi/en/ is the main instrument in Finland to implement Article 7. Negotiations regarding the New Energy Efficiency Agreement period 2017–2025 were successfully conducted and new scheme will start in the beginning of 2017 immediately after the ongoing Agreement scheme will end by the end of 2016
https://www.tem.fi/en/energy/press_releases_energy?89521_m=12044.
http://www.energiatehokkuussopimukset2017-2025.fi/

3. Future activities

Finland´s new Energy and Climate Strategy is being prepared. Based on the official schedule the new strategy will be submitted to the Parliament before the end of 2016. What new future activities there possibly will be is not yet know.

4. Relevant information

Ministry of Employment and the Economy www.tem.fi
The Energy Authority/Energy Efficiency Group https://www.energiavirasto.fi/fi/energiatehokkuus
Motiva Oy www.motiva.fi

EED implementation in France

Introduction

In France, implementation of the EED is the responsibility of the Ministry of Environment, Energy and the Sea.
The list of legislative and non-legislative measures adopted in compliance with the EED are available on the NIM database (http://eur-lex.europa.eu/legal-content/FR/NIM/?uri=celex:32012L0027).

1. Legal context

As described in our NEEAP 2014 (to be updated in our NEEAP 2017), France has set ambitious energy efficiency objectives since 2005.

The energy transition for green growth law (loi relative à la Transition Energétique pour la Croissance Verte – LTECV) voted in August 2015 has in addition introduced a series of new measures to reduce greenhouse gases emissions, energy consumption and improve energy efficiency at the national level.
In addition, the article 8 of the EED has been transposed by law (n° 2013-619, 16th of July 2013)

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

Detail of most recent laws in link with energy efficiency:

EED Article	Implementation status
Overall - Law on energy transition (n° 2015-992, 17th of August 2015)	https://www.legifrance.gouv.fr/jo_pdf.do?id=JORFTEXT000031044385
Article 8 - Law n° 2013-619, 16th of July 2013	https://www.legifrance.gouv.fr/jo_pdf.do?id=JORFTEXT000027713399

Additional information regarding the implementation of the EED / main provisions:

EED Article	Implementation status
article 3	Targets of energy consumption have been set up (131.4 Mtoe in final energy, 219.9 Mtoe in primary energy, excluding international air transport consumption and non energy uses).
article 4	As requested by the EED, a building refurbishment strategy has been published by France : https://ec.europa.eu/energy/sites/ener/files/documents/2014_article4_fr_france.pdf
article 5	The alternative approach has been notified in December 2013 http://www.developpement-durable.gouv.fr/IMG/pdf/Synthese_de_la_notification_article_5.pdf http://www.developpement-durable.gouv.fr/IMG/pdf/Rapport_sur_l_article_5.pdf
article 6	A decree dealing with energy performance criterion integration in public contracts for the purchase of products, services and buildings by public bodies has been

	published : https://www.legifrance.gouv.fr/jo_pdf.do?id=JORFTEXT000032371845
article 7	As requested France has transmitted to the Commission its strategy for the implementation of article 7 http://www.developpement-durable.gouv.fr/IMG/pdf/131205_Rapport_article_7_notifie_Commission-2.pdf
article 8	The implementation of this article has been performed
article 14	A decree has been published regarding individual cost benefit analysis : https://www.legifrance.gouv.fr/jo_pdf.do?id=JORFTEXT000029762421 Exemptions have been notified as requested. Heat map is also available : http://reseaux-chaleur.cerema.fr/carte-nationale-de-chaleur-france
article 15	A decree dealing with energy efficiency potentials in electricity and gas grids has been published : https://www.legifrance.gouv.fr/jo_pdf.do?id=JORFTEXT000031444948

2.2. Non-legislative provisions

Several non-legislative provisions have been adopted, they are described in France EED annual reports and in the NIM database.

Especially numerous decrees and orders have been taken, in order to adapt our existing white certificate scheme to the requirements of the EED.

Decrees have been taken to implement especially articles 6, 7, 8, 9, 14, 15…

Furthermore, as mentioned above, the energy transition for green growth law (loi relative à la Transition Energétique pour la Croissance Verte LTECV) has introduced a series of new measures to reduce greenhouse gases emissions and ease renewable energies

3. Future activities

We are now going to launch works to update our NEEAP (article 24) and our long term buildings strategy (article 4).

Work is ongoing regarding our white certificate scheme: especially preparation of the 4th period for 2018-2020.

4. Relevant information

- 2013 annual report: http://www.developpement-durable.gouv.fr/IMG/pdf/0458_EE.pdf

- 2014 NEEAP: http://www.developpement-durable.gouv.fr/IMG/pdf/0378_Annexe_1_PNAEE_.pdf

- 2015 annual report: http://www.developpement-durable.gouv.fr/IMG/pdf/0504_Annexe_rapport_annuel_2015.pdf

2016 annual report will be available soon.

EED implementation in Germany

Introduction

In addition to the German annual reports and National Energy Efficiency Action Plans in line with Article 24 of the Energy Efficiency Directive (EED) (2012/27/EU), this summary report provides brief information on the current status of the ongoing implementation of the EED in Germany and thereby meets the commitment of the CA EED participants to update the Commission on this issue. The national energy efficiency policy framework outlined in this summary report demonstrates and underlines Germany's commitment to energy efficiency policy in general and the national implementation of the EED in particular.

Key responsibility for the implementation of the EED lies with the German Federal Ministry for Economic Affairs and Energy (BMWi). Furthermore, the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) is involved in the implementation of selected areas of the directive. The Federal Energy Efficiency Center (BfEE) within the Federal Office for Economic Affairs and Export Control (BAFA) is mandated by national law to fulfil reporting and monitoring, as well as communication activities. The BfEE also selects and oversees institutions which conduct energy efficiency research for the ministries. Provisions in the EED concerning the energy market and grids lie within the responsibility of the Bundesnetzagentur (BNetzA). Several organisations, namely the BAFA, the KfW and different project executing bodies implement energy efficiency measures, initiatives and programs for the ministries.

1. Legal context

The EED was transposed through changes to several national laws. A key piece of legislation is the Act on Energy Services and Energy Efficiency Measures (Energiedienstleistungsgesetz, EDL-G), which was amended in April 2015 to transpose several aspects of the EED.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	The German National Building Renovation Strategy has been communicated to the Commission on 16 April 2014 and may be found at https://ec.europa.eu/energy/en/topics/energy-efficiency-directive/buildings-under-eed. The update of this Strategy will be part of the next National Energy Efficiency Action Plan (NEEAP) in 2017.
Article 5	In line with the EED, Germany has notified the Commission in line with Article 5 (6) EED in December 2013 that it opts for the alternative approach to the implementation of Article 5. The responsible BMWi and BMUB have adopted several measures in view of implementing Article 5 (7), namely information initiatives (dena), as well as federal support programs funding energy consulting for municipalities (BAFA), the development of energy efficiency contracting projects (BAFA), the development of municipal action plans, and renovation plans as well as the construction and renovation of municipal buildings and infrastructure / blocks (KfW) via grants and loans. In addition, the BMUB is supporting public bodies in getting EMAS certified. For further information on the subject please refer to the latest notifications which may be found at https://ec.europa.eu/energy/en/topics/energy-efficiency-directive/obligation-schemes-and-alternative-measures.
Article 6	All provisions regarding energy efficiency in procurement have been transposed to national law. Furthermore, the Federal Government, the German Länder and municipalities are cooperating in the "Alliance on Sustainable Procurement" (Allianz für Nachhaltige Beschaffung) in view of supporting public bodies at sub-federal level in procuring energy efficient products and services. For more information in German language on the initiative please see the website of the competence centre on sustainable

	procurement, which is supporting the alliance, at http://www.nachhaltige-beschaffung.info/DE/Allgemeines/allgemeines_node.html.
Article 7	The German Federal Government launched the National Action Plan on Energy Efficiency (NAPE), a comprehensive strategy to further increase Germany's energy efficiency, on 3 December 2014. The strategy comprises several new instruments and working processes. The Climate Action Programme 2020, also adopted on 3 December 2014, contains additional measures to increase Germany's energy efficiency and to reach the 2020 climate target. Please refer to the latest notifications which may be found at https://ec.europa.eu/energy/en/topics/energy-efficiency-directive/obligation-schemes-and-alternative-measures.
Article 8	Several programs and lists have been established to further the availability and affordability of high-quality energy audits for SMEs and private households. For further information regarding those programs please see the latest notifications which may be found at https://ec.europa.eu/energy/en/topics/energy-efficiency-directive/obligation-schemes-and-alternative-measures. Mandatory Audits for large companies in line with Article 8 (4ff) are defined in the EDL-G (mentioned above). For further information please see for instance http://www.bafa.de/bafa/en/energy/energy_audits/index.html.
Article 9 – 11	While the provisions are implemented through several acts and regulations, it is especially worth mentioning that the government has passed its proposal for the Act on the Digitalisation of the Energy Transformation (Gesetz zur Digitalisierung der Energiewende GDEW), which sets the regulatory framework for inter alia the German smart meter roll-out, to Parliament on 17. February 2016.
Article 12	Several initiatives supported by the BMWi and implemented inter alia by dena serve the purpose of implementing Article 12 a). Article 12 b) is transposed en passant as utilities are obliged by the EDL-G to provide information regarding energy efficiency measures to consumers with every bill. In addition, the BMWi is funding several initiatives by consumer organizations to increase energy efficiency. For more information in German language please see https://www.verbraucherzentrale-energieberatung.de/aktion_Heiz-Check.php.
Article 14	The comprehensive assessment of the national potential of cogeneration and district heating and cooling as well as the evaluation of the Act on Combined Heat and Power (CHP) has been communicated to the Commission on time and may be viewed at https://ec.europa.eu/energy/sites/ener/files/documents/151221%20Mitteilung%20an%20KOM%20EED%20KWK%20Anlage%20Analyse.pdf in German language. The Act on Combined Heat and Power, which supports efficient heating and cooling systems, has been amended and is in effect since 1. January 2016. In addition, several support programs by the BMWi and the BMUB fund the establishment of heating grids and the set-up of small CHP-units.
Article 15	Further information on the German incentive regulation may be accessed at http://www.bundesnetzagentur.de/cln_1431/EN/Areas/Energy/Companies/GeneralInformationOnEnergyRegulation/IncentiveRegulation/IncentiveRegulation_node.html;jsessionid=313DFFC3480CD26934B404044C8B107E. Germany has communicated its assessment of the energy efficiency potentials of the gas and electricity infrastructure to the Commission on time in line with Article 15 (2). As far as Article 15 concerns the development of CHP, the Act on the Energy Economy (Energiewirtschaftsgesetz, EnWG) and the Power Grid Access regulation (Stromnetzzugangsverordnung, StromNZV) are particularly relevant.
Article 16	The national level of technical competence, objectivity and reliability of providers of energy services, energy audits, energy managers and installers of energy-related building elements is considered to be, in principle, sufficient. Ongoing efforts by the German Confederation of Skilled Crafts and by actors involved in supporting various energy efficiency related services aim to ensure that the competence, objectivity and reliability of service providers remains adequate in view of constant technological and methodological development.
Article 17	The government conducts a wide variety of information campaigns regarding energy efficiency. In particular, a comprehensive communication campaign on energy efficiency has been launched on May 12th, 2016 (for further information see http://www.deutschland-machts-effizient.de/KAENEF/Navigation/DE/Home/home.html). Information to banks and other financial institutions is provided through the KfW as it cooperates with banks and other financial institution to distribute its loans in support of energy efficiency and to aid other organisations set up their own energy efficiency support programs.
Article 18	The BfEE is according to EDL-G §9 responsible for supporting the further development of the energy services market which includes proposing measures to ensure the proper functioning of this market in line with Article 18. For detailed information in German language please see the website of the BfEE http://www.bfee-online.de/bfee/.
Article 19	The BMWi has established the Energy Efficiency Platform to develop solutions for persisting barriers to increasing energy efficiency, which have been identified in the first NEEAP, together with the relevant

	stakeholders from business, civil society, science, the affected public departments and the federal states. Legal issues are discussed in the framework of the "Legal Framework for Energy Efficiency Services" Working Group. More information can be found at http://www.bmwi.de/EN/Topics/Energy/Energy-Efficiency/energy-efficiency-platform.html.
Article 20	Germany has set up a fund to finance national energy efficiency initiatives and measures. For latest figures see the Act on the Federal Budget 2016 (Haushaltsgesetz 2016, Einzelplan 60) at https://www.bundeshaushalt-info.de/fileadmin/de.bundeshaushalt/content_de/dokumente/2016/soll/Haushaltsplan-2016.pdf.

2.2. Non-legislative provisions

The German Federal Government launched a comprehensive efficiency strategy on December 3rd, 2014: the National Action Plan on Energy Efficiency (NAPE). The strategy stipulates several new measures and strengthens Germany's efforts in implementing Article 7 through alternative measures. For more information please refer to our annual Article 24 reports which may be found at https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive/national-energy-efficiency-action-plans. In addition, on December 3rd, 2014, the German cabinet adopted the Climate Action Programme 2020 (see www.bmub.bund.de/P3616-1/).

As part of the NAPE and equally on December 3rd, 2014, the Federal Government signed an agreement with business associations and organisations on the nationwide introduction of energy-efficiency networks. The alliance aims to set up approx. 500 new networks by 2020, thereby making an important contribution towards boosting energy efficiency in industry, the crafts, trade and commerce. More information in German language is available at http://www.effizienznetzwerke.org/.

On January 1st, 2016, the Federal Ministry of Food and Agriculture (BMEL) started the federal program for the promotion of activities to increase energy efficiency in agriculture and horticulture as part of the NAPE.

On July 1st, 2015, as part of a broader policy package, additional energy efficiency measures were agreed upon, which will save 5.5 mio. tonnes of CO_2 by 2020 (see http://bmwi.de/BMWi/Redaktion/PDF/E/eckpunkte-energiewende,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf). The measures, which are currently being implemented, include: financial incentives for the installation of highly efficient pumps in buildings and industry, as well as the optimisation of heating systems; financial incentives for measures aiming to prevent or recuperate waste heat (start: May 1st, 2016); programmes to increase energy efficiency in municipalities; as well as energy efficiency measures to be carried out in the railroad sector.

Furthermore, in 2015, Germany developed a comprehensive national “Energy Efficiency Strategy for Buildings” (ESG). The Strategy is based on the goal of achieving a virtually climate-neutral building stock by 2050, in line with the German Federal Government’s energy concept. This means that by the year 2050 primary energy demand of buildings must be reduced by 80 percent against the 2008 level through a combination of energy savings and the use of renewable energy (see: http://www.bmwi.de/EN/Topics/Energy/Buildings/energy-efficiency-strategy-for-buildings.html). The strategy will be also used to update the long-term renovation strategies related to Article 4 EED.

3. Future activities

As described above, numerous measures have been decided in the recent past in order to increase energy efficiency. Implementing these measures remains a top priority. Future activities will also crucially depend on the outcome of the upcoming EED review.

4. Relevant information

Please see our 3rd NEEAP for comprehensive information on relevant issues at https://ec.europa.eu/energy/sites/ener/files/documents/2014_neeap_en_germany.pdf.
Federal Ministry of Economic Affairs and Energy http://bmwi.de/
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety www.bmub.bund.de/P2/
Federal Energy Efficiency Center http://www.bfee-online.de/bfee/
German Energy Agency http://www.dena.de/

EED implementation in Greece

Introduction

The Ministry of Environment and Energy is responsible for the transposition into the national legislation and the implementation of the Directive 2012/27/EE on energy efficiency (EED) undertaking the obligation to design, realize and monitor the required energy efficiency measures for the fulfilment of the energy saving target at national level. Nevertheless, other ministries (such as the Ministry of Infrastructure, Transport and Networks and the Ministry of Economy, Development and Tourism) are involved into the formulation of energy efficiency measures, while vital is also the role of the Operational Programs, as they constitute the main financing mechanisms for energy efficiency measures mobilizing the available Structural Funds. Finally, the Centre for Renewable Energy Sources and Saving (CRES), which has been appointed by the corresponding legislation as the Greek national entity for the promotion of energy efficiency and the rational use of energy, participates in various initiatives regarding the EED implementation.

1. Legal context

The Law 4342/2015 "Pension arrangements, transposition of Directive 2012/27/EE on energy efficiency amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC" (Official Government Gazette: no. 143 of issue A') transposes into the national legislation all the provisions of the EED. The Law 4342/2015 came into force in November 2015, while the fulfilment of several obligations within the framework of Articles 3, 5, 7, 14 and 24 of the EED has started before its official transposition. Nevertheless, some ministerial decisions should be adopted in order to fully transpose all the foreseen aspects of the EED.

2. Status of the implementation

2.1. Legislative provisions

The following table contains information outlining the current degree of implementation of the EED by article in Greece.

EED Article	Implementation status
Article 3	An indicative national energy efficiency target was established based on final energy consumption taking into account the requirements of the paragraph 1 of Article 3 of the EED. The energy efficiency target was notified firstly by the 3rd Energy Efficiency Action Plan, which was submitted to EU in December 2014, while according to the requirements of Article 4 of the Law 4342/2015 the Ministerial Decision ΔΕΠΕΑ/Γ/οικ. 185496 (Official Government Gazette: no. 3023 of issue B') has imposed officially the obligation to achieve 18.4 Mtoe of final energy consumption in 2020.
Article 4	The long-term strategy for mobilising investments in the renovation of the national stock of residential and commercial buildings was prepared and submitted to the EU in the beginning of 2015 according to the requirements of the of the paragraph 1 of Article 4 of the EED. According to the requirements of Article 6 of the Law 4342/2015, the official approval of the long-term strategy was performed through the adoption of the Ministerial Decision ΔΕΠΕΑ/Γ/οικ. 185497 (Official Government Gazette: no. 3004 of issue B').
Article 5	Article 7 of the Law 4342/2015 introduces the obligation to renovate from 1st of January 2014 3% of the total floor area of heated and/or cooled buildings owned and occupied by the central government annually in order to meet at least the minimum energy performance requirements as foreseen in Article 4 of Directive 2010/31/EU. Greece has decided to follow the default approach, while it is provided the option in paragraph 8 of Article 7 of the Law 4342/2015 to be contributed equivalent investments to the Energy Efficiency Fund for the realization of the required energy savings. The list of heated and/or cooled central government buildings in accordance with Article 5 of the EED was published on ministry's website on 31 December 2013. The list contained heated and/or cooled buildings of central government with a total

EED Article	Implementation status
	useful floor area of over 500 m^2. Furthermore, it is foreseen in paragraph 12 of Article 7 of the Law 4342/2015 both of the preparation of actions plans at regional and local level by the corresponding authorities for the renovation of the public and municipal buildings and the establishment of energy management systems. The buildings, which will be integrated into the compiled actions plans, will have priority for being funded by the existing financial mechanisms in order to implement the identified energy efficiency measures. Finally, various measures have already been implemented so as to foster the public bodies at regional and local level to demonstrate their exemplary role as regards energy efficiency of buildings.
Article 6	According to Article 8 of the Law 4342/2015 the central governments should purchase only products, services and buildings with high energy-efficiency performance taking into consideration various criteria, such as the cost-effectiveness, the economic feasibility, the wider sustainability, the technical suitability, as well as the sufficient competition in the market. Moreover, the public bodies, including authorities at regional and local levels, are encouraged to purchase only products, services and buildings with high energy-efficiency performance. In paragraph 6 of Article 8 of the Law 4342/2015 it is foreseen that only buildings that are classified at least in the Energy Performance Class C according to the existing Energy Efficiency Regulation in Buildings can be rented or purchased by public authorities. The identical obligation exists also in the case of the potential renewal of the existing contracts.
Article 7	In December 2013 it was notified to the EU that the Article 7's target will be achieved through the introduction of alternative measures. The initially proposed alternative measures were updated during the submission of the 3rd Energy Efficiency Action proposing 18 policy measures finally. Nevertheless, the observed deviations from the established target in the annual reports both of 2015 and 2016 led to the reconsideration of the Article 7's implementation. According to Article 9 of the Law 4342/2015 the introduction of an energy obligation scheme to the energy distributors and/or retail energy sales companies is foreseen since 1st of January 2017. Therefore, the fulfilment of Article 7's target will be performed through a combination of alternative policy measures and an energy obligation scheme. A ministerial decision is expected in order to specify the required details about the obligated parties, the allocated target for each obligated party separately, the monitoring and verification scheme, the reporting obligations and other provisions of the scheme. Moreover, according to paragraph 10 of Article 9 of the Law 4342/2015 it will be given the option to the obligated party to pay equivalently the required investments to the Energy Efficiency Fund. Finally, the current design of the existing alternative measures will be reviewed taking into account the effectiveness of the existing measures, the introduction of the obligation scheme and the current deviations for the intermediate targets.
Article 8	Article 10 of the Law 4342/2015 introduces the provision of high quality energy audits, which have to be cost-effective for all final customers. Moreover, the enterprises that are not SMEs have the obligation to carry out an energy audit in an independent and cost-effective manner by qualified and/or accredited experts or by independent authorities under the national legislation until 9 November 2016 and at least every four years from the date of the previous energy audit. In the case that the obligated enterprises have already developed an energy or environmental management system, which is certified by an independent body according to the relevant European or International Standards, will be exempted from the obligation to conduct an energy audit. Nevertheless, all the details regarding the quality criteria of the energy audits, the energy auditors and the implemented procedure will be determined through the adoption of a ministerial decision. Finally, specific incentives will be introduced in order to encourage SMEs to conduct an energy audit and specific initiatives will be organised in order to enhance the existing level of awareness and knowledge considering energy audits.

EED Article	Implementation status
Article 9	Article 11 of the Law 4342/2015 sets energy distributors and retail energy sales companies responsible for implementing Article 9 of the EED. Paragraph 6 of Article 10 indicates that, where appropriate, a Join Ministerial Decision will include additional rules and guidelines on the way to allocate costs for heat and/or hot water that is used.
Article 10 & 11	Article 12 of the Law 4342/2015 includes the legal provisions of Article 10 and 11 of the EED. According to Article 12, where final customers do not have smart meters as referred to in Article 59 of the Law 4001/2011, energy distributors and retail energy sales companies must ensure that billing information is accurate and based on actual consumption, in accordance with point 1.1 of Annex VII. According to paragraph 2 of Article 12, smart meters must enable accurate billing information based on actual consumption. Energy distributors and retail energy sales companies must ensure that final customers have the possibility of easy access to complementary information on historical consumption allowing detailed self-checks. Independently of whether smart meters have been installed or not, energy distributors and retail energy sales companies, from the 1st January 2016, are responsible for the legal provisions of paragraph 3 of Article 10 and Article 11 of the EED.
Article 12	According to Article 13 of the Law 4342/2015 the Division of Energy Policy and Energy Efficiency of the Ministry of Environment and Energy is responsible for taking the appropriate measures to promote and facilitate an efficient use of energy by small energy customers, including domestic customers.
Article 14	The exceptions relating to Article 14(6) of the EED were submitted promptly to the EU in December 2013. Article 15 of the Law 4342/2015 appoints the Division of Renewable Energy Sources and Electrical Energy of the Ministry of Environment and Energy responsible for the implementation of Article 14 of the EED. The comprehensive assessment of the potential for the application of high efficiency cogeneration and efficient district heating and cooling, containing the information set out in Annex VIII and the analysis of high-efficiency cogeneration potential referred to the Law 3734/2009 (Article 8), has submitted to the EU in March 2016. The comprehensive assessment will be approved by a decision of the Minister of Environment and Energy. By decisions of the competent Ministers or Prefects measures will be adopted, which will encourage the use of efficient heating and cooling systems at local and regional levels. The cost-benefit analysis is caring out in cooperation with the companies responsible for the operation of the district heating and cooling networks. According to paragraph 14 of Article 15 of the Law 4342/2015, when adopting the authorisation criteria as referred to decision of licensing Minister of Development No. D5-HL/B/F.1/oik.17951/6.12.2000 (B. 1498), Deputy Minister of Environment, Energy and Climate Change No. YAPE /F1 / 14810 / 4.10.2011 (B 2373) and the Deputy Minister Woo Development, Competitiveness and Shipping number 483/35 / F.15 / 17.1.2012 (B 158), except those definitions, the permit criteria also include the aspects of points a-b of paragraph 7 of Article 14 of the EED. Ministerial Decisions will determine: • thresholds, expressed in terms of the amount of available useful waste heat, the demand for heat or the distances between industrial installations and district heating networks, for exempting individual installations and • exemptions for individual installations from the authorisation and permit criteria. Finally, public support to cogeneration and district heating generation and networks is a subject to State aid rules, where applicable.
Article 15	According to Article 16 of the Law 4342/2015 the Regulatory Authority for Energy (RAE) due to its responsibility that is specified in the Law 4001/2011, takes into account the energy efficiency in its decisions on the operation of the gas and electricity infrastructure. Ministerial Decisions: • will determine the rules relating to the ranking of the different access and dispatch priorities granted in their electricity systems, • will promote access to and participation of demand response in balancing and • shall encourage operators of installations referred to in the first subparagraph

EED Article	Implementation status
	to improve their annual average net operational rates.
Article 16	Currently, there is no qualification, certification and accreditation scheme for the providers of energy services, the energy auditors, the energy managers and the installers of energy-related building elements. Moreover, there are no suitable training programmes developed for these professional categories. Article 17 of the Law 4342/2015 foresees the establishment of certification and/or accreditation schemes and/or equivalent qualification schemes, including suitable training programmes potentially, for the energy auditors and for the related professions with the building elements as defined in Directive 2010/31/EU. Finally, information about the established certification and/or accreditation schemes and/or equivalent qualification schemes should be provided to all the consumers.
Article 17	According to Article 18 of the Law 4342/2015 the Ministry of Environment and Energy should launch a specialised web-site for the provision of information to all the involved stakeholders, such as consumers, builders, architects, engineers, banks, financial institutions, environmental and energy auditors, and installers of building elements as defined in Directive 2010/31/EU. Moreover, the public authorities should publicize in their web-sites the related information about the implemented energy efficiency measures, while specific dissemination actions should be incorporated into the Energy Efficiency Actions Plans according to the paragraphs 2 and 3 of Article 18 correspondingly.
Article 18	Law 3855/2010 “Measures to improve energy efficiency in end use, energy services and other provisions” (Official Government Gazette: no. 95 of issue A') established the necessary institutional framework for the provision of energy services. Specifically, Article 10 introduced the requirement to develop an ESCO Registry for the registration of the ESCOs, which provide energy services and implement energy efficiency measures. The details regarding the operation of the ESCO Registry were determined by the Ministerial Decision D6/13280/07.06.2011 entitled ‘Energy Service Companies. Operation, Register, Code of Conduct and relevant provisions’. Moreover, two different templates of the Energy Performance Contract have been prepared by the Ministry of Environment and Energy and are available on the ESCO Registry. Currently, 39 ESCOs have already registered to ESCO registry. Finally, Article 19 of the Law 4342 introduces provisions for the promotion of the energy services to SMEs and supports the appropriate functioning of the energy services market.
Article 20	Article 20 of the Law 4342/2015 promotes either the adoption of new financing measures or the exploitation of the existing financing mechanisms for the implementation of energy efficiency measures in order to maximise the derived benefits by the multiple streams of financing. Furthermore, according to Article 21 of the Law 4342/2015 the establishment of an Energy Efficiency National Fund is foresees. Nevertheless, the responsibilities of the Energy Efficiency National Fund may be exercised by the existing Green Fund until the official establishment according to its operational characteristics as outlined in Article 9(5) of the Law 3855/2010.

2.2. Non-legislative provisions

No non-legislative provisions have been introduced yet.

3. Future activities

The preparation of the foreseen ministerial decisions has been scheduled and will be adopted in the nearest future.

4. Relevant information

More information about the foreseen energy efficiency measures can be found within the 3rd National Energy Efficiency Action Plan and the submitted to the EU annual reports for the years 2015 and 2016.

EED implementation in Hungary

Summary

The main legislation implementing EU EED Directive:

- LVII. Act on Energy Efficiency;
- 122/2015 Government Regulation on Implementation of Energy Efficiency Act;
- 123/2015 Government Regulation on modification of some government regulations related to energy efficiency;
- 24/2015 Ministry of National Development Regulation on modification of 110/2007 Economic and Environmental Ministries Regulation on the method of calculating the amount of useful high efficiency CHP electricity and heat;
- 25/2015 Ministry of National Development Regulation on energy efficiency information provision;
- 26/2015 Ministry of National Development Regulation on detailed rules for the energy auditors' data provision and the registration bodies' annual report;

Strategic documents the implementation on energy efficiency:

- 5/2015 Parliament Resolution on modification of the 77/2011 Parliament Resolution on National Energy Strategy. The government has a new obligations to review every two years and update, if necessary, the forecasts for energy demands in the Energy Strategy and arrange the publication;
- 1160/2015. (III. 20.) Government Decision on the update of energy consumption forecasts in the National Energy Strategy

unit, PJ/a	2012	2020		2030	
		BAU	joint efforts	BAU	joint efforts
Primary energy consumption	992	1101	1009	1217	1028
End use energy consumption	677	766	693	840	692

- 1261/2015 Government Decision on adoption of Hungary 2015 National Reform Programme. the National Energy Strategy: In line with the Europe 2020 Strategy the announced new national energy efficiency target: 92 PJ primary energy savings, which means 73 PJ final energy consumption savings.
- 27/2015. (VI. 17.) Parliament Decision on the National Environmental Programme for the period between 2015-2020: The main goals of the Programme related to energy efficiency: (1) In the next period - in the context of climate change - must pay particular attention that in parallel with the increase in income it does not increase again the household energy consumption. (2) To develop an efficient, green and competitive economy. (3) To achieve a 10% overall energy savings based on environmental considerations. (4) To reduce the motorized traffic transportation needs, and facilitate the personal, non-motorized forms of transport. (5) To reach a greener the tax system with reduction of environmentally harmful subsidies. The Government presents the summary report to the Parliament in every two years.
- 1601/2015 Government Decision on the III. Hungarian National Energy Efficiency Action Plan: This action plan is a general report based on the requirements from the 2012/27 EU Energy Efficiency Directive (EED). This is a complex strategy about the energy efficiency situation in Hungary and the main directions of development and the proposed measures relating to the transposition of EED.
- 1602/2015 Government Decision on Energy and Climate awareness Raising Action Plan: The purpose of the Action Plan is to spread the awareness of energy and climate. Therefore, the Plan of Action accordingly identifies the achievable within a short time - the majority by 2020 - governmental measures which are capable of significantly to contribute to changing attitudes about climate change and energy efficiency. It concerned the following five main areas: (1) energy efficiency and energy conservation; (2) renewable energy use; (3) transport energy saving and emission reduction; (4) a resource-efficient and low-carbon-intensity of economic and social structures; (5) accommodation.

- 1487/2015 Government Decision on the legislative tasks related to Jedlik Ányos Plan: The Jedlik Ányos Plan aims to promote the domestic spread of electro mobility. The main measures of ongoing planning, preparation-type tasks with several ministries and regulatory co-operation, for example: (1) Planning the deployment of charging infrastructure. (2) To develop the measurements and accounting system for electricity used to charge the vehicles (3) to ensure the operation of household charging appliances (4) Establishing direct and indirect-tax incentives, so on.
- 1215/2015 Government Decision on some government tasks necessary to achieve energy savings.
- 1073/2015 Government Decision on National Building Energy Strategy.
- 82/2015 Interior Ministry Decision on support for an centralized management appropriation called Modern Cities Program

Summary of the principal new measures related to the EED

1. *National Building Energy Strategy 2015 - 2020*

The main topics of the Strategy: EU and international environment National policy background The energy situation of domestic buildings Refurbishment versions The strategic vision, priorities and goals Toolkit Financial and employment benefit of the implementation Monitoring Annexes The 2015 - 2020 primary energy saving targets (PJ/a) by buildings in the Strategy: Residential and public buildings refurbishment: 40 PJ/a Enterprises buildings refurbishment: 4 PJ/a Other energy savings in buildings 5 PJ/a, so the total is 49 PJ/a. The strategy includes a detailed action plan for the government between the period 2015-17 in the following tasks: Achieve energy savings in existing buildings Standards for new buildings and building renovations Research, development, dissemination, innovation, knowledge, training and information.

2. *Building energy requirements according to the (20/2014 (III.7.) Ministry of Interior (BM) Regulation*

Stricter standard regulations must be used for any significant refurbishment with EU or national support, and for new building construction or major renovations. The U-values are stricter for example for facade walls: the old value is 0.45 W/m^{2}K, the new value is 0.24 W/ W/m^{2}K; for windows with glass: the old value is 1.6 W/m^{2}K, the new value is 1.15 W/m^{2}K, for flat roofs the old value is 0.25 W/m^{2}K, the new value is 0.17 W/m^{2}K, and so on. (22 U-values are defined). The cumulative primary energy performance is also stricter. The primary energy conversion factor for district heated buildings also changes, so the CHP origin of the district heating could be evaluated also by labelling of buildings, if the CHP ratio is more then 50%.

3. *The independent inspection system of the Buildings energy audits and upload information in the central electronic database*

The independent control system and structure has been secured by the buildings energy audits. In addition, all documentations of building energy audits have to be filled into a new electronic database. All audit data will be available for many purposes. The e-certification databases made in 2013, the application aims to upload energy certificates. The e-system provides an opportunity to consult the complete list of energy certificates, and certify professionals to record the certificates. Inspection for the building certificate was agreed between LLTK and HCE. The 0.5% of the building's audits will be checked by on-site inspection (full inspection) and by 2 % only through calculations. All building's audits data have to be uploaded on the LLTK database.

4. *Creating a new building energy databases (NÉER 1, NÉER 2) of public buildings*

Through this project the most precise possible building energy data collection was made for public-sector buildings. In addition, it developed an action plan selected by the government building ensemble (approx. 50-100 pcs) for preparing, under technically, budgetary and development concept. NÉER 1 contains the

results of the full survey for the central government buildings. NÉER 2 contains the results of a continuously voluntary survey on local government owned or used building. The NÉER database is not yet open to the public.
The supported project name: Development of annual development program and action plan for public buildings' energy efficiency renovation in 2014-2020. Support: 1.196.243.500 HUF. Project owner: Pro Regio Central Hungary Regional Development Company Ltd.

5. *Energy Efficiency subsidies for public and local governmental buildings*

Against the previous years there is a strategic change in the government policy by the public sector and municipal buildings refurbishment. The main purposes: (1) Deletion or minimize the own resources by the public sector and the local government sector. (2) Avoid the non-eligible success fee type costs (which earlier could reach 5 - 10% / project) (3) Reduce the risk of the success of the proposal to avoid unnecessary costs (4) Improving cost efficiency by avoiding the excessive costs in the feasibility studies. Thus, already in 2015 they appeared in subsidies where the subsidy rate is 100%, but the eligible projects are defined by specific legislation.
In 2015 the KEOP-2015-5.7.0 (Building energy development of the Public Buildings measure has a budget of HUF 150 million and 100% support intensity. Supportable entities and projects had been decided in 1290/2015. (V.5) Government Decree. No. 1. Annex. The maximum support is EUR 150 million/project. Normally, those activities can be supported to ensure required levels for a building envelope constructions (U values) achieve. The support energy efficiency projects are expected mainly from two EU - Hungary co-financed program will be provided (KEHOP, TOP) between 2016-2020. The TOP (Regional development Operational Programme) selection of projects is based on a multi-stage process, in which a key element produced by the county governments development plans and concepts which already made in 2014. The KEHOP is managed by Ministry of National Development the TOP is managed by the Prime Minister's Office.

6. *Introducing a new energy audit obligations for the large enterprises and public institutions before their ESCO contracts*

According to the Act on SME's every company does not qualify as an SME enterprises are obliged to carry out a complex energy audit in every 4 years in accordance with the EU Energy Efficiency Directive. Specific characteristics of the Hungarian legislation: (1) Authority (Hungarian Energy and Public Utility Regulatory Authority) provide the control and registration function. (2) The intermediate organizations (the Hungarian Chamber of Engineers) prepare the auditors to pass the compulsory exam, organize the exams and hold the direct communication with the auditors. The Authority decides on an individual decision on the licensing of energy auditing by auditors. (3) The registered energy auditor has to be an MSc. graduated engineer in energetics field, has to prove 5 years of engineering experience and has to pass the auditor exam. (4) Authority may check and sanction the companies, the auditors, the registration bodies and the qualities of the energy audits. (5) Exemptions from the obligation: the existence of ISO 50001 certification or by linked enterprises to be lower consumption than 5% of the biggest consumption of a company within the company group. (6) The quality of own energy inspection by ISO 50001 is not verified by the authority. The existence of an ISO 50001 certificate is sufficient criteria to get existence. So it is consciously encouraging the adoption of the ISO 50001 (7) The owners of the buildings fundamentally obliged, but jointly and severally tenant also would be obliged if it had more than 50% leased part in the building.
Additional new requirement that public institutions are also required to be made energy audits before the conclusion of an ESCO agreement.

7. *New obligation to provide information and to give awareness-raising by the energy regulator*

The Hungarian Energy and Public Utility Regulatory Authority is obligated to create and operate the public information website (as a state owned website) about energy efficiency. The energy consumers and

market participants must be implemented for information on energy efficiency and energy saving methods, as well as financial and legal frameworks related to energy efficiency. Information subjects of the information: a) legislation related to energy efficiency; b) energy efficiency services, financing of investments and financial instruments available to support; c) to improve energy efficiency information about awareness-raising and trainings; d) practices on energy efficiency, energy efficiency behaviour patterns; e) energy efficiency service contracts; f) the application of energy efficiency-based contracts; g) Certification schemes of the energy efficiency service providers, international best practice examples; h) financial institutions on energy efficiency services; i) energy labelling schemes for energy providers and products.
The target groups for information: a) the population; b) businesses; c) construction professionals, engineers, planners, energy specialists; d) financial institutions; e) energy efficiency services; f) public institutions. Furthermore, it should be given information to the small and medium enterprises as well as to the residential sector about the energy audit and the benefits associated with conducting energy audits.

8. *Complex 100% supported programs by KEOP 7.9.0 / 12 to establish national energy efficiency action plans. 6 high priority projects.*

1. project: Analysis of energy management tools in the public-sector and develop an extensive program. Support: 599.740.000 HUF. Project owner: ÉMI Non-Profit Llc. / 2. project: Establish a sustainable urban energy management model and development program for the cities over 40,000 population. Support: 599.144.000 HUF. Project owner: ÉMI Non-Profit Llc. / 3. project: Survey of the residential building energy efficiency potential. Support: 1.196.019.189 HUF. Project owner: Pro Regio Central Hungary Regional Development Company Ltd. / 4. Project: A national survey of industrial energy efficiency potential for the 2014-2020 support planning. Support: 500.000.000 HUF. Poject owner: Virtual Power Plant Program Nonprofit Ltd. / 5. Development of the 2014-2020 budget period CO2 savings-clearing model concept version. Support: 800.000.000 HUF. Project owner: Virtual Power Plant Program Nonprofit Ltd. / 6. Development of annual development program and action plan for public buildings' energy efficiency renovation in 2014-2020. Support: 1.196.243.500 HUF. Project owner: Pro Regio Central Hungary Regional Development Company Ltd.

9. *Energy Efficiency subsidies for residential EE purposes*

There are three main sources actually: EU structural subsidies, state revenues from the EU Emission Trading System related and the state budget law. The EU support for residential sector will be available by the Environment and Energy Efficiency Operative Programme KEHOP (KÖRNYEZETI ÉS ENERGIAHATÉKONYSÁGI OPERATÍV PROGRAM), which is a Co-Financed program by EU Funds and national sources. According to the new decision of the government the programs will be available only from KEHOP supported energy efficiency funds with repayable supports. This is against all the earlier usual non-repayable support and will be a significant and probably positive effect, because only minimum own resource will only need. The amount of available KEHOP resources is 100 billion HUF which will be available between 2015-2020. The Green Economy Financial System (ZFR) managed by the Ministry of National Development, which mainly used for energy efficiency purposes in residential sector. The ZFR get support from the state budget. In 2015 this means 654.5 million HUF from the Building Energy and Energy Efficiency indicative target and 4886.3 million HUF from the ZFR indicative target. This sources increase with the 25% of the state revenue of the EU Emission Trading Systems according to the new act. The next programs were implemented in 2015:
ZFR-TH / 2015 Modernization program for apartment buildings with 10 billion HUF budget (non-repayable support). The subsidy is depends on the verified saved carbon dioxide unit and it is between 750 - 950 HUF/CO2 kg. Replacement of windows and doors, insulation and the combination of refurbishment with renewable energy utilization is supported.
MGCS/15 Large household appliances (washing machine) replacing action with 500 million HUF frame. By the replacing of household appliances minimum 10% energy savings, or a minimum 20 kg/year CO2 savings needed to achieve. The maximum grant is 50% non-refundable, but this maximum is depend on

the class of the machine (by A+ class is 25,000 HUF/appliances, by A ++ class is 40,000 HUF/appliances and by A +++ class 45,000 Ft/appliances).

A new element was a voluntary agreement with commercial banks. According to the contract in 2015 with the Erste Bank Hungary the bank is required to start a new Energy Efficiency Loan Program with 100 million euros worth between 2016-2018. In addition, the Ministry of National Economy manage more residential housing modernization support programs. The purpose is not primarily the energy efficiency, but this is the overall renovation of the buildings. It has the main target by helping more young families to get the first home and families with more children. However some key objective, as accessibility or energy efficiency is also displayed. The achievable subsidy is basically an interest subsidy with 5 year duration. The subsidy is 50% of the government bond yield.
There is another popular operating public support which is an additional support by own savings for housing purposes. It is necessary to open by a commercial bank a special savings account and take a regular voluntary payment for 4 years at least (and for 10 years maximum). The government gives an additional payment (+30%, but maximum 72,000 HUF/year) to this account in every year. So if the monthly payment is 20,000 HUF the guaranteed rate of return can be achieved 12.72%. This savings can be used for every costs related to housing, including for energy efficiency purposes or buying new home, so on. One time one person can have only one special account, but in one family every person (parents and the children) can have an own special account. It is freely allowed to use more contracts by one project. Another useful possibility is that the employer can provide tax-free support to its staff members for residential purposes in the cafeteria system.
Budapest, 15. 06. 2016.

Zoltán Kapros

EED implementation in Ireland

Introduction

The Department of Communications, Energy and Natural Resources (DCENR) is responsible for implementation of the EED in Ireland. The Sustainable Energy Authority of Ireland (SEAI) is responsible for measuring energy savings achieved and for implementation of many energy efficiency support programmes.

1. Legal context

The EED was transposed into Irish law in 2014 by means of Statutory Instrument (SI) 426 of 2014 European Union (Energy Efficiency) Regulations 2014. A number of other SIs have been finalised and have become law since.

2. Status of the implementation

2.1. Legislative provisions

Implementation of the EED is sub-divided into specific work packages. Table 1 below table contains information on how the EED has been implemented by article, including any relevant web links.

EED	EED Article	Implementation status
WP1 – Targets & Renovation	3 – Energy Efficiency Targets	IE submitted our 2015 and 2016 Annual Reports on national energy efficiency targets by their respective due dates (reporting years 2014 and 2015 respectively).
	4 - Buildings Renovation	In 2014, DCENR published Ireland's first ever National Renovation Strategy. This Strategy sets out the measures currently in place to reduce emissions in these sectors and sets out the factors that will be considered in developing new measures. A copy of the Strategy is available for download at here.
	24 - Reviewing & Monitoring of Implementation	Implementation of Ireland's NEEAP 3 is continuously monitored through the work of the NEEAP Implementation Group. Many of the sectoral measures contained in NEEAP 3 are still ongoing. Work on developing NEEAP 4 is underway to be completed by Q1 2017. A copy of Ireland's NEEAP is available for download here.
WP2 - Public Sector	5 - Exemplary role of public bodies buildings	A higher Energy Efficiency target of 33% has been set in Ireland for public service bodies. Public sector bodies monitor and report on their progress annually. Efforts to date have resulted in energy efficiency gains of 1,840 GWH with reduced emissions of 418,000 Tonnes of CO2 and avoided energy spend savings of €121m for 2014; this Report can be accessed here. Public lighting is a major element of energy use in all local authorities. Recognising the importance of Public Lighting as a flagship project a Public Lighting Steering Group was established in 2015 to oversee the upgrade to upgrade the public lighting network and avail of energy efficiency potential.
	6 - Purchasing by public bodies	An Action Plan on Green Public Procurement was published in 2012 by the Department of the Environment, Community and Local Government and the Department of Public Expenditure and Reform. It is the first such Action Plan to be introduced in Ireland. Its overall objective is to assist public bodies to successfully plan and implement green public procurement by highlighting existing best-practice and outlining further actions to boost green public procurement.

EED	EED Article	Implementation status
		Green Procurement Guidance for the Public Sector was published in 2014 by the Environmental Protection Agency. The guidance document was developed to assist the public sector to implement and maintain procedures for green public procurement. The Accelerated Capital allowance scheme (covered elsewhere in this report) encourages and facilitates public bodies to purchase the most energy efficient equipment.
WP3 - Metering & Billing	9 - Metering	Part 4 of S.I. 426 of 2014 supports both S.I. 445 of 2000 and S.I. 60 of 2005 in meeting all requirements of Art 9. It also allocates powers to the Commission for Energy Regulation (CER) to roll out smart meters nationally.
	10 - Billing information	Part 4 of S.I. 426 of 2014 and Subsection 9M (5) of the Electricity Regulation Act of 1999 and S.I. 463 of 2011 give effect all requirements of Article 10.
	11 - Cost of access to metering and billing information	Part 4 of S.I. 426 of 2014 supports Regulation 9 of S.I., 463 of 2011 in meeting all requirements of Art 11. It sets out the roles in this regard for the Commission for Energy Regulation to deliver on requirements.
	12 - Consumer information and empowering	Part 7 (Regulation 38) of S.I. 426 of 2014 instructs both CER and SEAI to deliver on the empowerment of customers as laid out in Art 12.
WP4 - CHP and Infrastructure	14 - Promotion of efficiency in heating & cooling	It is expected that Ireland will introduce a Renewable Heat Incentive in the coming months. A key requirement of the RHI will be to ensure the only the most efficient renewable heat technologies are supported and that the heat demand to be served is in commercial and industrial buildings that met appropriate energy efficiency standards.
	15 – Energy transformation, transmission and distribution	EirGrid's Smart Grid Programme aims to develop innovative smart grid solutions and technologies which help to manage the integration of more distributed forms of renewable generation on the transmission and distribution system in an efficient manner. The main aim is to create a 'smarter' grid which can be adapted to meet the needs of a constantly changing electricity industry as part of the overall energy transition to a low carbon and more efficient energy system. All of Ireland's grid operators have produced the Article 15 Studies requested of them.
WP5 – Accreditation of Energy Service providers and Energy Audits	8 – Energy audits and energy management systems	In 2015, Ireland put in place a scheme to implement energy audit requirements for large (non SME) enterprises which addresses the requirement of Article 8. "The Energy Auditing Scheme" is administered by SEAI. For more here. SEAI promotes the implementation of energy management systems through its large industry and public sector programmes.
	16 – Availability of qualification, accreditation and certification schemes	There is a registration scheme in place for Registered Energy Auditors. For more, see here.

EED	EED Article	Implementation status
WP6 – EPC Framework / Cross Cutting Financial Issues	12 – Consumer information and empowering programme	DCENR and SEAI developed the National Energy Services Framework. There is a comprehensive set of standard documents, contracts and guidance available here. This also includes Project Assistance grants for project feasibility and for project development and facilitation. A number of projects are testing the documentation and there have been successful contracts signed, mostly in the private sector. Regulation 38 of S.I. No 426 of 2014 transposes the relevant provisions of Art 18 of the Directive. Under the Energy White Paper published in December 2015 "Ireland's Transition to a Low Carbon Energy Future 2015-2030", the CER was tasked with three specific actions (Chapter 8 – Energy Costs). DCENR commits to introduce any legislative changes required to support the CER in carrying out these actions. The CER will: • Enhance consumer protection and market monitoring and become a more active advocate for energy customers. This will include publishing a consumer focussed assessment of the development of competition in retail markets (and its impact on prices), publishing advice on reducing energy bills, and publishing details of supplier compliance with consumer codes and requirements; • Ensure that competitive markets are delivering for all consumers, and consulting on the promotion of active consumer engagement. This will include examination of the structural factors that underpin consumer disengagement (such as the extent to which energy bills are understood by consumers) and will outline remedial solutions. • Ensure that energy suppliers include additional information on their customers' bills, including information on energy usage and how it compares to that of other customers. Ireland's Ministry DCENR continues its work as the Market Surveillance Authority responsible for Energy Labelling, Ecodesign and Tyre labelling Regulations. Inspections continue to be carried out to monitor compliance and ensure retailers and importers are informed of their obligations under legislation with follow up where necessary.
	18 – Energy services	Regulation 39 of S.I. No 426 of 2014 transposes the relevant provisions of Art 18 of the Directive.
	19 – Other measures to promote energy efficiency	Ireland has put in place the Climate Action and Low Carbon Development Act 2015. The National Policy Position provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050. This process will drive and support energy efficiency as a key strategy to reduce carbon emissions.
	20 – Energy efficiency national fund, Financing and technical support	**Finance**: The National Energy Efficiency Fund was formally established in March 2014. This fund - managed by Sustainable Development Capital Ltd. (SDCL) - seeks to provide a new and attractive finance and risk management approach option for public service bodies to invest in achieving energy efficiency in pursuit of their public sector energy efficiency target of a 33% reduction by 2020. In 2015, the Fund invested in a number of private and public sector projects and finished the year with a strong project pipeline for 2016. **Project Development Guidance** – SEAI developed the National Energy Services Framework (NESF) which sets out a structured development process for energy projects. Its key aim is to encourage the development of robust projects which are investment ready for financing entities. It provides guidance on routes to project

EED	EED Article	Implementation status
		development, sources of finance and support available from SEAI and encourages the development of robust projects which are investment ready for financing entities.
WP7 – Energy Efficiency Obligation	7 – Energy Efficiency Supplier Obligation Schemes (ESOS)	Ireland's ESOS was established in 2014 by Statutory Instrument No. 131, 2014 and is administered by the Sustainable Energy Authority of Ireland (SEAI); a link to the relevant legislation can be found here. The ESOS aims to meet part of the target of 1.5% as set under the Energy Efficiency Directive. Under the ESOS energy suppliers are issued Energy Efficiency Notices which detail energy efficiency savings targets that they must achieve. In the period 2014-2015 the obligated energy suppliers delivered energy efficiency savings of 1110KWh through energy efficiency measures to their customers across the commercial and residential sectors. Further details on Ireland's ESOS can be found here.

2.2. Non-legislative provisions

Since 2014 besides the measures described in Section 2.1 above a number of other legislative and non-legislative measures have been implemented by Ireland which contributes towards the overall national energy efficiency target for 2020. A summary of those measures are outlined below:

Measure	Description
Publication of Ireland's Energy White Paper	"Ireland's Transition to a Low Carbon Energy Future 2015-2030" was published in December 2015. It recognises Energy Efficiency as a critical element of Ireland's energy policy. A copy of the White Paper is available here
Energy Efficiency in Homes/Households	Better Energy Homes is a programme administered by SEAI on behalf of the Government which gives fixed cash grants for insulation and heating system upgrades, helping to make your home more comfortable and cheaper to run. In 2015, €46.38 million was invested by the Irish Government through the schemes of the "Better Energy Programme" to deliver energy efficiency upgrades for over 21,000 homes and in 33 community projects.
Accelerated Capital Allowance Scheme	SI 208 of 2014 Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) (Amendment) (No. 1) Order 2014 (http://www.irishstatutebook.ie/eli/2014/si/208/made/en/pdf).
	SI 605 of 2014 - Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) (Amendment) (No. 2) Order 2014 (http://www.irishstatutebook.ie/eli/2014/si/605/made/en/pdf)
	SI 254 of 2015 - Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) (Amendment) No. 1) Order 2015 (http://www.irishstatutebook.ie/eli/2015/si/254/made/en/pdf)
	SI 587 of 2015 - Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) (Amendment) No. 2) Order 2015 (http://www.irishstatutebook.ie/eli/2015/si/587/made/en/pdf)
"One Good Idea" scheme	This initiative is aimed at second level and from 2014-15. primary (first) level schools. The initiative challenges students to design and run an exciting energy efficiency awareness campaign in their local community or their own school. Students develop projects to research, learn about and then communicate key messages about smarter and more efficient energy and resource use. More information at this link.

3. Future activities

4. Relevant information

Links, where relevant, have been included in the sections above.

EED implementation in ITALY

Introduction

This report highlights the main aspects of the EED implementation in Italy with reference to March 2016

The **Ministry for Economic Development** (cft. MiSE) has the competence on the establishment and implementation of Energy Efficency policies and measures, supported for the technical and scientific aspects by **ENEA** the National Agency for New Technologies, Energy and Sustainable Economic Development, **GSE** Gestore dei Servizi Energetici and other executive actors such as **Agenzia per il Demanio** - Agency for state property, and national institutional entities, such as the **Ministry of Environment, Land and Sea** – MATTM, the **Ministry for Economy and Finance** – MEF, the **Ministry for Infrastructures and Transports** – MIT, the **Italian Regulatory Authority for Electricity Gas and Water**- AEEGSI, , **ISPRAmbiente**, etc, either for the concertation of guidelines, legislations, recommendations and the data collection, gathering and assessments.

1. Legal context

In Italy the EED provisions have been fully transposed into national laws: the main one is The Legislative Decree (Dlgs) n. 102 issued on 4 July 2014 .

The Dlgs 102/2014 establishes a framework of measures for the promotion and improvement of the efficiency, designed to achieve the national energy saving targets in all sectors, such as defined for 2020, and actions to overcome obstacles and shortages in the market that hamper the efficiency in the supply and end-use of energy. The national indicative energy savings target is determined using the implementation methodology of Art. 7/ EED: i.e. the reduction of consumption primary energy of 20 million of tons / oil equivalent (Mtoe) in 2020, amounting to 15.5 Mtoe of final energy.

The main issues covered by the decree are:

a. The introduction of significant updates for the refurbishing of the buildings. In particular, under Articles 5 and 6, Annual energy upgrading interventions are expected on public buildings from 2014 to 2020, as well as interventions programs for the rehabilitation of both public and private buildings.
b. The obligation for large companies **and** for energy-intensive companies as well, to perform energy audits using certified entities by 5 December 2015, and thereafter every four years.
c. To allow a major awareness by the final users on their own energy consumption, the decree envisages that the AEEGSI shall prepare enabling requirements for the smart counters, which distribution companies will be committed to comply with, and activities to provide users with individual smart meters
d. The introduction of a three-year program of training and information aimed at promoting the efficient use of energy;
e. Promotion of energy performance contracts, and introduction of simplification measures to promote energy efficiency
f. Establishment of a National Fund for Energy Efficiency in favour of interventions consistent with the achievement of the national targets for energy efficiency.

In addition, specific sector measures have been enacted with reference the public and private building (education building, social housing etc), local level (regions and municipalities), accreditation schemes, information and communications, hereinafter reported under EED specific articles

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Art 4	Two inter-ministerial decrees of MiSE and MATTM, in concertation with other ministries and institutions , based on 2 respective public consultations (deadline Dec. 4th, 2015) are to be issued to launch: • the **STREPIN :** National strategy for Energy Requalification for either Private and Public real estate, and • the **PANZEB –** National Action Plan to increase the number of NZEB buildings Moreover: an inter-ministerial Decree has been issued on June 26th, 2015, encompassing three decrees : on minimum requirements and calculation methods for energy performance, devoted to Nearly Zero new Buildings, refurbishments, renovations, guidelines, reference schemes for energy performance certifications (APE), EPC inspections, ICT system for the EPCs (SIAPE) . The new guidelines on APEs, entered into force on October 2015, aim to harmonize the EPC procedures and issue at national level. Additional measures will also be provided to assist municipal authorities in their role as promoters of energy efficiency at the local level and to provide homeowners with an (indicative) energy label. This approach applies both for the building of residential and non-residential buildings. Other behavioural measures are included in the Three Years Communication Plan (PIF mentioned below at art. 12)
Art 5	Art. 5(6): Italy has chosen the Default Approach . Legislative Decree July 13, 2015 n. 107, a national reform law that establishes, among other things, the construction of innovative schools from the architectural point of view, systems, technology , energy efficiency and structural and earthquake safety. . 2016 Budget year National law (208/2015 or Stability Law)**,** ca. 170 million € have been allocated to EE interventions in Social Houses . C.S.E. 2015 – Comuni per la Sostenibilità e l'Efficienza Energetica (a tender for municipalities to implement sustainability and energy efficiency); . Fondo Kyoto: A revolving fund, of 350 million euro, for the low-interest loans for the retrofit of school and university buildings. UPGRADING SCHOOLS . Allocation of Resources for school building refurbishing (2014) and a Three Year National Program for School Building 2015 ; . Increase of financial budget for EE for Convergence Regions (ERDF) 2015: ca 1,5 billion € for EE interventions in local PA
Art. 4 + 5+ 6	.Definition and dissemination of energy performance contract models: A consultation with operators for the finalization of the EPC model proposed by ENEA is underway. .Moreover: an inter-ministerial Decree has been issued on June 26th, 2015, encompassing three decrees : on minimum requirements and calculation methods for energy performance, devoted to Nearly Zero new Buildings, refurbishments, renovations, guidelines, reference schemes for energy performance certifications (APE), EPC inspections, ICT system for the EPCs (SIAPE) . The new guidelines on APEs, entered into force on October 2015, aim to harmonize the EPC procedures and issue at national level. Every intervention must comply with MEPS. .For Article 4(d), MiSE and MATTM issued the inter-ministerial Decree January 9th, 2015 which establishes functions and modalities of the "**cabina di regia**", a control room set up

EED Article	Implementation status
	by art.4 of **Dlgs** 102 to agree upon a medium-long term plan of interventions to improve energy performance in buildings , to coordinate EE measures through the National Fund for EE (art 15 of D.lgs 102/2014), to promote training for projects, synergies with Regions, dialogue with operators and FIs for stimulating the energy service market, to propose to Ministries more effective EE measures .Set UP of PREPAC - Program for the renovation of the central public administration buildings: a. About 3500 are the buildings (13 million square meters) occupied by the central PA b. the aim is to refurbish at least 3% per year (2014-2020) is approximately 400,000 square meters c. the estimated expenditure is € 541 million, 355 million already put in place by the Government d. two "call for projects" launched (October 2014 and July 2015) e. 157 projects for about 113 million euro have been presented and are under evaluation.
Art 6	Budget Law 2007 n. 296/2006 committed MATTM and MEF to issue action plans for the environmental sustainability of the PA consumptions; these Ministries issued the "National Action Plan on Green Public Procurement - PAN GPP " that at Point 3.6 sets the products for which Minimum Environmental Criteria have to be satisfied. Decreto Interministeriale 135 dell'11 Aprile 2008. Up to 2012, MATTM issued several decrees which rule PA purchasing of goods and services, per sectors (transports, lighting, construction etc.). The set-up minimum criteria (CAM - Criteri Minimi Ambientali), mainly refer to environmental impact (CO2 emission limits) and safety. They have to be consistent also with cost-effectiveness requirements. The products (PCs, printers, photocopy papers, air conditioners, toner and inks, LED for traffic lights, etc.), services (energy, food and cleaning) and buildings with high energy-efficiency performance purchased by PA, have to comply with EE requirements defined also by other related EU acts (Eco Design Directive, Energy Performance of Buildings Directive, Ecolabelling Directive etc. ..) PAN GPP has been revised and updated twice: . in 2013, to strengthen the general approach Decreto 10 aprile 2013 (Gazzetta Ufficiale n. 102 del 3 maggio 2013). . In 2016, Dlgs 8 Aprile 2016, N. 50: relevant changes refer to new CAMs for the construction sector. In particular it is mandatory to carry out energy audits for exinsting buildings, while for new buildings and relevant refurbishings, their energy need shall be satisfied by RES plants or by, in alternative, high efficient systems (eg. CHP/trigeneration, central heat pumps, etc.) Decreto 24 Dicembre 2015 . Furthermore, art. 17 of the Law nr 221, Dec. 28th, 2015, provides that environmental certifications such as EMAS e Ecolabel, ISO 14001 and 50001 give priority access to environmental grants, incentives and subsidies The central agency for PA purchases (CONSIP), is involved in developing schemes for public tenders in these sectors and in EPC definition, in collaboration with ENEA, in support to MiSE.
Art. 7	. The *WCs Scheme* has completed its 10th year of enforcement; the foreseen energy saving targets have been achieved and new one have been identified. The Guidelines are under revision (issue Sept. 2016) with the aims of : improving efficacy of the mechanism and enhance the additional energy saving achieved by the projects; preventing speculation behaviours, rewarding the most innovative technologies and the most effective initiatives. As complementary measures art7(9) the following political additional measures have been introduced: . *Conto termico* (Heating & Cooling Support Scheme): incentive system for small interventions to increase EE and to produce thermal energy from renewable sources. Inter-ministerial Decree 16.02.2016 , which includes new provisions as a result of a public

EED Article	Implementation status
	consultation held in 2015, strengthens and simplifies the previous supporting scheme introduced by decree 28/12/2012. . *Ecobonus*: Fiscal deductions of 65% of total investment for private building refurbishment namely related to transparent and opaque envelopes, thermal solar plants for production of sanitized hot water and ; high efficiency boilers and heat pumps in heating and cooling systems. The measure has been extended to end 2016. IEA recently mentioned this measure as a best practice at international level, with specific reference to its role in the spreading of an energy efficiency culture at local level. **Achieved savings** for the above measures have been: . *White Certificates scheme*: in the 2005-2013 period, this tool contributed with a primary energy saving equal to 4.85 Mtoe/year (equivalent to 3.4 Mtoe/year of final energy). To reach this objective, both analytical and standard projects, and ex-post calculation have been implemented. . *55/65% tax deductions* : at 2013, the overall primary energy saving has been slightly higher than 0.91 Mtoe/year, equivalent to little more than 0.85 Mtoe/year of final energy . Indeed, between 2007 and 2014, more than two millions of interventions have been realized, and at 2013 households had invested EUR 22 billion, with a cost of EUR 13 billion in terms of fiscal revenue. . *Conto Termico*: since its implementation in July 2013 until November 2014, eligible beneficiaries submitted around 9,000 applications, among which more than 6,000 in 2014. Earmarked funds have amounted to more than EUR 22 million. Since most of the proposed projects are still in the realization phase, it was not possible to estimate the achieved energy saving.
Art. 8	Energy audits in industry are carried on by ESCOs, experts in energy management or energy auditors. About 7600 obliged subjects have performed audits and they have been collected into ENEA's database; this will soon allow statistics and trends. By an Inter-ministerial Decree issued on May 12th, 2015, MiSE , MATTM and Regions have launched a programme to implement audits in SMEs in 2014-2020. 15 million € are expected to be made available by Regions, thus the total amount for the programme implementation will be 30 million €; projects so far presented by 15/21 Regions will start in September 2016 onwards.
Art. 9-11	Measurement: The final customers of energy must be provided with individual meters that reflect their actual energy consumption and provide information on actual time of use of energy: By December 31, 2016 set up of obligation of individual meters installed to measure the actual heat consumption for each building unit. If not feasible, it is mandatory to install temperature control and heating accounting systems in each radiator located inside the building units. Billing: The end user must have access to information on his historical consumption and make his consumption data available to an energy service provider. AEEGSI has launched in August 2015 and may 2016 consultations for the definition of the technical requirements of the second generation of smart meters for the measurement of low voltage electricity. Within 2017, 33 million of second generation smart meters are planned to be installed at end-users's premises.
Art 12	A national program for information and training (Programma triennale di informazione e formazione **PIF**) 2015-2017, has been issued. • Funding: 3 million € over three years, 1350000 for the first one. • Targets: enterprises, operators promoting EE such as energy managers, ESCOs and energy experts, PA personnel, students, families , multifamily buildings, consumers, financial institutions and to "multiplier effect subjects": i.e non-technical individuals that

EED Article	Implementation status
	transfer EE info and behaviours to close environments. • Features: continuous dialogue with stakeholders and graduality, flexibility, in monitoring and cross-checking the result • Actions: information to large public, targeted information campaigns (i.e. about the measures and programmes that implement EED articles listed above: PREPAC, Ecobonus, etc.), training to PA, Multifamily building managers, Media professionals, real estate agents, all level education teachers. www.italiainclassea.enea.it
Art. 14	To promote efficiency in heating and cooling systems, by October 30, 2015 a Report has been prepared by GSE, containing an assessment of the national potential of application of high-efficiency cogeneration and district heating as well as efficient cooling and identification of measures to be taken in the period 2020-2030 for exploit this potential. A consultation with Regions has been undertaken on the assessment. According to the Decree (art 10), as of June 5, 2014 the proponents of new projects or systems upgrades (power greater than 20 MW) or new district heating networks have to perform an cost benefit analysis. AEEGSI, upon MiSE input, sets the standards of district heating and cooling, establishes the criteria for determining the connection tariffs to utilities and, only in cases of new district heating networks with a supply obligation, sets the heat transfer rates.
Art 15	As for transformation, transmission and distribution (Art 11 of the Decree), AEEGSI, upon MiSE input, is in charge of: updating the rules for the remuneration of the development and management of networks, making provisions for dispatching priority to electricity produced from high-efficiency cogeneration plants, ruling the access to the balancing market demand, the reserve and other system services, adjusting the components of the electricity tariff to overcome the current progressive structure.
Art. 16	As for the Operators qualification, certification and accreditation schemes for Energy Management Experts and ESCOs by ACCREDIA ,the Italian Association for accreditation and conformity, have been approved.

2.2. Non-legislative provisions

. Covenant of Mayors, now for both Mitigation and Adaptation scopes, is more and more put in place by municipalities in Italy, with its highest number of signatories in Europe; ENEA's mission is (acting as both national agency for energy efficiency in Italy, and technical national coordinator of the CoM) supporting local administrations in drafting their Sustainable Energy Efficiency (and Climate) Action Plans, and in implementing the actions envisaged.

. "School of Energies" which includes the 4th Summer School for Energy Efficiency. The 2016 edition aims at providing young Engineers and Architects with know-how and methodologies to support PA strategies implementation in the building sector.

. "Stati Generali" for EE: an annual initiative, promoted by ENEA and EKN, for implementing bottom-up consultations on EE related issues; it represents a good practice aimed at facilitating the shift from the planning phase to the operational one, directly involving the sector operators and other stakeholders , collecting comments and proposals arising from their daily professional experiences.

3. Future activities

. In the second and third year of the PIF (see above art. 12) sensitivity and awareness actions will be implemented for the promotion of audits in SMEs. Different tools (e-learning courses, capitalization events, agreements with professional associations and commerce chambers, expos, newsletters, etc.) will be put in place for the achievement of this objective.

. New guidelines for White Certificate Scheme (see art. 7).

. Refining and extending monitoring and evaluation methodologies on the ongoing measures, with the aim of achieving a higher effectiveness .

4. Relevant information

www.enea.it
www.efficienzaenergetica.enea.it
www.mise.gov.it
www.minambiente.it
www.aeegsi.it
www.gse.it

EED implementation in Latvia

Introduction

In Latvia implementation of the EED is the responsibility of the Ministry of Economic Affairs of the Republic of Latvia. The Ministry of Environmental Protection and Regional Development is involved into implementation of energy efficiency measures in households and municipalities. Other ministries are obliged to report on energy savings in projects where energy efficiency is not the main target but energy savings are possible.

1. Legal context

The requirements of the EED still are not fully transposed into national legislation but the main legal document "Energy Efficiency Law" has entered into force from March 29, 2016. Amendments to several other laws (Energy Law, Law on Energy Performance of Buildings, Energy Law) has been adopted to transpose the requirements of the EED and some other amendments are in the process of adoption (Public Procurement Law, Electricity market Law).

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	Article 4 of the EED requires EU Member States to establish a long-term strategy for the renovation of buildings. The Long Term Building Renovation Strategy for Latvia has been elaborated in 2014 and submitted to the European Commission together with the Information report On the progress towards the indicative national energy efficiency targets in 2014 – 2016 according to Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (Energy Efficiency Plan). The Strategy envisages that in order to ensure economically sound and high-quality building renovation process must ensure the following preconditions must be in place: 1) availability of finance for economically justified projects in all regions of Latvia; 2) high-quality project management and supervision; 3) when monitoring the implemented activities the focus should be on the result, including the energy savings achieved; 4) high-efficiency and high-quality construction assurance; 5) improvement of the procedures of the selection of construction companies for building renovation; 6) reduction of construction costs.
Article 5	Article 5 of the EED requires EU Member States to ensure that as from 1 January 2014, 3% of the total floor area of heated and/or cooled buildings owned and ocupied by its central government is renovated each year to meet at least the minimum energy performance requirements. Latvia has chosen proposed approach and Ministry of Economic Affairs is elaborating regulations for the renovation programm of the buildings owned and ocupied by central government. The programm will be financed from the EU Structural funds.

EED Article	Implementation status
Article 6	To ensure the transposition of the requirements of Article 6 of the EED amendments to the Public Procurement Law2 entered into force on 29 March, 2016. These amendments ensure that public authorities purchase only products and services with high energy efficiency performance. Amendments to the Law on Energy Performance of Buildings3 entered into force on April 5, 2016 and ensure that the State buys or leases only buildings that comply with the minimum energy efficiency requirements, which are certified by the energy performance certificate of the building.
Article 8	Article 5 of the EED requires EU Member States to promote the awailability to all final customers high quality and cost effective energy audits carrued out in an independent way by qualified or accredited experts. In Latvia these obligations are implemented by: 1) Law on Energy performance of Buildings4. The Law defines that a person with an appropriate competence – an independent expert – is entitled to perform the certification of the energy performance of buildings and the inspection of heating systems and air conditioning systems. 2) Regulations of Cabinet of Ministers No.382 “Regulation on Independent Experts of Energy Performance of Buildings”5. This Regulation prescribes the competence requirements of an independent expert and the procedures for certifying this competence, the procedures for registering and monitoring an independent expert, as well as the data content of the independent expert register and the usage procedures of such data. 3) Energy Efficiency Law6. The Law sets out the requirements for energy audits in large enterprises and SMEs and energy management system implementation. 4) Regulations of Cabinet of Ministers “Regulations on Energy Audits in Enterprises” under development. These regulations define that energy audit in enterprises is a procedure carried out by energy auditor to gather information on all the company's energy consumption, which identify and quantify cost-effective energy savings opportunities, and the results are compiled by enterprise energy auditor in the energy audit report. According to the new regulations Energy auditor of enterprise is legal entity who fulfil certain competence requirements and is accredited by National accreditation institution.
Article 9-10	The requirements of the EED Article 9 and 10 regarding individual individual meters, smart metering, installation of individual heat meters or heat cost allocators in multifamily buildings and billing information are transposed into the National legislation by different articles of the: 1)Regulations of Cabinet of Ministers No. 85 "Natural Gas Supply and Use"7; 2)Regulations of Cabinet of Ministers No. 876 "Heat Supply and Use"8; 3)Regulations of Cabinet of Ministers No. 50 " Regulations Regarding the Trade and Use of Electricity9; 4)Regulations of Cabinet of Ministers No. 1013 “Procedures by which an Apartment Owner in a Residential Apartment House shall Pay for Services, which are Related to Usage of the Residential Property”10; 5) Energy Efficiency Law.

[2] http://likumi.lv/doc.php?id=133536
[3] http://likumi.lv/doc.php?id=253635
[4] http://likumi.lv/doc.php?id=253635
[5] http://likumi.lv/ta/id/258321-noteikumi-par-neatkarigiem-ekspertiem-eku-energoefektivitates-joma
[6] http://likumi.lv/doc.php?id=280932
[7] http://likumi.lv/doc.php?id=280169
[8] http://likumi.lv/doc.php?id=183035
[9] http://likumi.lv/doc.php?id=263945
[10] http://likumi.lv/doc.php?id=185342

EED Article	Implementation status
Article 11	The requirements of the EED Article 11 regarding cost of access to metering and billing information are transposed into the National legislation by different articles of the: 1)Law on Administration of Residential Houses11; 2) Law On Privatisation of State and Local Government Residential Houses12; 3)Energy Efficiency Law.
Article 12 and 17	The requirements of the Article 12 regarding promotion of efficient energy use by small energy customers, including domestic customers are transposed into the National legislation by Article 4 part 6 of the Energy Efficiency Law. The responsible ministry shall establish measures to facilitate the efficient use of energy by households and other consumers, and its website provides information on energy efficiency improvement measures aimed to change their behaviour to improve energy efficiency and support programs and other fiscal incentives to improve energy efficiency. Since 2010 Ministry of Economic affairs together with stake holders has organized a communication campaign “Lets Live Warmer!”13 to promote energy efficiency of buildings in Latvia. The key objectives of the "Let’s Live Warmer” campaign are to: - raise awareness about energy efficiency among the general public and decision makers; - activate apartment owners to renovate their homes using the aid from EU funds; - inform and advise building managers, apartment owner associations and trustees on the EU funding programmes, conditions, and benefits; - encourage construction companies, construction material manufacturers and traders to take the initiative of housing renovation.
Article 14	Article 14 (10) of the EED sets rules for guarantees of origin for high-efficiency cogeneration. These rules will be implemented by the Regulations of the Cabinet of Ministers which are now in the development process. Regulations of cabinet of Ministers No 243 “Regulations on Energy Efficiency Requirements for Registrated District Heating Companies and Compliance Procedures for their Examination”sets sets energy efficiency requirements for licensed or registered district heating companies and compliance procedures for their examination.
Article 15	The requirements of the Article 15 regarding the role of regulatory bodies in promotion of energy efficiency are transposed into the National legislation by different articles of: 1) Law on Regulators of Public Utilities14; 2) Public Utilities Commission Council decision “Electricity transmission system service tariff calculation methodology” 3) Public Utilities Commission Council decision “Electricity distribution system service tariff calculation methodology” 4) Public Utilities Commission Council decision ‘Thermal energy supply service tariff calculation methodology’ 5) Public Utilities Commission Council decision “Electricity Network Code” According the requirements of the EED Article 15 (8) in order to facilitate the promotion of demand response providers of demand response services must be treated in a non-discriminatory way on the market for balancing and

[11] http://likumi.lv/doc.php?id=193573
[12] http://likumi.lv/doc.php?id=35770
[13] https://www.em.gov.lv/lv/es_fondi/dzivo_siltak/
[14] http://likumi.lv/doc.php?id=12483

EED Article	Implementation status
	associated services. This requirement will be adopted by the amendments to the Energy Law.
Article 16	The level of competence, objectivity and reliability of energy auditors, energy managers and installers in Latvia is sufficient. Such situation has been secured by different articles of: 1)Law on Conformity Assessment15; 2)Energy Efficiency Law; 3)Law on Energy Performance of Buildings; 4) Law on Administration of Residential Houses16 5) Regulations of Cabinet of Ministers No 445" Regulations on National Acreditation Insitution" 6) Regulations of Cabinet of Ministers No1059 "Terms of Conformity Assessment, Accreditation and Supervision of Assessment Bodies"17; 7) Regulations of Cabinet of Ministers No 138 "Regulations on Energy Audits in Industry"18 and more other regulations.
Article 18	The requirements of the Article 18 regarding promotion of energy services market and access for SMEs to this market are transposed into Energy Efficiency Law. In this Law provision that for state and municipal insitutions now is possible to sign ESCO agreements not longer than for 20 years has been included. This provision will help mentioned above institutions to develop public procurement agreements on long term conditions.
Article 19	As about 90% of all flats in multifamily buildings are private properties rental sector is very small in Latvia and split incentives are not the priority. The main problem is to organize private flat owners in residential house management societies and to make the decision on multifamily building energy efficient renovation. Provisions regarding implementation of energy efficiency measures in multifamily buildings are included in these documents: 1)Law on Administration of Residential Houses; 2)Law on Residential Properties 19. Provisions regarding implementation of energy efficiency measures in municipalities are included in these documents: 1)Guidelines for energy sector planning in municipalities20; 2)Green procurement Promotion Plan 2015-201721; 3)Guidelines for the promotion of environmentally friendly construction process22.
Article 20	Article 7 of Energy Efficiency Law determines that state or municipality can establish Energy Efficiency find. The Regulations of Cabinet of Ministers regarding structure, financing sources and operation of the Fund are under development.

[15] http://likumi.lv/doc.php?id=63836
[16] http://likumi.lv/doc.php?id=193573
[17] http://likumi.lv/doc.php?id=185789
[18] http://likumi.lv/doc.php?id=255935
[19] http://likumi.lv/doc.php?id=221382

[20] https://www.em.gov.lv/lv/nozares_politika/energoefektivitate_un_siltumapgade/energoefektivitate/pasvaldibu_energoplani/
[21] http://likumi.lv/ta/id/272295-par-zala-iepirkuma-veicinasanas-planu-2015-2017-gadam
[22] http://www.iub.gov.lv/lv/node/63

2.2. Non-legislative provisions

In addition to legal implementation, what other measures are taken, are there any additional instruments? Are there any national co-operation mechanisms: working together with others in order to enhance EED implementation? Voluntary agreements?

In December 2, 2013 Cabinet of Ministers adopted "The Concept of transposition of the requirements of the Directive 2012/27 / EU on energy efficiency and amending Directive 2009/125 / EC and 2010/30 / EU and repealing Directives 2004/8 / EC and 2006/32 / EC in the national legislation". According the Concept Latvia will introduce Energy Efficiency obligation scheme in combination with alternative measures. Alternative measures action plan will include all energy efficiency measures implemented in different ministries or in co-operation with ministries and municipalities. The regulations are now in development.

3. Future activities

As Latvia has not implemented all the requirements of department of Renewable Energy and Energy Efficiency of the Ministry of Economic Affairs is still working on new regulations.

4. Relevant information

Ministry of Economic Affairs23 is responsible for the full implementation of the EED. National Energy Efficiency Action Plan24 was submitted to European Commission. "Guidelines for Energy Sector Development 2016-2020"25 was adopted in 2016.

[23] https://em.gov.lv/

[24] https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive/national-energy-efficiency-action-plans

[25] http://tap.mk.gov.lv/lv/mk/tap/?pid=40342629&mode=mk&date=2016-02-09

EED implementation in Lithuania

Introduction

The overall implementation of the Directive on Energy Efficiency (EED) (2012/27/EU) is the responsibility of the Ministry of Energy. Operating in their respective fields Ministry of the Environment and Ministry of Economy are also involved in the implementation of the EED. State Enterprise Energy Agency administers Energy Audit system, performs energy savings calculations and oversees the achievement of a cumulative end-use energy savings target as assigned by the Ministry of Energy.

1. Legal context

Implementation of the EED will be ensured when the draft Law on Energy Efficiency will be adopted. It should be adopted in the 3rd quarter of this year. Together with this draft a number of amendments were made for other laws governing energy sector - Law on Energy, Law on Heat Sector, Law on Electricity, Law on Natural Gas, Law on Public Procurement, and other legislation.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	Energy Resource and Efficient Energy Consumption Monitoring Order approved by the Government Decision No. 332 of the 30th of March 2016 sets the requirements for the long-term strategy for the renovation of the national building stock.
Article 5	In order to comply with the requirements of this article a Public Building Energy Efficiency Development Programme was adopted by the Government Decision No. 1328 of the 26th of November 2014. The aim of this programme is to increase energy efficiency in public buildings saving 60 GWh of primary energy by the end of 2020. This programme shall also ensure renovation of at least 3 % of the total floor area of the public buildings owned by state or local authorities.
Article 6	Compliance to this article is ensured by the Energy Efficiency Requirements for Purchasing Organizations When Purchasing Goods, Services or Buildings approved by the Government Decision No. 621 of the 17th of June 2015.
Article 7	Main provisions of this article will be implemented by the Law on Energy Efficiency scheduled to be adopted in the 3rd quarter of this year. This law will give the ability to introduce Energy Efficiency Obligation System and combine it with other alternative measures to achieve energy saving target by 2020.
Article 8	Requirements (other than those relating to the Large Enterprises) of this article has already been implemented in the Law on Energy. The draft Law on Energy Efficiency will cover the requirements for Large Enterprises. Energy Audit system is regulated by the orders of the Minister of the Energy.
Article 9-11	Provisions regarding these articles are laid down in the Law on Energy, Law on Heat Sector, Law on Electricity and Law on Natural Gas. Where it is technically possible and economically feasible individual meters can be installed to measure individual energy consumption.
Article 12	This article will be implemented by the Law on Energy Efficiency. The law stipulates that when drafting legislation provisions should be put in place to encouraging small energy end users to use energy more efficiently.
Article 14	Provisions of this article are addressed in the Law on Energy, Law on Electricity, Law on Heating Sector, National Heating Sector Development 2015–2021 Programme, Rules of Issuing Guarantees of Origin for Electricity From High Efficiency Cogeneration (approved by the Minister of Energy order

EED Article	Implementation status
	No. 1-126 on the 5th of November 2012).
Article 15	Requirements of this article are transposed by the amendments to the Law on Energy, Law on Electricity, and Law on Natural Gas.
Article 16	Requirements for energy specialists and energy auditors, together with training centres are laid out in the rules and regulations governing training, examination, mandatory experience requirement and attestation. Rules and other regulations can be found here.
Article 20	Draft Law on Energy Efficiency provides a possibility to set up an Energy Efficiency Fund. Law also provides details about the financing sources and administration of this fund.

2.2. Non-legislative provisions

It is planned that the bigger part of energy saving required to be achieved by 2020 will be achieved through the alternative measures. These measures being: energy taxes on fuels; energy audits in large enterprises; agreements with energy suppliers on information campaigns; agreements with energy suppliers to increase energy efficiency at final consumers; revised Multi-apartment Renovation Programme and Public Building Energy Efficiency Development Programme. Last two programmes are already up, running and delivering first energy savings.

3. Future activities

Given that the main legislation – Law on Energy Efficiency – is submitted for the consultations and is expected to be adopted in the 3rd quarter of this year – main future activity will be finalisation of the accompanying legal acts.

4. Relevant information

Unfortunately majority of legal documents are in Lithuanian language only.
Ministry of Energy of the Republic of Lithuania – http://enmin.lrv.lt/en/
State Enterprise Energy Agency – http://www.ena.lt/en/default.htm

EED implementation in Luxembourg

Introduction

The implementation of the Directive on Energy Efficiency (EED) (2012/27/EU) is the responsibility of the Ministry of the Economy. Provisions regarding public procurement and public building renovation are implemented by the Ministry for Sustainable Development and Infrastructure. Myenergy, the national energy agency, supports the Ministry of the Economy in the transposition of the EED, i.a. in the promotion of the energy efficiency and advice to consumers.

1. Legal context

The transposition of the EED required the modification of several legal and regulatory texts, as the law on rational use of energy, the laws concerning the electricity and natural gas markets and the regulation on public procurement.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	A first draft of the renovation strategy was integrated in Luxembourg's 3rd NEEAP https://www.gouvernement.lu/4462360/dritter-nationaler_energieeffizienzaktionsplan_luxemburg.pdf . On the basis of that first draft, Luxembourg organized several working groups with stakeholders in order to identify the national renovations potential, with focus on the identification of the solutions to eliminate the potential barriers to renovation initiatives. The process to identify barriers and look for possible solutions to enhance energy efficiency was continuously developed in the years 2015 and 2016 and is an ongoing process.
Article 5	Luxembourg decided not to opt for the alternative approach foreseen in article 5 EED. So, 3 % of the total floor area of heated and/or cooled buildings owned and occupied by Luxembourg's central government is renovated each year to meet at least the minimum energy performance requirements. The total surface of buildings owned by the central government to be renovated until 2020 totals 29.970 m^2. An inventory of the concerned buildings was send to the European Commission in March 2013 https://ec.europa.eu/energy/sites/ener/files/documents/2013_lu_eed_article5_fr.pdf In September 2014, Luxembourg adopted a national energy efficiency renovation strategy for the refurbishment of States patrimony www.mddi.lu or http://www.abp.public.lu/publications/index.html. Luxembourg provides financial means to implement the renovation strategy, by providing in its multi-year budget the funds for the planned refurbishments. Renovations will be done in compliance with the minimum energy efficiency criteria set out in the Grand-Ducal Regulation of 31th August 2010 on the energy performance of functional buildings.
Article 6	Transposition of article 6 EED required an insertion of a new article 169*bis* in the Grand-Ducal regulation of 3rd August 2009 implementing the law of 25th June 2009 concerning public procurements (loi du 25 juin 209 sur les marchés publics et portant modification du seuil prévu à l'article 106, point 10 de la loi communale modifiée du 13 décembre 1988).
Article 7	Luxembourg decided to fulfill its complete energy savings target under article 7 EED (cumulative energy savings target of 5.993 GWh) with the introduction of an energy efficiency obligation scheme (EEOS). The related legal and regulatory texts were adopted in June respectively August 2015. http://www.legilux.public.lu/leg/a/archives/2015/0119/a119.pdf#page=2 and http://www.legilux.public.lu/leg/a/archives/2015/0170/a170.pdf#page=2 Obligated parties under the EEOS are all electricity and gas retailers selling electricity or gas to final consumers located in Luxembourg. The EEOS is running from 1st January 2015 to 31th December 2020. Obligated parties are allocated an annual individual energy saving target based on their marked share of the previous year. They have to report yearly by 31 of March on the energy savings achieved during the previous year. In case they don't match their goals, a penalty of 2€/MWh is foreseen with an obligation to realise the missing savings within the following year.

EED Article	Implementation status
Article 8	The transposition of article 8 to oblige enterprises that are not SMEs to realise an energy audit carried out in an independent and cost-effective manner required the modification of the law of 5th August 1993 regarding the rational use of energy.
Articles 9-11	Luxembourg's legislation regarding the organisation of the electricity and natural gas markets was already complying with most of the provisions of articles 9 to 11 of the EED. Only few amendments were made to completely stick to the text of the directive. The roll-out of smart meters will start in July 2016 and be completed by 2019 for electricity and 2021 for natural gas.
Article 12	Luxembourg opted for global roll-out of smart meters by 2019 for electricity and by 2021 for gas. By installing these smart meters, final consumers will have the opportunity to actively participate in the energy market and to regulate their own consumption. Moreover, myenergy offers free guidance for individuals, municipalities and professionals in their projects to help them save energy and use renewable energy sources (www.myenergy.lu). myenergy regularly organizes information and awareness campaigns for individuals regarding energy efficiency. In addition, myenergy organizes an annual fair under the title "myenergy days" enabling exhibitors to present new technologies for energy efficiency and renewable energy in the field of construction. Luxembourg is aware that the various targets on energy efficiency can only be achieved if the available workforce in the construction sector is enough qualified. Thus, a consortium of myenergy, the Luxembourg Chamber of Trade and IFSB (Institut de formation sectorial du bâtiment) training institute was brought together in a national project called LuxBuild2020 aiming to ensure training of artisans and construction workers. For further information is referenced under following link: www.buildupskills.eu/national-project/luxembourg The Luxembourg Government has decided to strengthen its new system of state financial aid "PRIMe House", which entered into force in January 2013, to further encourage energy renovations and the implementation of renewable energy. The Ministry of the Economy has developed a standard form agreement governing aspects of an energy performance contract. The energy performance contract provides the opportunity for owners of large buildings to achieve energy savings in their building with the support of a contracting company. The financial investments necessary to achieve the energy saving measures are not engaged by the owner of the building itself, but by a contractor, who is in turn funded by the energy savings.
Article 13	The various sanctions provided in article 13 EED are included in the relevant legal and regulatory texts.
Article 14	The transposition of article 14 required the modification of the law of 5th August 1993 regarding the rational use of energy and of the regulation of 26th December 2012 on high-efficiency cogeneration. The comprehensive assessment of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling is under finalisation and is estimated to be accomplished at the end of July 2016.
Article 15	Article 15 is transposed in national law by the legislation regarding the organization of the electricity and natural gas markets. Only few amendments were necessary to comply with the requirements of article 15.
Article 16	Luxembourg has voluntary and mandatory schemes. The EPC accreditation is a mandatory accreditation given by the Ministry of Economy to experts in order to allow them to establish EPCs (energy performance certificates) for households and non-residential buildings. http://www.eco.public.lu/attributions/dg6/d_durables/energyefficient/index.html The EPC agreement is given to the company but with the restriction that only the named persons can establish the EPCs on behalf of the company. "myenergy certified" is a voluntary certification scheme of energy advisers for residential buildings given by Myenergy (EIG) to experts in order to attest their extra qualification in the energy advice sector. http://certified.myenergy.lu/ Trainings in energy efficiency are offered by the Chamber of trade (http://www.cdm.lu), the *Institut de formation sectoriel du bâtiment* IFSB (http://www.ifsb.lu/fr/formations.php?domaine=3) and *L'Agence de l'Energie S.A.* (http://www.energieagence.lu/fr/formations). Luxembourg is participating to the European program LuxBuild 2020 http://luxbuild2020.myenergy.lu/
Article 17	Please refer to the developments under article 12 EED. Furthermore, the websites of the Ministry of the Economy (http://www.gouvernement.lu/3313559/minist-economieor www.energyefficient.lu), the Department of the Environment, (http://www.environnement.public.lu/guichet_virtuel/energie) and of myenergy (www.myenergy.lu) offer the public free access to all information relating to energy efficiency and the

EED Article	Implementation status
	various financial aid schemes. In this context, the Department of the Environment regularly publishes a brochure presenting the grants applicable to individuals for the construction of a new high energy efficient house, for the energy efficient renovation of an existing building, for the rational use of energy and the development of renewable energy (http://www.environnement.public.lu/energies_renouvelables/publications/index.html). As part of an administrative simplification program aiming to provide citizens and businesses a central information point for everything related to administrative procedures or questions of everyday life, the Luxembourg Government has set up a website under the name "Guichet.lu" for easy way to access all sorts of useful information and referrals to relevant links. A section dedicated to housing contains a sub-section relating specifically to energy efficiency (www.guichet.public.lu/citoyens/fr/logement/renovation-transformation/index.html). For those without internet access or preferring verbal advice, myenergy developed a network of information points "myenergy infopoint". At the info points, experts are available to the public to answer any issues related to energy, including energy efficiency. Discussions with banking institutes are currently ongoing to raise awareness about energy efficiency and encourage them to set up financing mechanisms facilitating the energy renovation of buildings.
Article 18	Luxembourg has set up a special public structure called myenergy with the mission to inform and advise all private or public persons on energy efficiency. Information can be collected directly from myenergy (offices or info points) or its website (www.myenergy.lu or (http://particuliers.myenergy.lu/fr/conseil/renovation_construction/renovation_energetique). myenergy recently implemented a new quality label for energy consultants called "myenergy certified". This new label is a voluntary certification program to certify the competence of professionals acting in the field of energy consulting. Certified experts can claim the increased quality of their services and stand out on the market. Moreover, in 2013 were awarded the first certificates under the label "Energie fir d'Zukunft +". The label "Energie fir d'Zukunft +" allows customers and consumers to easily identify the craft enterprises specialized in the field of construction of new passive houses and energy efficient renovation of homes. These companies have mastered the principles of the certification seal of the house and also have competent people to accompany their clients in administrative procedures for the granting of subsidies under the legislation. A list of experts having undergone special training courses in the energy performance of residential and functional buildings is published on the Ministry of the Economy website (http://www.guichet.public.lu/citoyens/fr/logement/construction/performances-energie/demande-passeport-energetique/index.html) but does not included architects and engineers The list limited to architects and engineers is available on the website of the Order of Architects and Engineers (www.oai.lu). These lists are regularly updated. The Ministry of Economy, together with myenergy, promotes the energy performance contracting in public buildings by means of a standard contract. To encourage the use of energy performance contracting, the use of it may be subsidized. Further information is available on the following website (http://particuliers.myenergy.lu/fr/subvention/communes/contrat_performance_energetique.

2.2. Non-legislative provisions

See comments under point 2.1.

3. Future activities

Future activities will depend on the outcome of the revision of the EED by de EC.

4. Relevant information

Ministry of the Economy: http://www.gouvernement.lu/3313559/minist-economie
Ministry of Sustainable development and Infrastructure: http://www.developpement-durable-infrastructures.public.lu/fr/index.php

Myenergy: www.myenergy.lu

Luxembourg's NEEAPs can be accessed on the website from the Ministry of the Economy http://www.gouvernement.lu/4300111/efficacite-energetique

EED implementation in Malta

Introduction

The Office of the Prime Minister through the Sustainable Energy and Water Conservation Unit is responsible for overseeing the implementation of the Energy Efficiency Directive (2012/27/EU). Other Ministries are involved in implementation. These include the Ministry for Transport and Infrastructure, the Ministry for European Affairs and Implementation of the Manifesto, and the Ministry for Finance.

1. Legal context

The Energy Efficiency and Cogeneration Regulations (L.N. 196 of 2014) transpose the Energy Efficiency Directive (2012/27/EU).

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 4	*Article 4 of the EED requires the establishment of a long-term strategy for mobilizing investment in the renovation of the national stock of residential and commercial buildings, both public and private. The first version of Malta's long-term strategy for mobilising investment in the renovation of buildings gives a clear picture of the particular attributes of the Maltese buildings. It describes the method of construction, energy consumption patterns and limitations of the local building sector. The strategy shall be updated every three years and submitted to the Commission as part of the National Energy Efficiency Action Plans.* *In the meantime the following actions were taken:* 1. *Government continued to support schemes that supported the installation of Solar Water Heaters, Double Glazing and Roof Insulation;* 2. *Using the financing possibilities offered with the use of ERDF funds, schemes were made available to SMEs to retrofit their operation and buildings;* 3. *The Siġġiewi Primary School refurbishment Project was concluded. In this Project equipment was replaced with a more modern, energy efficient one. Investments included a BM system, Solar Thermal units, Solar PV units, insulation, double glazing and smart lighting;* 4. *The Building Regulations Office issued an updated Technical Guide F i.e. the 'Energy Performance Requirements for Buildings' Guide;* 5. *The Malta Environment and Planning Authority issued in 2015 the 'Strategic Planning for the Environment Development. This Policy document included new parameters for the installation of RES in buildings.*
Article 5	*On the basis of article 5(6), Malta has opted for an alternative approach which allows the possibility to count the excess savings achieved in the previous or following years towards the target of a given year.* *Meanwhile the Sustainable Energy and Water Conservation Unit provides technical advice to Public bodies in order to improve their energy consumption.*
Article 6	*With respect to the provisions of Article 6 of the EED, SEWCU is collaborating with the relevant entities including the Department of Contracts to formalize in an appropriate guidance document the administrative processes to implement Article 6 of the EED. The document will be available online to guide public authorities in their procurement of goods, services and buildings in line with Article 6.*

Article 7	*In its report for Article 7 drafted in December 2013, Malta indicated that Article 7 energy savings would be met through the setting up of an Energy Efficiency Obligation Scheme, as well as alternative policy measures.* *The Energy Efficiency Obligation Scheme requires the main public utility in the electricity sector to :* *a. To instruct consumers in wise energy use in the home through appropriate messages (both general and specific) via smart meters. Smart meters will also detect fraud and hence control excessive use of energy which usually accompanies fraud.* *b. To set up a Domestic Residential Household Tariff System that through its progressiveness incentivises energy efficiency* *The majority of energy savings will be achieved through alternative energy saving policies.* *Measures include :* - *Financing schemes or instruments and fiscal incentives .e.g incentive schemes for Building Improvement through Double Glazing and Roof Insulation;* - *Public corporations leading by example e.g. the considerable investment for the Water Services Corporation to improve the energy efficiency of its operation;* - *Direction to the public sector to improve the energy efficiency of its buildings;* - *Improvement in the energy consumption of the vehicle fleet;* - *Introduction of small and micro cogeneration units providing heat energy for own use.* - *Voluntary Agreements.*
Article 8 & Article 16	*Malta has adopted Option (a) given in Article 8(1)(a), where energy audits are carried out in an independent manner by qualified and/or accredited experts according to qualification criteria. The Sustainable Energy and Water Conservation Unit (SEWCU) monitor energy audit activities. It is the agency that promotes energy audits and guarantees the attainment of the desired quality in mandatory audits by non-SMEs.* *SEWCU in conjunction with the Regulator for Energy and Water Services had issued a guidance note on the carrying out of mandatory energy audits by non-SMEs. This guidance note can be accessed at the following link:* *http://energy.gov.mt/en/Pages/guidancenotes.aspx* *The Regulator for Energy and Water Services (REWS) had issued a Government Notice (GN 1032 of 2014) which sets out a scheme for the registration of training courses leading to the certification of energy auditors and energy managers. The registered training courses and the list of certified energy auditors and energy managers are available at the following link:* *https://www.rews.org.mt/#/en/a/81-providers-res-and-energy-audits*
Article 9 - 11	*By mid 2015, Enemalta had installed around 274,500 electricity Smart meters, this being 92.3% of the total number of customer services installed. There remained around 23,000 installations that still had to be equipped with a Smart meter. Most of these are either closed premises or premises wherein there are technical difficulties for installation.* *Malta revised the electricity and water bills aligning it to the requirements specified in the EED. Further changes are also being proposed to make the bill to provide more information to the consumer.*
Article 12	*Article 12 requires MSs to take appropriate measures to promote and facilitate an efficient use of energy by small energy customers, including domestic customers. Malta is addressing this requirement through various initiatives intended for small energy customers investing in energy efficiency and renewable sources. These*

	measures include fiscal incentives, feed-in tariffs, grants and subsidies, and the implementation of exemplary projects in the residential sector. Furthermore SEWCU technical personnel participate in popular media programmes and conduct home visits, to promote energy efficiency and provide tailored energy and water savings tips. These instruments and policies are intended to promote a behavioural change towards the better use of energy.
Article 14	*Malta had notified the European Commission that there are no exemptions from the requirement for thermal electricity generation installations to be subject to a cost benefit analysis, in line with Article 14(6) of the EED.* *Malta has also recently carried out an analysis in order to assess cost effective and efficient heating and cooling. CHP technology seems to have a marginal potential role in Malta, even when taking into account provisions of Directive 2012/27/EU of enhancing this technology and district heating. This is accentuated by the fact that Malta has practically no cheaply available indigenous resources of biomass or biogas, and currently there is no natural gas network to render the fuel supply cheaper than present options. Nevertheless, the economic cost-benefit analysis drawn up in accordance with Directive 2012/27/EU showed some positive results for some scenarios of CHP plants penetration rate especially when considering environmental benefits and health externalities that could receive a better evaluation in the future. However the up-take of CHP technology as small scale stand alone installations is rendered more difficult considering the market competition of equally efficient heating technologies, like heat pumps and condensing boilers.* *The current local conditions may not be ideal for the implementation of CHP and district heating networks; the report suggests a series of policies and measures that may be adopted to support and promote these technologies for the medium term up to 2020 and further out to 2030 with the introduction of even more ambitious legislation and technological breakthroughs.* *As regards the equipment mentioned in Article 14(6) it is not currently envisaged that in the near future new peak load and back-up electricity generating installations, nuclear power installations, geological storages of carbon dioxide, industrial installations with a total thermal input exceeding 20MW generating waste heat, and new district heating and cooling network with a total thermal input exceeding 20MW are installed in Malta.*
Article 15	*In line with the requirements of this Article, the designated distribution system operator has carried out an assessment of the energy efficiency potential of the electricity infrastructure.*
Article 17	*A newly set up website www.ecobuild.gov.mt addresses this article.* *The website's objective is to promote discussion and disseminate expertise in local applications of green building technology. The project is envisaged to facilitate Malta in achieving the EU 2020 targets for energy efficient buildings.* *One of the aims of this website is to enhance consumer awareness with respect to energy efficiency and renewable energy sources. The website ecobuild.gov.mt includes:* - *Product catalogue of locally available green building technologies;* - *Job descriptions of certified technicians, designers, consultancy & specialist services;* - *Non-technical advice for home-owners investing in energy-saving measures;* - *Technical produce information for building professionals, technicians and developers;* - *Technical advice on how to make the most cost-effective choice of products.* *The Immediate target results for the Website are:* - *More exposure to all approved green building products;* - *A direct comparison between products from different suppliers;* - *More energy awareness;* - *Collection of green design data;*

	- *Long term benefits;* - *Less energy poverty;* - *More comfortable buildings through the implementation of green technology;* - *Better understanding of green building products and services;* - *Supporting the Government targets for EU 2020.* *In order to achieve its goals the website is focused on:* - *Homeowners* - *Developers* - *Contractors* - *Architects* - *Engineers* - *Stakeholders in the Green Building Product & Service Industry*
Article 18	*Malta has prepared a document on energy performance contracting and related monitoring and verification which will be issued for public consultation. Amongst other things, the public consultation will provide feedback whether the EPC model is suitable for Malta and whether Malta needs to have a transitory business model for EPC or even an EPC facilitator.*
Article 19	*Studies to implement these paragraphs of this Article are still being developed.*

2.2. Non-legislative provisions

With the local transposition of the Energy Efficiency Directive in 2014, the industry sectors were informed of their legal obligations towards Article 8 and the Government relayed its commitments to support all economic sectors to boost competitiveness. The Sustainable Energy and Water Conservation Unit in summer of 2014 approached the Malta Business Bureau, to facilitate the implementation of the obligation of Article 8 and also proceeded to negotiate voluntary agreements with non-SMEs to promote the implementation of energy efficiency measures as a tool to support this aim. A number of voluntary agreements were signed in 2015 covering energy saving measures implemented from 2014 onwards.
Companies have committed savings of 11,117,716kWh through energy conserving measures during the year 2014.

3. Relevant information

Sustainable Energy and Water Conservation Unit: **www.sewcu.gov.mt**

EED implementation in The Netherlands

Introduction

The implementation of the Directive on Energy Efficiency (EED) (2012/27/EU) is the responsibility of the Ministry of Economic Affairs. Also the Ministry of the Interior and Kingdom Relations and the Ministry of Infrastructure and the Environment are involved in the implementation of the EED. The Netherlands Enterprise Agency (RVO.nl) implements several instruments and programmes related to energy efficiency in assignment of the Ministries. The Energy Research Centre for the Netherlands is involved for calculations regarding energy efficiency (EE).

1. Legal context

To implement the EED, changes have been made to several national laws. These have been among others effectuated by the law on the implementation of EC directives energy efficiency, the electricity law, the gas law, law on heat. They all came into force in July 2015 together with a temporary regulation for the implementation of articles 8 and 14 of the EED. In the Netherlands the EED obligations have been fully transposed into national laws.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by Article, including any relevant web links.

EED Article	Implementation status
Article 4	Article 4 of the EED requires European Member States to establish a long-term strategy for the renovation of buildings. The strategy of the Netherlands is based on the Energy Agreement for Sustainable Growth that was concluded in September 2013. The basic assumption of the Energy Agreement is that citizens and companies will themselves take responsibility for investments in energy-saving measures. The role of the national Government is to facilitate and encourage energy-savings where necessary and to implement certain regulations of a more restrictive nature. The national Government has provided an incentive for the financing of energy-saving measures in particular with the National Revolving Fund for Energy Savings for private home-owners and a subsidy-scheme for energy savings in the social housing sector. Additional measures will also be provided to assist municipal authorities in their role as promoters of energy efficiency at the local level and to provide homeowners with an (indicative) energy label. The government facilitates and encourages third parties to take energy-saving measures and deals with restrictive regulations. The government's renovation strategy can be divided into three activities: 1. Own responsibility 2. Facilitating and encouraging 3. Financing and subsidising This approach applies both for the building of residential and non-residential buildings.
Article 5	Article 5 EED obliges Member States to renovate 3% of the floor area of buildings owned and occupied by its central government each year and offers Member States the opportunity to opt for an alternative approach to achieve an equivalent objective. On the basis of Article 5(6) the Netherlands has opted for an alternative approach. The Ministry of the Interior has commissioned ECN in 2013 to calculate if the current approach of 2 % energy savings is as effective as energy reduction by 3% renovation would be annually. It concerns buildings of the National Real Estate Company (7 million m2 premises of the Government Buildings Agency (GBA) (offices , courts, prisons , monuments , etc) and 6.5 million m2 of defense property from the Ministry of Defense). According to ECN the GBA would save 14%, (approximately 700TJ)with the approach of 2% energy savings. The service property Defense would save with the chosen approach 600 TJ savings ; about 300 TJ for defense property covered by the EED obligation. See ECN report 2013 .

EED Article	Implementation status
	. For the implementation of Article 5(7), the Minister of Infrastructure and the Environment is encouraging municipal and provincial authorities to draw up a local climate agenda setting out energy efficiency objectives. A local climate agenda also contains policies to reduce energy consumption in the built environment. The 'Road map to a climate-neutral municipal and provincial organisation' is one of the measures developed to achieve this. In the Energy agreement for sustainable growth, the International Cooperation Agency of the Association of Netherlands Municipalities and therefore the municipalities is responsible for energy efficiency in social property. Housing corporations are also developing initiatives to reduce energy consumption in the built environment. This is to implement the Energy Saving Agreement for the Social Rental Sector, which the Minister for Housing and the Central Government Sector has entered into with the housing corporations, in which they agree that housing corporations will reduce building-related energy consumption by 33% over the period 2008 - 2020. 319 of the 420 municipal authorities in the Netherlands made use of the subsidy scheme to promote local climate policies (subsidieregeling stimuleringsmaatregel lokaal klimaatbeleid) (SLOK), which ran from 2008 to 2012. The payment helps local authorities to implement local climate policy. These municipal authorities have translated their energy objective into policy.
Article 6	The central government and the other authorities have been purchasing sustainably since 2007 to encourage sustainable production. A general purchasing framework is being developed to take account of energy efficiency in the central government's purchases. This framework is placed on the website PIANOo (the Dutch Public Procurement Expertise Centre; https://www.pianoo.nl/). Here expertise is built up through a large network of around 3,500 public procurement professionals and contracting authorities. PIANOo brings experts in specific areas together, pools knowledge and experience and provides advice. It also fosters dialogue between government contracting authorities and private sector companies. Public purchasing is centralized for several years, through DGOBR, part of the Ministry of Interior. This is divided into 34 purchasing categories and 34 category managers. There is an Interdepartmental Committee on National Operations (ICBR). The aim is that more and more services are purchased instead of products, and integral more and more is tendered and EMVI rather than lowest price. For fifty product groups sustainability criteria have been developed for sustainable purchasing. For the management and maintenance of buildings and infrastructure the use of energy performance contracts have been increased.
Article 8	In the built environment, energy audits are promoted by means of the energy label, the energy performance advice (EPA) and the energy management systems. These instruments are implemented independently by qualified experts and are verified by independent bodies. For the energy label this is done on the basis of the Energy Performance of Buildings Decree and the Energy Performance of Buildings Regulation. The use of energy audits in industry is promoted by the LTA3 (Long-Term Agreement 3, MJA3) and the Long-Term Agreement for the energy efficiency of ETS enterprises (MEE). To ensure that Article 8 of the Directive is fully implemented, additional requirements are now included in the temporary regulation for the implementation of Articles 8 and 14 of the EED (Tijdelijke regeling implementatie artikelen 8 en 14 Richtlijn energie-efficiëntie). This regulation stipulates that all large enterprises which do not carry out an energy audit under the LTA3 and MEE must have carried out an energy audit before 5 December 2015. It also guarantees that all large enterprises repeat their energy audit every four years. These provisions will become part of the Activities Decree on Environmental Management.
Article 8(5)	Article 8 (5) states that access of market participants offering energy services must be based on transparent and non-discriminatory criteria. The Competitive Trading Act and the supervision thereof by the Authority for Consumers and Markets (ACM) will ensure this.
Article 8(6)	Article 8 (6) of the Directive states that enterprises that are not SMEs and that implement an energy or environmental management system - certified by an independent body according to the relevant European or International Standards - are exempt from the requirement to carry out an energy audit once every four years under the Directive. The temporary Regulation on the implementation of articles 8 and 14 includes an exemption from the requirement to carry out an energy audit for this situation.

EED Article	Implementation status
Article 8(7)	Article 8 (7) contains an optional provision for district heating and cooling networks. As part of the promotion of efficiency in heating and cooling a cost-benefit calculation must be made for new or substantially refurbished installations with a total input of more than 20 MW of the operation of the installation as a high-efficiency cogeneration installation. To determine whether a comprehensive cost-benefit calculation is necessary, the temporary Regulation on the implementation of articles 8 and 14 stipulates that a quick scan must be carried out as part of the energy audit.
Articles 9-11	The 1998 Electricity Act, the Gas Act, the Heating Act and the EU Energy Efficiency Directive (Implementation) Act contain regulations for the provision of meters. These acts provide that small consumers of gas, electricity, cooling and heat and large consumers of cooling can have an individual meter.
Articles 12 and 17	Examples of instruments and policies implemented in the Netherlands to promote behavioural change by fiscal incentives include the Energy Investment Allowance (EIA, Article 3.42 of the 2001 Income Tax Act) for small entrepreneurs and the excise on mineral oils (Section 6, Chapter II of the Excise Act) for small customers and consumers. The EIA is a budgeted fiscal scheme that allows entrepreneurs to deduce a certain percentage of in the cost of energy-savings measures from their profit tax. The energy tax and excise duties on mineral oils are putting up the cost of using gas, electricity, petrol and diesel, for example, for small customers and consumers. Regarding information provision, the Netherlands Enterprise Agency distributes information via the internet about sustainable leases for buildings, for example, (Green Leases), performance contracts for the management and maintenance of buildings, and forms of mortgage which are combined with energy-saving measures. The website www.energiesubsidiewijzer.nl has been developed by the Netherlands Enterprise Agency and provides a list of subsidies, loans and other schemes for energy efficiency. MilieuCentraal and the National Institute for Family Finance Information provide consumers with information about energy efficiency via the website www.bespaartest.nl There are various enterprises offering energy services in the Netherlands. The independent network organisation Esconetwerk aims to put these parties in a better position to gather information about the provision of energy services and to utilise opportunities in this field. Esconetwerk's focus is on reducing the cost of setting up an energy service provision contract between the energy service provider and the owner, manager and/or user of a building and to increase the quality of the energy saving measures in these buildings. These measures provide banks and other financial institutions with information about the possibilities of participating in the financing of measures to improve energy efficiency, by setting up public-private partnerships, for example.
Article 16	The level of competence, objectivity and reliability of energy advisors in the Netherlands is very high. There are various training programmes for energy advisors and certifying bodies for the certification and accreditation of the training programmes for energy advisors. An example of a certifying body is the Stichting Kwaliteitsborging Installatiesector (Foundation for Quality Assurance in the Installation Sector) (KBI). KBI is an industry organisation which, amongst other things, certifies the design, installation and management of installations and assesses means of ventilation in dwellings. Another example of a certifying body is the Platform for Certification of Environmental and Occupational Health & Safety Management Systems (SCCM). The SCCM is working on a clear certificate for example for ISO 14001 (environment), EMAS (environment) and ISO 50001 (energy). The SCCM establishes certification systems for this and publishes them on its website. The Accreditation Council (Raad voor Accreditatie) supervises the certifying bodies. This structure contributes to realising the national energy efficiency objectives. MilieuCentraal's website, aimed at consumers, refers to the importance of a certified customised solutions advisor.
Article 18	The Netherlands Enterprise Agency (RVO.nl) website distributes information to promote the market for energy services and access of small and medium-sized enterprises to this market. This information includes a template for a performance contract for the supply of heat and/or cooling by an ESCo and a number of other performance contract templates. The website of the Netherlands Enterprise Agency also provides information about financing structures and possible subsidies, such as the EIA. RVO.nl is participant of the Platform Duurzame Huisvesting. One of the tools of PDH is Menu on Performance contracting. It stimulates clients and ESCo's to use EPC for energy efficiency measures. RVO.nl developed a Guide on Procurement of Energy Performance contracting to help

EED Article	Implementation status
	municipalities and other procuring organisations with defining projects with a performance contract. Energy service providers are listed on the internet (www.esconetwerk.nl). The list includes 41 suppliers and relevant parties, who signed the Transparense Code of Conduct. There are certainly more service providers available in the Netherlands, but these providers didn't sign this code. We do not know the extent to which ESCO services are used in the Netherlands, in the commercial sector and in the public sector, for e.g. energy efficiency and maintenance in buildings, in public lightning, housing, or for installations/products such as WKO (?), LED lightning, solar panels. However it will probably increase significantly in the coming years because the working method fits with a trend towards further cooperation, not simply tendering on the lowest price, but on the cost-profit ratio and finding and using core competencies (not every company is good at all aspects of operation). RVO.nl is involved in a H2020 project GuarantEE on capacity building and promoting EPCs, from April 2016 – Mach 2019.
Article 19 and 20	The independence of the network operators is guaranteed in the 1998 Electricity Act and the Gas Act (House of Representatives, 30 212). Good market access is assured by existing energy regulations and competitive trading legislation. We are also implementing this by making an open standard compulsory for the consumer port on the smart meter. This obligation is included in the General Order in Council on Remotely-Readable Meters. This gives third parties access to the measurement data obtained by the network operator via the smart meter, provided they obtain consent to this from the small consumer (privacy regulations). The problem of the split incentive in social housing is solved by the Housing Valuation System in which investments in improving energy efficiency are encouraged by means of a points system based on the energy label. An energy-efficient dwelling delivers more points under the points system than a dwelling that is not energy efficient. At the moment of writing there is new legislation proposed for energy performance compensation between tenants and landlords. The Netherlands has set up a national fund to implement the alternative policy measures under Article 7 of this Directive. Under the Housing Agreement (Parliamentary Papers II, 2012/2013, 32 847 No 42) the cabinet contributed a total of € 150 million in 2013 and 2014 to a national fund for energy savings in the built environment. This is a revolving fund, which means that the expenditure of the fund will be returned to the fund over time in the form of interest and repayment. This revolving fund is aimed at energy saving for tenants and homeowners and is supplemented with funds from the market, to achieve a total investment of € 600 million. The revolving fund started in 2013. The state provided a € 400 million subsidy for landlords in the rental social housing sector for investments in energy efficiency for the period 2014 - 2017 with the aim of contributing to the objectives of the Energy Saving Agreement for the Rental Sector.
Article 14 (7) (9) (10)	Provisions are made in the temporary regulation for the implementation of Articles 8 and 14 to comply with Article 14. Article 14 (10) sets rules for guarantees of origin for high-efficiency cogeneration. These rules will be implemented in the Regulation on Guarantees of Origin for Electricity Generated in an Installation for High-Efficiency Cogeneration. Other measures: The development of efficient heat and cooling networks will be promoted by means of fiscal incentives such as the EIA and energy tax, but also by the LTA3, MEE, Green Deals, the Nationaal Expertise Centrum Warmte (National Heat Expertise Centre) and the setting of EPC standards.
Article 15	The 1998 Electricity Act, in common with the Gas Act, promotes network tariffs that are related to the most effective operation and quality of the electricity chain. As the network tariffs do not distinguish between providers of balancing and ancillary services by means of demand response measures or other measures, no additional requirements are needed for this. Annex XI.2 to the Directive specifies that tariffs or conditions for the transmission of electricity may not prevent network operators or energy retailers from offering services for demand response measures, demand management and distributed generation. The ACM has been appointed to supervise the tariffs and conditions of network operators to ensure that they do not constitute an impediment to the provision of the specified services and the energy efficiency of the electricity and gas market. Facilitating the promotion of demand response Providers of demand response services must be treated in a non-discriminatory way on the market for balancing and associated services. This was already the case in the Netherlands. All producers or customers with balance responsibility, including providers of demand response services, can compete in the market for the provision of system services if, by switching installations on or off, they can contribute to balancing the system.

EED Article	Implementation status
	Energy efficiency for the design and regulation of energy networks The regulation of quality aspects of the operation of electricity and gas networks provides incentives for optimising energy efficiency in the energy system. This Bill also specifies that the ACM must take account of energy efficiency when performing its duties on the electricity and gas market. This will allow maximum use of the potential for energy efficiency in the electricity and gas networks. It also further implements Article 15 (2) of the Directive, which asks Member States to assess the remaining potential for energy efficiency in the networks.

2.2. Non-legislative provisions

Schemes for alternative policy measures in accordance with Article 7 (9) and (10).

The Energy Agreement for Sustainable Growth (Social and Economic Council of the Netherlands, 2013) brings together the activities of over 40 organisations, including central, regional and local authorities, employers' and employees' organisations, nature conservation and environmental organisations, other social organisations and financial institutions, in fields such as energy efficiency. These parties aim to achieve an average annual saving of 1.5 % of the final energy consumption with the Energy Agreement and are thus expected to meet the EED objectives comfortably. Under this Agreement the parties have agreed a package of measures which is expected to produce a final energy consumption saving of about 100 PJ in 2020. The energy saving agreements are aimed at the built environment, at increasing the energy efficiency of industry, the agricultural sector and the rest of the commercial sector and at energy saving in mobility and transport.

Under Article 7, the Netherlands has opted for alternative measures. The Netherlands expects to achieve cumulative savings of between 387 and 562 PJ in final terms, of which 87 to 186 PJ will be through new policies. This new policy consists of policy measures agreed in the *Energieakkoord* [Energy Agreement for Sustainable Growth] concluded by the Dutch Government with more than 40 parties, among which industry, employers' associations, NGOs, trade unions, regional governments, etc. For an overview of the measures that have been taken, please see the Dutch report on Article 7: https://ec.europa.eu/energy/en/topics/energy-efficiency-directive/obligation-schemes-and-alternative-measures e.g. fiscal policy (energy tax policy and Energy Investment Allowance) voluntary agreements (MEE and MJA), De Stimuleringsregeling energieprestatie huursector (STEP), etc.

Future activities

Future activities will be depending on the outcome of the revision of the EED by de EC. At the moment of writing there is new legislation proposed for energy performance compensation between tenants and landlords.

Relevant information

Netherlands Ministry of Economic Affairs: www.ez.nl
Netherlands Enterprise Agency: http://english.rvo.nl/
See also the 3rd NEEAP for more information about the EE specific measures taken for built environment, industry, transport/mobility and agriculture. Also generic measures affecting more sectors are summarized here.

The strategy of the Netherlands is based on the Energy Agreement for Sustainable Growth that was concluded in September 2013.

EED implementation in Poland

Introduction

The Energy Efficiency Directive (EED) was implemented by the amended Energy Efficiency Law (EEL) (2016), which replaced the previous Energy Efficiency Law (2011).
The responsibility of the whole implementation is placed on the Minister of Energy (MoE). The MoE is obliged to prepare the National Energy Efficiency Action Plan every three year.
Furthermore, according to article 9 of the EEL, the MoE shall perform different additional tasks related to energy efficiency, such as organizing campaigns to promote the use of energy efficiency improvement measures, including the introduction of innovative technologies; conducting information and educational activities, organizing trainings on available energy efficiency improvement measures; monitoring measures of efficiency energy improvement, which will also result in additional expenses for the state budget.
Some statistical duties were attributed to the National Statistical Office and the regional governmental administration.
As the main mean of energy efficiency, the White Certificate System (WCS) was established and launched (2013). Executive role in the WCS plays the President of the Energy Authority, who organises the public auctions for the WC. Basing on the experience gained in the first phase of administration of the WCS, some minor changes in the procedures have been made in 2016.
The programs focused on energy efficiency are financed from the fund set up the WCS fees.

1. Legal context

It had been decided that the EED would be transposed into the Polish legal system by the legal act "Energy Efficiency Law"" (EEL). The new EEL (2016) extends the duration of the previous EEL (2011) beyond 2016 and introduces necessary changes in order to fully implement the EED.
The act adopted by the Parliament on 20 May 2016 comes into force in October 2016.

2. Status of the implementation

The status of implementation of the EED is presented in Table 1 where relevant comments to the EEL (2016) were made.

Table 1. Implementation of the provisions of the Energy Efficiency Directive (EED) in the Energy Efficiency Law (EEL)

EED Article	Implementation status
Article 4 Building renovation	The newly created Ministry of Infrastructure and Buildings is in charge of the following areas of the government activity: construction, local planning and spatial management and housing. The Ministry has prepared the strategy for investment in the renovation. The strategy is attached as the Annex of the National Energy Efficiency Action Plan for Poland 2014.
Article 5 Public bodies' buildings	The "alternative" approach was chosen (art. 5 (6) of the EED). At least one measure from the list of eligible measures provided in the EEL shall be applied. There is obligation to inform public on the energy savings obtained in the Public Sector. Also obligation imposed on central governments to take other cost-effective energy efficiency measures in eligible buildings owned and occupied by these public bodies (art. 8 of the new EEL).
Article 6 Purchasing by public bodies	Already the task of the President of the Office of Protection of the Competiveness and Consumers. Promotion of "green" public procurement Also obligation imposed on central governments to purchase only products, services and buildings with high energy-efficiency performance, (art. 8 of the new EEL).
Article 7 Energy efficiency obligation scheme	The White Certificate System (WCS) was established. The Minister of Energy is responsible for main quantitative parameters of the WCS. President of the Regulatory Office is responsible for administrative of issuing of the

EED Article	Implementation status
	WC. No other policy measure envisaged (as listed in art. 7 (6) EED). Modification of the WCS has been made to make it more flexible.
Article 8 Energy audits and energy management systems	Rules of preparation of energy efficiency audits are outlined in a very general way. Detailed rules are provided in the EEL (Chapter 5, art. 36-38) and decree following from the EEL.
Article 9 Metering	Already implemented in the Energy Law (EL). Smart Metering activities intensified in Poland in electric sector.
Article 10 Billing information	Already implemented in the Energy Law. Active participation and support from the President of the Energy Authority
Article 11 Costs of access to metering and billing information	Already implemented in the Energy Law (art. 14, para. 4). Active participation and support from the President of the Energy Authority
Article 12 Consumer information and empowering programme	Already implemented. Such programme was adopted and described in NEEAP for Poland 2014. Obligatory audits are also an element of the White Certificates System (for large savings)
Article 13 Penalties	Penalties for not meeting the requirements imposed by the EEL (Chapter 5, art. 39-42).
Article 14 Promotion of efficiency in heating and cooling	Already implemented in the Energy Law. There is a system for supporting high-efficient cogeneration – "red" certificates for all fuels except gas, and "yellow" certificates for gas and small-scale cogeneration units. Preparation of the heat/cool map has been outsourced and completed in 2015. The methodology that was adopted is in line with the general rules provided in art. 14 and Annex VIII of the EED.
Article 15 Energy transformation, transmission and distribution	Already implemented in the Energy Law for electricity (2009/72/EC) and gas (2009/73/WE) requirements. There is a guarantee for transmission and distribution from high-efficiency cogeneration. There is a guaranteed access to the grid of electricity from high-efficiency cogeneration.
Article 16 Availability of qualification, accreditation and certification schemes	No implementation necessary. The qualification, accreditation and certification schemes are not planned, because of action on the deregulation of professions in Poland. No specific requirements for energy efficiency auditors and dedicated trainings.
Article 17 Information and training	No implementation necessary. No specific professional requirements for energy efficiency auditors. Obligation for the public sector to promote good solutions.
Article 18 Energy services	Some incentives in EEL (art. 7) for public sector to take energy efficiency improvement measures and use energy performance contracting to finance these measures. Weak development of ESCO.
Article 19 Other measures to promote energy efficiency	Regulatory barriers to energy efficiency removed. Weak signals to remove barriers in building sector and public sector as described in art. 19 (1) (a) and (b) EED.
Article 20 Energy efficiency national fund, financing and technical support	Special account established within the White Certificates System from which energy efficiency programs may be financed.
Article 24 Review and monitoring of implementation	The Ministry of Energy is in charge of preparation and co-ordination of all required report.

Additional efforts

Recent years the energy efficiency policy has been strongly supported in its implementation phase by the programs being continuously launched by the National Fund of Environmental Protection and Water Management.

Future planning

The extent of the previous EEL was limited to 2016. Therefore the law has been replaced by a new legal act, that extends the duration of energy efficiency law beyond 2016 and 2020. No revolutionary changes are planned, the

new law extends the main provisions of the previous EEL with some changes to make the necessary adoptions to the EED. Some amendments are also planned in the White Certificate System.

Relevant information

Link to the Energy Efficiency Law (in Polish) Energy Efficiency Law (in Polish)

EED implementation in Portugal

Introduction

In Portugal, the Energy Efficiency Directive (EED) implementation is the responsibility of the Ministry of Economy. The Directorate General for Energy and Geology (DGEG) under this Ministry is the entity responsible for EED supervision.

1. Legal context

EED was transposed to national law by Decree-Law n.º 68-A/2015, of 30 April, which also reviewed Decree-Law n.º 23/2010 on cogeneration.

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

EED Article	Implementation status
Article 3	Portugal's targets are defined in the National Energy Efficiency Action Plan for 2013-2016, published by the Cabinet Resolution nº 20/2013, of 10 April. It reflects the new National Energy Strategy, aiming to fulfil Portugal 2020 targets. The estimate of savings induced by the NEEAP is 1501 ktoe, corresponding to a reduction of energy consumption of approximately 8.2% relative to the average consumption in the period between 2001 and 2005, which approximates the indicative target set by the European Union of 9% energy savings by 2016. The establishment of the time horizon of 2020 for the purpose of monitoring and controlling the estimated impact on the primary energy consumption allows to foresee in advance the fulfilment of the new targets set by the EU, the 20% reduction of primary energy consumption by 2020, as well as the goal assumed by the Government to reduce the primary energy consumption by 25% in 2020 and achieve energy savings equivalent to 30% of the energy consumption in public buildings by 2020.
Article 4	Article 8.º of Decree-Law n.º 68-A/2015. On building renovation, the long-term strategy for mobilising investment in the renovation of the national stock of residential and commercial buildings, both public and private was presented to the Commission in August 2014.
Article 5	Article 7.º of Decree-Law n.º 68-A/2015. For the exemplary role of public bodies' buildings, Portugal has opted for the alternative approach and has notified the Commission in December 2013.
Article 6	Articles 9.º,10.º and 11.º of Decree-Law n.º 68-A/2015. For the purchase of products, services and buildings by public bodies, the Government Entity of Shared Services (eSPap) is responsible for ensuring the development and provision of shared services within the Public Administration, as well as design, manage and evaluate the National Public Procurement System.
Article 7	Articles 4.º and 5.º of Decree-Law n.º 68-A/2015. Regarding the setting up of an energy efficiency obligation scheme, Portugal has opted for the alternative approach and has notified the Commission in December 2013.
Article 8	On energy audits and energy management systems, Portugal already had mandatory energy efficiency schemes in place, namely for Industry and Transport sectors, being the minimum criteria to its scope the annual energy consumption. Paragraph 4 of this article created the obligation of conducting energy audits by non SMEs, which was transposed by Articles 12.º and 13.º of Decree-Law n.º 68-A/2015.

Article 9, 10, 11	Articles 16.º,17.º,18.º and 19.º of Decree-Law n.º 68-A/2015 and Order n.º 231/2013 transposes the obligations on metering and billing information.
Article 12	Consumer information and empowering programme: article 19.º of Decree-Law n.º 68-A/2015.
Article 13	Penalties: article 31.º of Decree-Law n.º 68-A/2015.
Article 14	Promotion of efficiency in heating and cooling: article 25.º of Decree-Law n.º 68-A/2015, which amended Decree-Law n.º 23/2010.
Article 15	Energy transformation, transmission and distribution: in the regulatory sector, the adoption of practices to promote energy efficiency and the creation of appropriate standards of service quality is the responsibility of the Energy Services Regulatory Authority (ERSE), in accordance with its statutes approved by Decree-Law n.º 97/2002, as amended by Decrees-Law n.º 200/2002, 212/2012 and 84/2013. ERSE also monitors losses in distribution networks and transmission of electric energy and natural gas and promotes a number of activities whose purpose is to promote the active participation of consumers.
Article 16	Availability of qualification, accreditation and certification schemes: article 14.º of Decree-Law n.º 68-A/2015, Laws n.º 7/2013 and n.º 58/2013.
Article 17	Information and training: article 19.º of Decree-Law n.º 68-A/2015
Article 18	Energy services: article 15.º of Decree-Law n.º 68-A/2015.
Article 19	Measures to remove regulatory and non-regulatory barriers to energy efficiency, without prejudice to the basic principles of the property and tenancy law: Laws n.º 31/2012 and 79/2014 on the legal regime for urban lease doesn't limit in any way, the split of incentives arising from investments in energy efficiency
Article 20	The Energy Efficiency Fund (EEF) is a financial instrument created by Decree Law n.º 50/2010 with the following objectives: to fund programmes and measures identified in the NEEAP, encouraging energy efficiency on the part of citizens and businesses, supporting energy efficiency projects and promoting behavioural change. The EEF, by means of specific calls, supports energy efficiency projects in sectors such as transport, buildings, services, industry and public services. The EEF also supports projects not covered by the NEEAP but which demonstrably contribute to energy efficiency.

2.2. Non-legislative provisions

In addition to legal implementation, what other measures are taken, are there any additional instruments? Are there any national co-operation mechanisms: working together with others in order to enhance EED implementation? Voluntary agreements?

The Innovation Support Fund (FAI) aims to support innovation, technological development and investment in the areas of renewable energy and energy efficiency in achieving the goals set in the national energy strategy.

3. Future activities

Complementary legislation on cogeneration is about to be published and Decree-Law n.º 68-A/2015 will be revised in order to introduce some changes on articles 7 and 14 of the Directive implementation.

4. Relevant information

More information regarding the situation in Portugal can be found at the following websites:

Directorate General of Energy and Geology: www.dgeg.pt
NEEAP: www.pnaee.pt/pnaee
Energy Agency (ADENE): www.adene.pt
Energy Efficiency Fund: www.pnaee.pt/fee
SGCIE (Management System of Intensive Energy Consumption): http://sgcie.publico.adene.pt
System for Energy Certification of Buildings (SCE): www.adene.pt/sce
Energy Services Regulatory Authority: www.erse.pt

EED implementation in Romania

Introduction

In August 2014 entered into force the Law no. 121/2014 on energy efficiency. The Law transposes the European Union regulations set out under Directive 2012/27/UE regarding energy efficiency into national legislation. The main purpose of the Law is to establish a coherent legislative framework for the development and application of the national energy efficiency policy in order to achieve the national target for increasing energy efficiency.

The Romanian National Energy Regulation Authority (ANRE) is an autonomous administrative body under Parliamentary control, entirely self-financed and independent as regards its decision-making process, organisation and functioning, whose scope of activity is to issue, approve and monitor the implementation of the national-wide binding regulatory framework required for the proper functioning of the electricity, heat and natural gas sectors and markets in terms of efficiency, competition, transparency and consumer protection.

The main responsibility of implementing Directive 2012/27/UE on energy efficiency (EED) lies with the National Regulatory Authority for Energy (ANRE) through the Energy Efficiency Department; established by the Law no. 121/2014 on energy efficiency which is responsible with transposing the provisions of the law into secondary legislation and has the following main attributions and responsibilities:

- draft policy proposals and delegated legislation on energy efficiency;
- monitor the implementation of the National Energy Efficiency Action Plan as well as related programs for increasing energy efficiency at national level;
- cooperate with national and international bodies to promote energy efficient usage and reduce the negative impact on the environment;
- elaborate technical regulations in order to increase energy efficiency in all the sectors of activity;
- authorize energy auditors and certificate energy managers;
- regularly update the list of energy services suppliers that are qualified and certified, as well as their qualifications/certifications;
- develop synthesis of implementation stage by operators of the energy efficiency programs ;
- promote to consumers the usage of renewable resources, through additional actions to regulatory activity;
- participate to substantiating the indicative targets for energy saving and the necessary measures;
- monitor voluntary agreements initiated by competent authorities;
- collaborate with National Authority for Regulating and Monitoring Public Procurement in order to support central public administration authorities to meet the obligation of purchasing only high efficiency performance products, services and buildings, as far as the requirements for cost effectiveness, economic feasibility, high viability, technical compliance and a sufficient level of competition are met.

1. Legal context

In order to ensure a clear and consistent transposition of Directive 2012/27 / EU into national legislation in accordance with the reasoned opinion issued by the European Commission regarding the case 2014/0367, the draft for amending and supplementing Law no. 121/2014 on energy efficiency is currently under Parliamentary analysis (since March 2016).

Main proposed amendments:

- ANRE's Department for energy efficiency encourages training programs for the qualification of energy auditors, aiming to ensure a sufficient number of available experts;
- Operators exceeding 1000 toe energy consumption have to carry out an energy audit every four years on a profile established by the operator, which represents at least 50% of the total energy consumption of the economic operator; the audit is carried out by an individual or legal entity authorized by law and underpinning the establishment and implementation of measures to improve energy efficiency;

- Economic operators with an energy consumption under 1000 toe, with the exception of SMEs, are obliged to carry out an energy audit every 4 years on an representative energy consumption profile chosen by the operator;
- The Ministry of Energy, SMEs and Business Environment shall develop programs to encourage SME's to undergo energy audits and the subsequent implementation of the recommendations of these audits;
- The Ministry of Energy, SMEs and Business Environment may set up support schemes for SME's, including if they have concluded voluntary agreements, to cover the costs of an energy audit and implementation of highly cost-effective recommendations form the energy audits, without bringing prejudice to the state aid legislation;

Following the provisions of the Law no. 121/2014 on energy efficiency for the transposition of the Directive 2012/27/UE regarding energy efficiency, the Romanian authorities approved by Governmental Decision no 122/2015 the National Energy Efficiency Action Plan (2014-2020).

The support scheme for promoting high-efficiency cogeneration has been approved in Romania by Governmental Decision no 219/2007 for the promotion of cogeneration based on useful heat demand. The bonus scheme represents state aid operational type (N 437/2009 - Romania), authorized by the European Commission being implemented by Government Decision No 1215/2009, *establishing the criteria and the conditions required for the implementation of the support scheme for the promotion of high-efficiency cogeneration based on a useful heat demand.* In 2015, the Governmental Decision no 219/2007 for the promotion of cogeneration based on useful heat demand was modified by the Governmental Decision no 846/2015.

Secondary legislation on energy efficiency issued by the Romanian Energy Regulatory Authority

- ANRE Decision no.2794/2014 - Regulation for certification of energy managers and energy service provider companies and Regulation for authorising industrial energy auditors
- Decision ANRE no.2123/2014 Guide for energy audit - it includes minimum criteria for energy audits according to Energy Efficiency Directive 27/2012/CE;
- Model for developing the Program for increasing energy efficiency for industrial units ANRE Decision no. 8/DEE/12.02.2015
- Model for developing the Program for increasing energy efficiency of establishments with a population exceeding 5000 inhabitants - ANRE Decision no. 7/DEE/12.02.2015 for approving the Model for developing the Program for increasing energy efficiency of establishments with a population exceeding 5000 inhabitants.
- Decision no. 13/DEE/2015 regarding the approval of the syllabus of specialized courses in the field of energy management and energy audits development.
- Decision no 1765/2013 regarding the approval of the layouts for the total energy consumption statement and the analysis questionnaire of the energy consumer.
- ANRE Order No. 95/2015 amending the approval of contribution for high-efficiency cogeneration and certain provisions on its invoicing;
- ANRE Order No. 61/2015 on approving the calculation method for establishing the quantity of electricity produced by high efficiency cogeneration in for certification by guarantee of origin;
- ANRE Order No. 10/2015 on the approval of the Methodology for monitoring and reporting data regarding the support scheme on the promotion of high efficiency cogeneration based on the useful heat demand;

Guidelines for the building sector – Ministry for Regional Development and Public Administration

- Good practice guide for the design of ventilation / air-conditioning in buildings (Indicative GEx 011-2015)
- Good practice guide for designing lighting systems / protection in buildings (Indicative GEx 012-2015)
- Guidance on the use of renewable energy in new and existing buildings (Indicative GEx 013-2015)

2.2.Non-legislative provisions

ANRE, through the Energy Efficiency Department, in collaboration with other competent authorities, promotes the development of energy services market and regulates the access to it, especially for SMEs by: disseminating clear and easily accessible information on: (i) the available energy services contracts and provisions that must be included in such contracts, according to Annex no.10, to guarantee energy savings and end users' rights.

In addition to legal implementation, ANRE conducted awareness-raising campaigns:

- series of **training courses** for energy managers in 4 different cities – Bucharest, Craiova, Iasi and Brasov.

The courses introduced a new platform for energy managers to upload the yearly energy consumption on ANRE's portal. Approximately 300 energy managers from companies with a total energy consumption exceeding 1000 toe participated at.

- **workshop** addressed to the representatives of public local authorities which have the obligation to elaborate energy efficiency improvement programmes, including short term and 3 to 6 years measures.

Accordingly to the provisions of the Energy Efficiency Law no. 121/2014:

- Art. 9(12) For municipalities more than 5000 inhabitants it is obligatory to have:
  - Energy efficiency programs

- Art. 9(13) For municipalities more than 20000 inhabitants it is obligatory to have:
  - Energy efficiency programs
  - Energy manager

The workshop addressed a number of issues such as gathering information needed for elaborating the energy efficiency improvement programme and the databases analysis of municipalities' energy consumption, the identification of energy savings potential and energy efficiency measures, as well as the identification of sources and mechanisms for financing these measures.

Energy Efficiency Information Point – established by the Energy Efficiency Department within ANRE in order to help all energy consumers to achieve a better understanding of energy efficiency matters, from legislation to concrete measures that can help increase energy efficiency.

In order to raise the awareness of decision-making institutions regarding the active policies and measures for increasing energy efficiency, reducing energy poverty and protecting the vulnerable consumers, at the request of the Energy Efficiency Department within ANRE, a **Study on "Energy Efficiency – national priority for reducing energy poverty, increasing life quality and safety of energy consumers"** was elaborated by the Romanian Institute for Life Quality and Institute of Sociology, at the request of the Energy Efficiency Department within ANRE (June-September 2015).

The study highlighted the fact that in Romania it should be taken into account the difficulties of the national context represented by the share of people facing poverty or social exclusion risk (40%). In the case of energy household consumption, the dissemination of the benefits resulting from energy efficient behaviour changes to the vulnerable consumers is a prerequisite to ensure a decent living standard required by the European context.

In December 2015 the Ministry of Energy has submitted to the European Commission the "Report on the assessment of the national potential to implement high-efficiency cogeneration and efficient district heating and cooling, in accordance with Art. 14 para. 1 of Law no. 121/2014 on energy efficiency, which is published on the European Commission website at the following link:
http://ec.europa.eu/energy/en/topics/energy-efficiency/cogeneration-heat-and-power

3. Future activities

- Future activities will be in accordance with the European Energy Strategies (Energy Union, Energy Strategy 2020 and 2030) and the outcome of the revision of the Energy Efficiency Directive.
- Continuing the participation within Horizon2020 projects, including on CAEED next project.

4. Relevant information

Energy efficiency legislation link on ANRE's website
http://www.anre.ro/en/energy-efficiency/legislation/energy-efficiency-legislation1438862283

Ministry of Energy website
http://energie.gov.ro/

Ministry of Regional Development and Public Administration website
http://www.mdrap.ro/

EED implementation in Slovakia

Introduction

Energy Efficiency Act No. 321/2014 Coll. in force from 1.12.2014 prepared by Ministry of Economy, in cooperation with Ministry of Transport, Construction and Regional Development of the Slovak Republic as well as with Slovak Innovation and Energy Agency. Various secondary legislation was adopted during 2015 and 2016. Annual Energy Efficiency reports were sent to the Commission in 2015 and 2016. National Energy Efficiency Action Plan for 2017 is already under preparation.

1. Legal context

Energy Efficiency Act No. 321/2014 Coll., in force as of 1 December 2014, has been prepared by Ministry of Economy of the Slovak Republic, in cooperation with Ministry of Transport, Construction and Regional Development of the Slovak Republic as well as with Slovak Innovation and Energy Agency. It includes amendment of Heating Energy Act No. 657/2004 Coll., Energy Act No. 251/2012 Coll., High Efficient CHP and Renewables Act No. 309/2009 Coll., Act on Regulation in Network Industries 250/2012 Coll. and other acts related to the Energy Efficiency Directive transposition. Various secondary legislations have been adopted during 2015.

2. Status of the implementation

2.1. Legislative provisions

Energy Efficiency Act No. 321/2014 Coll., in force from 1.12.2014, was prepared by the Ministry of Economy of the Slovak Republic, including amendment of Heating Energy Act No. 657/2004 Coll., Energy Act No. 251/2012 Coll. High Efficient CHP and Renewables Act No. 309/2009 Coll. Act on Regulation in network industries 250/2012 Coll. and other acts related to the directive transposition. Various secondary legislation has been adopted during 2015. All articles of the directive have been transposed in above mentioned acts.

Annual Energy Efficiency Reports in 2014, 2015 and 2016, National Action Plan on Energy Efficiency for the years 2014-2016 with an outlook up to 2020 (3NEEAP) and Strategy for Renovation of the Residential and Non-residential Buildings in the Slovak Republic have been prepared during period of 2014-2016 to fulfil the very challenging requirements of the Energy Efficiency Directive. Complex analysis of potential for CHP and DHC has been also provided to the Commission in February 2016, which includes Cost-benefit analysis of CHP and DHC, as well as an Annual Statistical Reporting for High Efficient CHP. List of energy services as well as the Heating Map are published at the webpage of the Ministry of Economy of the Slovak Republic (www.mhsr.sk) and regularly updated.

2.2. Non-legislative provisions

One of the important instrument that help fulfil the requirements of the EED (esp. in terms of monitoring, evaluation and planning of energy savings) is the Permanent Interinstitutional Commission for the Preparation of Energy Efficiency Action Plans, established in 2007. It includes representatives of various ministries and other central governmental bodies, as well as organisations responsible for energy savings programmes and measures in Slovakia. Monitoring System of Energy Efficiency, run by Slovak Innovation and Energy Agency, is used for collecting various data necessary for evaluation of energy efficiency and energy savings according to legal obligations. Another important tool for implementing energy savings measures based on various EED obligations are the EU structural and investment funds for the period of 2014-2020. EED has supported a creation of various contacts with industries for enabling the voluntary agreements on energy efficiency.

3. Future activities

National Energy Efficiency Action Plan for 2017 (4NEEAP) is already under preparation to guarantee the deadline of April 2017, as it includes also various reports from EED for specific articles (Art. 5, 8, 16). The year 2016 is set as the year for checking the trajectory of energy savings for 2020 target based on Article 7 obligations. The trajectory checking and possible updates including possible new measures will be included.

4. Relevant information

Ministry of Economy of the Slovak Republic: www.mhsr.sk
Slovak Innovation and Energy Agency: www.siea.sk

EED implementation in Slovenia

Introduction

The implementation of the Directive on Energy Efficiency (EED) (2012/27/EU) is the responsibility of the Ministry of Infrastructure. Also the Ministry for Environment and Spatial Planning and Energy Agency are involved in the implementation of the EED. Eco fund, public fund implements several instruments and programmes related to energy efficiency in assignment of the Ministries. Institute Jozef Stefan, Centre for Energy Efficiency is involved for calculations regarding energy efficiency (EE).

1. Legal context

To implement the EED, changes have been made to several national laws. These have been among others effectuated by the new Energy law (Official Gazette, No. 17/14 in 81/15) coming into force March 2014. For the full transposition of EED Decree on physical assets of the state, regions and municipalities must be changed for transposition of Article 6 regarding buying and renting houses by public sector.

2. Status of the implementation

Energy efficiency obligation scheme (EEO)

Slovenia has chosen to effect the provisions of Article 7(9) of the Energy Efficiency Directive (Directive 2012/27/EU), through opting to combine alternative policy measures and an energy efficiency obligation scheme (EEOS) to meet the national target. The two measures thus (EEO and Eco-Fund) will be responsible for achieving the 1.5% target annually.
The obligation is divided in half of the 1.5% energy savings to the Eco-Fund and the other half on EEOs.
Obligated parties under the EEOS are energy suppliers of electricity, heat, gas and liquid and solid fuels to final customers. There are no exceptions for small scale suppliers foreseen. These market parties must achieve the targeted energy savings among final consumers, 0.75% annually of final energy they have sold in the past year. The final customers are public and service sectors, industry and some measures in households. The measures must function up until and including 2020. From 2015 suppliers of motor fuels are also obligated, on the level of savings 0,25% sold fuel in the previous year.
Eco Fund (Eko sklad), Slovenian Environmental Public Fund, is a public fund (owned by the state). Eco-Fund aims at improving energy efficiency through financing investments in energy efficiency, mostly in households. The funds for subsidies are collected from the contributions-fee for improving energy efficiency; from charges from district heating, electricity and solid, liquid and gaseous fuels, paid by final consumers on top of the price of energy or fuel to the operator or supplier of energy or fuels, which pays the funds collected to Eco-Fund.
Non-repayable subsidies (grants) (higher for investments in at least three eligible measures and total retrofits vis–à–vis singular investments; up to 50 % of the eligible cost for investments on areas with high PM_{10} pollution; up to 100 % of the eligible costs for socially deprived households) are offered to:

- households for energy efficiency in residential buildings:
    - solar heating systems
    - biomass boilers
    - heat pumps
    - connection to district heating on renewable energy sources
    - energy efficient wooden windows
    - facade insulations
    - roof insulations
    - heat recovery ventilations
    - new nearly-zero-energy buildings (nZEBs)
    - full retrofits
    - purchases of apartments in nZEBs multi-residential buildings (full retrofits)
- individuals (households) for energy efficiency and use of renewable energy sources investment projects in in multi residential building:
    - facade insulations,
    - roof insulations.
- households, legal entities and municipalities for electric cars
- municipalities for nearly-zero energy public buildings.

In 2016 for grants there is around 50 mio EUR available.

Eco Fund's is supporting also Energy Advisory Network which offers free advises regarding EE investments for households.

The energy savings in the framework of EEO and Eco Fund are calculated by the method of evaluating energy savings determined by Ministry of Infrastructure published in Regulation on methods for determining the energy savings to end consumers (UL RS, No 67/15).

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links.

Energy Law (EZ-1), http://www.energetika-portal.si/predpisi/energetika/slovenija/krovni-zakon-ez/

EED Article	Implementation status
Article 4	Article 348, Energy Act The Slovenian "Long-Term Strategy for Mobilising Investments in the Energy Renovation of Buildings" was adopted in October 2015.
Article 5	Article 29, 324,346, 347, 348 Energy Act Decree on energy management in public sector is to be adopted in June 2016. The Decree is bringing obligation for all public bodies to perform energy bookkeeping and achieve EE and RES goals in the building owned and used by them. Regarding transposition of EED decree is defining minimum energy performance requirements for buildings which central government will purchase or rent.
Article 7	Article 314, 316, 317, 318 Energy Act Decree on energy savings requirements Rules on the methods for determining energy savings
Article 8	Article 350, 351, 352, 353, 354 Energy Act Rules on the Methodology for Compiling Energy Audits and the Content of those Audits is to be adopted in June 2016
Article 9	General Condition for connection to the distribution Electric system Decree on the method of provision of an electricity DSO service of general economic interest and a service of general economic interest of electricity supply to tariff , Decree on measures and procedures for the introduction and interoperability of advanced electric power metering systems, Rules on dividing and billing heating costs in multiple-dwelling and other buildings with several units Rules on the system operation of electricity distribution network
Article 10	Article 355, Energy Act Article 358, Energy Act
Article 11	Article 358, Energy Act
Article 12	Article 312, 315,351, 352 Energy Act
Article 13	Article 319, Energy Act
Article 14	Article 532, 534, 359,360, 363, 364 Energy Act Rules on issuing energy permits Regulation on determination of the amount of electricity from cogeneration of heat and electricity which is generated with high efficiency and determination of efficiency of transformation of energy from wood biomass Decree on issuing declarations for generation units and guarantees of electricity origin Decree on support for electricity generated from high-efficiency cogeneration of heat and electricity
Article 15	Article 30, 43, 164, 371, 385, Energy Act Act on the methodology determining the regulatory framework and the methodology for charging the network charge for the electricity system

EED Article	Implementation status
	operators. http://www.uradni-list.si/1/objava.jsp?sop=2015-01-2713 - Demand response measures like Time of Use Tariffs and Critical Peak Tariffs (Article 98); - System efficiency improvement in infrastructure design and operation by the Quality of Service regulation (Articles 42-64); - System efficiency improvement in infrastructure design and operation by incentives for Smart Grids and Smart Metering projects (Articles 67-70); - Non-discriminatory participation of demand response in ancillary service procurement (Article 31, paragraph 4); - Incentives for pilot projects in the field of demand response in relation to the efficient use of networks and generation capabilities (Article 71); - Large scale storage is supported by the Act (Article 107, paragraph 1) which states that electricity consumed from the transmission system for the purpose of storage and later delivered into the transmission system is free of network charges.
Article 16	Article 357, Energy Act
Article 17	Article 348, 349, 351, Energy Act
Article 18	Article 319, 351, Energy Act
Article 19	Article 27, 348 Energy Act
Article 20	Article 314, 316, 317 Energy Act
Article 21	Decree on the method of determining and calculating the contribution for ensuring support for the production of electricity from high-efficiency cogeneration and renewable energy sources.

2.2. Non-legislative provisions

Regarding Article 5 Slovenia has opted for a default approach. The list of central government buildings is updated yearly.

For the implementation of Article 5(7), the Ministry of Infrastructure is preparing Decree on energy management in public sector which is to be adopted in June 2016.
The Decree is bringing obligation for all public bodies to perform energy bookkeeping and achieve EE and RES goals in the building owned and used by them. For implementation of that provision electronic register will be established. Organisations will report on energy consumption in the register. In the framework of register report on achieving goals regarding EE will be generated.

To set public bodies' buildings as exemplary role the Ministry of Infrastructure has established a special Project Office for Building Energy Renovation in October 2015. The Project Office is a coordinating body concentrating knowledge and experience for the implementation of investments in the energy renovation of state-owned buildings, with special emphasis on the energy performance contracting model. It provides an expert team to assist in designing invitations to tender, conducting public-private partnership procedures, evaluating tenders, overseeing the implementation of measures, overseeing the implementation of the contract on the provision of energy savings and transferring knowledge and good practice to the entire public and other sectors.

The main tasks of the Office are to manage and ensure the systematic preparation of a set of projects to meet the targets of renovation of state-owned buildings; to support the implementation of energy performance contracting projects: an active role in establishing an energy performance contracting model (including the preparation of procedures and documents for the standardised implementation of projects) and in removing administrative barriers, the speeding-up of the preparation of projects, analyses of the quality of projects already carried out; to provide information and participate in the training of all important entities in these fields; to transfer knowledge and experiences relating to investments in the renovation of buildings between different segments of public administration (with entities such as local energy agencies, etc.), and transfer international knowledge and experiences to other sectors (e.g. SMEs, housing sector); to support the transfer of knowledge and experiences in the field of the energy renovation of cultural heritage buildings; to manage demonstration project records (the role of the project office will be to ensure the demonstration effects by making the appropriate selection of projects and

solutions and by monitoring them, disseminating the results, etc.); to retain and maintain records of central government buildings for energy renovation requirements.

By now the Project Office in the framework of Cohesion Fund has prepared and published instructions for the work of intermediary bodies and beneficiaries, manual of eligible costs and instructions and technical guidelines for all participants in the energy renovation of buildings.

In 2014 the Republic of Slovenia has adopted a new Energy Law (EZ-1), that came into effect in March 2014. In Article 351 it addresses aspects of Articles 17 and 18 of the Energy Efficiency Directive (EED, 2012/27/EU), particularly providing information and training as well as development of energy services. A dedicated web platform - www.trajnostnaenergija.si – was set up by the electricity market operator Borzen already in 2014. It is the main vehicle through which various sub-programmes are publicized and available to the public.
Regarding EED Article 18 on energy services/contracting, a special section (http://trajnostnaenergija.si/Trajnostna-energija/Energetsko-pogodbeništvo/Modeli-energetskega-pogodbeništva/Pogodbeno-zagotavljanje-energije), containing contract samples, relevant legislation, project templates – and a clear focus on best practices (projects already carried out that can serve as an example) and also list of potential new projects. This was done in close collaboration between the Ministry of Infrastructure, Borzen (who carries out the programmes pertaining to Article 351), local energy agencies, ESCOs and others. Since energy supplier as required (by a Decree) to achieve a certain amount of yearly energy savings, they are motivated to offer also ESCO services, so this model / market has been picking up in recent years.
Below is a list of some other activities that were either completed in 2015 or 2016 – or will be completed by end 2016:

- Partial refurbishment and update of GIS portal for RES and energy efficiency – containing locations of plants, info on possible further RES development (potentials), info on Energy Efficiency projects (www.engis.si)
- Conference on local energy concepts – how to integrate them into the regional and national plans
- Info book on renewables in Slovenia – will be available in PDF format on www.trajnostnaenergija.si
- Series of 15 TV shows addressing various RES and efficiency topics (developed in cooperation with and transmitted by RTV Slovenia, the national broadcaster) – also available on www.trajnostnaenergija.si
- Extensive research (survey) on RES / efficiency habits and plans of households in Slovenia – serves to establish "state-of-play" as well as basis for further measures – also available on www.trajnostnaenergija.si
- Competition for students – short term forecasting of RES production in electricity – also available on www.trajnostnaenergija.si
- Extended topic on Trajnostna energija portal (waste, water, smart grids, carbon footprint, PV recycling etc.)
- Info portal on wood biomass (by end 2016)
- Conference on near-zero-energy buildings (by end 2016)
- Competition for students – how to sensibly develop wind and biomass energy in Slovenia (by end 2016)
- Cartoons on RES and efficiency topics, aiming at the youngest segment of the population (by end 2016).

There are three on-going pilot/ demonstration comprehensive energy renovation projects, each covering different category of public sector building stock: one building fulfilling nearly-zero renovation criteria, one building with more building operators (three different public service providers/ bodies occupying the same building), and three buildings of the same type from the same owner at three different locations. All will be performed in the scope of energy performance contracting.

Additionally, the Ministry of Infrastructure plans to publish a call on a yearly basis to all interested investors who plan comprehensive energy renovation of their public buildings helping them with grants from Cohesion Fund.

3. Future activities

Regulation on methods for determining the energy savings to end consumers (UL RS, No 67/15) will be updated with national and international standards applied to equipment and installers and supplemented with some new measures.
Rules on the Method of Distributing and Calculating the Costs of Heat in Residential and Other Buildings with Several Individual Parts (UL RS, No 82/15) pursuant to Article 357 of the EZ-1 will be changed and corrected to eliminate some anomalies which came out.
Training for energy bookkeeping for public sector will be performed.
Survey and control of quality of Energy Audits will be performed and certification system implemented.

The future activities of the Project Office face the challenges regarding compiling the list of and defining the criteria for ESCO companies.

4. Relevant information

Any other relevant information should go here. Please provide include URLs of useful websites, but make sure to provide a brief description, for instance:
Ministry of Infrastructure, Portal energetika:
http://www.mzi.gov.si/
http://www.energetika-portal.si/
and link to NEAAPs: http://www.energetika-portal.si/dokumenti/strateski-razvojni-dokumenti/akcijski-nacrt-za-energetsko-ucinkovitost/.

EED implementation in Spain

Introduction

Spain is fully committed to the objectives of energy efficiency arising from Directive 2012/27/UE, leading to achieve 20% savings target in terms of primary energy by 2020 for the whole of the European Union. As required in Article 3 of this Directive, Spain set and communicated to the European Commission the indicative national targets for 2020, in terms of primary and final energy.

The above set objectives continue those policies and measures on energy efficiency developed during the last decade in Spain, which allowed anticipate the target set by Directive 2006/32/EC by 2016 to 2010. The results of these policies and measures are extensively detailed in the Action Plan for Energy Efficiency 2014-2020, submitted to the European Commission.

The Action Plan for Energy Efficiency 2014-2020 comprises a wide range of saving and energy efficiency measures that are being implemented, with varying degrees of progress, despite the restrictions imposed by the current economic scenario. Thus, as from remission of Report on the National Energy Efficiency Target 2020 to the European Commission required by 2012/27/UE Directive Article 3, Spain has continued working in the promotion of energy efficiency, with special emphasis on transport and building sectors.

1. Legal context

To implement the EED, changes have been made to different regulations and legal provisions and a new decree and a national law have been approved to transpose the Directive. These legal provisions are mentioned article by article in the next paragraph, being the most important ones the Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply, and Law 18/2014 for all these questions related to the energy efficiency obligations scheme (art. 7, EED) and Energy Efficiency National Fund (art. 20, EED).

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented article by article, including any relevant web links.

EED Article	Implementation status
Article 2 (Definitions)	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply (paragraph I). Law 6/1997 of 14 April, on the organization and operation of the General State Administration (art. 41-44, Title II). Law 18/2014, of 15 October, approving urgent measures for growth, competitiveness and efficiency (art. 69, 71). National Energy Efficiency Plan (paragraph 4.1.6). Law 24/2013 on the Electricity Sector (arts. 6, 7, 30, 38, 40). Law 34/1998 on the Hydrocarbons Sector (art. 58).

	Royal Decree 1110/2007, 24th August, approving the Regulation of metering points of the electrical system (art. 3). Royal Decree 616/2007, 11th May, on the promotion of cogeneration (art. 2).
Article 4	In fulfilment of Article 4 the Ministry of Development has presented, within the framework of this 2014–2020 National Energy Efficiency Action Plan, a 'Spanish Strategy for Energy Renovation in the Building Sector'. This is a long-term strategy (including forecasts for 2020, 2030 and 2050) which will be updated every three years, the aim of which is to stimulate investments in the renovation of residential and commercial buildings with a view to improving the energy performance of the national stock of buildings. With this in mind, it gives an in-depth analysis of how to take on exhaustive and cost-effective renovations which could potentially reduce consumption in terms of both the energy supplied to buildings and their final energy level. According to the Directive, this strategy shall encompass: (a) an overview of the national building stock based, as appropriate, on statistical sampling; (b) identification of cost-effective approaches to renovations relevant to the building type and climatic zone; (c) policies and measures to stimulate cost-effective deep renovations of buildings, including staged deep renovations; (d) a forward-looking perspective to guide investment decisions of individuals, the construction industry and financial institutions; (e) an evidence-based estimate of expected energy savings and wider benefits.
Article 5	The inventory of heated and/or cooled central government buildings has been elaborated and published as it is stated in article 5 (firstly including those with a total useful floor area over 500 m^2 and secondly including also those over 250 m^2) and is available at the following link on the Ministry of Industry, Energy and Tourism website: http://www.minetur.gob.es/energia/desarrollo/EficienciaEnergetica/directiva2012/Paginas/actuaciones-transposicion.aspx
Article 6	Law 15/2014, September 16th, for public sector rationalization and other measures of administrative reform. This law establishes the principles and energy efficiency requirements for the procurement of goods, services and buildings by public administrations within the State Public Sector: https://www.boe.es/boe/dias/2014/09/17/pdfs/BOE-A-2014-9467.pdf
Articles 7 and 13	Regarding article 7, Royal Decree Law 8/2014, July 4th, for the approval of urgent measures for growth, competitiveness and efficiency (https://www.boe.es/diario_boe/txt.php?id=BOE-A-2014-7064), approved afterwards by Law 18/2014, October 15th (https://www.boe.es/diario_boe/txt.php?id=BOE-A-2014-10517), established the system of energy saving obligations (art. 69.1) and set up, in accordance with Article 20 of Directive 2012/27/EU, the National Energy Efficiency Fund (art. 72.1), under the Ministry of Industry, Energy and Tourism (art. 73.1). According to the Law 18/2014, the obligated parties (gas and electricity trading companies, petroleum product wholesale and operators of liquefied petroleum gas wholesale) should do an annual financial contribution to the Fund for fulfilling with energy savings obligations (art. 71.1). Alternatively, in the terms legally regulated by the Government, a mechanism based on the presentation of Energy Saving Certificates (art. 71.2) may be established. However, it should be noted that, to date, the regulatory provisions that will establish this mechanism have not yet been approved.
Article 8,16	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply. http://www.boe.es/boe/dias/2016/02/13/pdfs/BOE-A-2016-1460.pdf The Royal Decree consists of fourteen articles, grouped into five chapters, four additional

	provisions, two transitional provisions, seven finals provisions and five annexes. **Chapter I**, under the heading "General Provisions," sets the object and purpose of this Royal Decree, and the necessary definitions for the proper interpretation of the text. **Chapter II**, "Energy Audits", contains the regulation of them. This Royal Decree establishes the obligation for companies not SMEs, which must do an energy audit before December 5th, 2015 and thereafter at least every four years from the date of previous energy audit. Requirements to be met by the audit are also established. An Administrative Registry of Energy Audits is created in the Ministry of Industry, Energy and Tourism and an inspection system is established. **Chapter III**, "Accreditation system for providers of energy services and energy auditors" regulates the conditions and requirements to be applied in the accreditation of these suppliers and auditors. **Chapter IV**, "Promotion of energy efficiency in the production and use of heat and cold" regulates the assessment of high-efficiency cogeneration potential and district heating and cooling to be performed in order to provide information to investors regarding the national development plans and contribute to a stable and supportive environment for investment. **Chapter V**, "Penalties", relates to the penalties for the provisions defaults of this Royal Decree. The provisions included in the Royal Decree impact on the assessment of energy efficiency potential in the gas infrastructure, establish deadlines and dates for the mandatory implementation of the articles contained in the Royal Decree and modify existing legislation to incorporate aspects of energy auditing, the system of accreditation of providers of energy services and energy auditors and accounting for consumption of hot water and heating, provided by Directive 2012/27/UE.
Article 9	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply. Law 24/2013, December 26th, on the Electricity Sector. Title VIII. Power supply. Royal Decree 1955/2000, December 1st, by which the transmission, distribution, marketing, supply and authorization procedures for electric power facilities are regulated. Title VI Supply. (Art. 93). Royal Decree 1110/2007, August 24th, approving the unified regulation on metering points of the electrical system (art. 6, 9). Royal Decree 1718/2012, December 28th, which determines the procedure for reading and billing energy supplies low voltage with contracted power not exceeding 15 kW. Royal Decree 216/2014, March 28th, establishing the methodology for calculating volunteers prices for small electricity consumers and its legal procurement regime is established. Royal Decree 738/2015, July 31th, by which the activity of electricity production and clearance procedure in the electrical systems of non-peninsular territories is regulated. Royal Decree 1085/2015, December 4th, to promote biofuels (ninth additional provision, final provision third, additional provision eighth). Order ITC / 3992/2006, December 29th, establishing the tariffs for natural gas and manufactured gases by pipeline, meter rental and connection fees for consumers connected to pressurized networks with a supply equal to or below set 4 bar (art. 18).
Article 10	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply. Royal Decree 1435/2002, December 27th, in which the basic conditions of power purchase contracts and access to low voltage networks are regulated. (Art. 7). Resolution of 2 June 2015 (State Energy Secretariat), amending certain operating procedures approved for the treatment of data from equipment type 5 measurement for billing and settlement of energy.

	Royal Decree 1074/2015, November 27th, by which different provisions are amended in the electricity sector (art. 2).
Article 11	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply. Law 24/2013, December 26th, on the Electricity Sector. Title VIII. Power supply. Royal Decree 1955/2000, December 1st, by which the transmission, distribution, marketing, supply and authorization procedures for electric power facilities are regulated. Title VI Supply. Royal Decree 1718/2012, December 28th, which determines the procedure for reading and billing energy supplies low voltage with contracted power not exceeding 15 kW. Royal Decree 216/2014, March 28th, establishing the methodology for calculating volunteers prices for small electricity consumers and its legal procurement regime is established.
Article 14 and Annex X	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply. http://www.boe.es/boe/dias/2016/02/13/pdfs/BOE-A-2016-1460.pdf **Chapter IV**, "Promotion of energy efficiency in the production and use of heat and cold" regulates the assessment of high-efficiency cogeneration potential and district heating and cooling to be performed in order to provide information to investors regarding the national development plans and contribute to a stable and supportive environment for investment. The second additional provision determines the obligation to make a comprehensive assessment of the use of high efficiency cogeneration and an efficient district heating and cooling. The second final provision modifies the Royal Decree 616/2007, May 11th, on the promotion of cogeneration. Order ITC / 1522/2007, May 24th, by which the regulation of a origin guarantee of electricity from renewable energy sources and high efficiency cogeneration is established (Art. 3, 4, 6). Royal Decree 413/2014, June 6th, by which production activity of electric power from renewable energy sources, cogeneration and waste is regulated (art. 27).
Article 15 and Annex XI and XII	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply. Law 24/2013, December 26th, on the Electricity Sector. (Art. 9, 14.8, 16, 26,33, 46, 49). Royal Decree 413/2014, June 6th, by which production activity of electric power from renewable energy sources, cogeneration and waste is regulated (Arts. 6, 10). Order IET 2013/2013, October 31st, by which the competitive allocation mechanism management service demand interruptibility is regulated. Order IET 346/2014, March 7th, amending the Order IET / 2013/2013, of 31 October, by which the competitive allocation mechanism management service demand interruptibility is regulated. Royal Decree 1085/2015, December 4th, to promote biofuels (sixth additional provision). Royal Decree 661/2007, May 25th, by which the activity of electricity production under the special regime (art. 17, 33) is regulated. Royal Decree 216/2014, March 28th, establishing the methodology for calculating volunteers prices for small electricity consumers and its legal procurement regime is established. Royal Decree 900/2015, October 9th, by which the administrative, technical and economic conditions, of electric energy supply modalities with self-consumption are regulated.

Article 16	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply.
Article 17	Spanish NEEAP (paragraph 4.1.4). See some videos of the most recent campaign on energy efficiency, under the EED: http://www.lamoncloa.gob.es/serviciosdeprensa/cpci/Paginas/industria/idae-2015.aspx See also the 2016 national report on: https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive/national-energy-efficiency-action-plans
Article 18	Royal Decree 56/2016, February 12th, which transposes the EED regarding energy audits, accreditation of service providers and energy auditors and promoting efficiency of energy supply. Spanish NEEAP (paragraph 4.1.6). Law 24/2013, December 26th, on the Electricity Sector. (Art. 40, 46, 49, 50, 65).
Article 19	Spanish NEEAP (paragraph 4.1.7).
Article 20	The National Energy Efficiency Fund is under the Ministry of Industry, Energy and Tourism through the State Secretariat for Energy. The Fund, which was established by Law 18/2014 (https://www.boe.es/diario_boe/txt.php?id=BOE-A-2014-10517) aims at financing mechanisms for economic, financial, technical assistance, training, information or other measures to increase energy efficiency in the different energy-consuming sectors so that contribute to the national energy savings target established by the National System of Energy Efficiency Obligations under Article 7 of Directive 2012/27/EU.
Annex VII	Royal Decree 1718/2012, December 28th, which determines the procedure for reading and billing energy supplies low voltage with contracted power not exceeding 15 kW. Royal Decree 216/2014, March 28th, establishing the methodology for calculating volunteers prices for small electricity consumers and its legal procurement regime is established. Royal Decree 1164/2001, October 26th, in which access tariffs to transmission and distribution of electricity are established (Art. 5). Law 24/2013 on the Electricity Sector (arts. 44, 46). Resolution of 23 May 2014, from the General Directorate of Energy Policy and Mines, in which the minimum content and the electricity bill model is established. Royal Decree 1955/2000, December 1st, by which the transmission, distribution, marketing, supply and authorization procedures for electric power facilities are regulated. Title VI Supply. (Art. 110a). Royal Decree 1434/2002, December 27th, by which the activities of transportation, distribution, marketing, supply and authorization procedures for natural gas installations are regulated (Art. 51, 52, 53).

2.2. Non-legislative provisions

In addition to legal implementation, what other measures are taken, are there any additional instruments? Are there any national co-operation mechanisms: working together with others in order to enhance EED implementation? Voluntary agreements?

The National Energy Efficiency Fund includes the following action lines:

- Aid program for municipal street lighting. Loans at an interest rate of 0.0% for renovation projects of municipal street lighting installations (with a minimum of 300,000 euros and a maximum of 4 million) to reduce energy consumption by at least 30%, reaching A or B energy qualification, regulate lighting levels and adapt the facilities to the energy efficiency criteria of the Regulation on Energy Efficiency in Exterior lighting installations. See:

  http://www.idae.es/index.php/relcategoria.4037/id.855/relmenu.449/mod.pags/mem.detalle

- Aid program for SMEs and large enterprises in industry sector. This line promotes measures to reduce the final energy consumption and CO_2 emissions through the implementation of projects on energy efficiency saving in industry (improving both equipment and process technology and energy management systems), covering up to 30% of eligible cost. See:

  http://www.idae.es/index.php/relcategoria.4037/id.856/relmenu.449/mod.pags/mem.detalle

- Incentive program for modal shift and transport modes. It aims to encourage the implementation of sustainable transport plans, improving the management of road transport fleets and performing efficient driving courses for professionals (minimum 200 students).
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  http://www.idae.es/index.php/relcategoria.4037/id.857/relmenu.449/mod.pags/mem.detalle

- Aid program for energy efficiency in the railway sector. Improving energy efficiency in the rail sector through energy recovery from regenerative brakes, improving energy efficiency in buildings, lighting of tunnels, galleries, platforms and parking, introduction of more energy efficient technologies in signing and beaconing, etc.

  http://www.idae.es/index.php/relcategoria.4037/id.886/relmenu.449/mod.pags/mem.detalle

- Aid program for energy efficiency in desalination plants. Aims reducing energy consumption in the water cycle, with special attention to desalination.

  http://www.idae.es/index.php/relcategoria.4037/id.887/relmenu.449/mod.pags/mem.detalle

- Communication campaign.

In addition to these programmess (founded by the National Energy Efficiency Fund) the PAREER-CRECE program is directed to support investments on energy renovation of existing buildings. This program aims to act in any type of buildings, improving the energy efficiency of the thermal envelope or the heating and lighting installations, and the replacement of conventional energy by solar, biomass, aerothermal, geothermal or hydrothermal in HVAC systems. See: http://www.idae.es/index.php/id.858/relmenu.409/mod.pags/mem.detalle.

See complete presentations of these programmes on:
http://www.idae.es/index.php/id.883/relcategoria.4037/mod.pags/mem.detalle.

Other administrative provisions approving measures for supporting energy efficiency by the General State Administration:

- Law 8/2013 of 26 June 2013 on rehabilitation, regeneration and urban renovation.

- MOVELE: direct subsidies for the purchase of electric vehicles, as part of the 2010–2014 Action Plan under Spain's 2010–2014 Integrated Electric Vehicle Stimulus Plan.

- Order FOM/1635/2013 of 10 September 2013 updating basic document DB-HE 'Energy Saving' of the Technical Building Code, approved by Royal Decree 314/2006 of 17 March 2006.

- Order INT/229/2013 of 25 November 2013 amending Annexes I, V, VI and VII to the General Driver Regulations approved by Royal Decree 818/2009 of 8 May 2009, and Order INT/2323/2011 of 29 July 2011 regulating training for progressive access to the class A driver's licence.

- PIMA AIRE: direct assistance under the 'PIMA Aire' environmental stimulus plan for the purchase of more efficient commercial vehicles.

- PIMA SOL: provides carbon credits through the carbon fund for a sustainable economy for energy renovation projects in the hotel industry.

- PIVE (Efficient Vehicle Incentive Programme): programmes of public aids managed by IDEA which aimed to encourage the scrapping of passenger vehicles (M1) and commercial vehicles under 3.5 T (N1) at least 12 and 10 years old, respectively. The incentive was related to the purchase of new category M1 and N1 vehicles in energy class A and B, for category M1 vehicles, and with CO_2 emissions less than 160 g/km for category N1 vehicles.

- Royal Decree 233/2013 of 5 April 2013 regulating the state plan for the promotion of rental housing, building restoration and urban regeneration and renovation for the 2013–2016 period.

- Royal Decree 235/2013 of 5 April 2013 approving the basic procedure for the energy efficiency certification of buildings.

- Royal Decree 238/2013 of 5 April 2013 amending certain articles and technical instructions of the Regulation on Building Heating Installations (RITE), approved by Royal Decree 1027/2007 of 20 July 2007.

3. Future activities

Future activities will include programmes of public support funded by the National Energy Efficiency Fund, taking into account the contributions that obligated parties are making in 2016 according to the Order IET/359/2016, March 17th, which establishes the obligations to contribute to the National Energy Efficiency Fund in the year 2016: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2016-2750

EED implementation in Sweden

Introduction

In Sweden the implementation of the EED is the responsibility of the Ministry of the Environment and Energy. The Ministry of Enterprise and Innovation is also involved in the implementation. The Swedish Energy Agency implements the majority of instruments and programmes for the directive and is also responsible for the follow-up and reporting under the directive. The National Board of Housing, Building and Planning, the Swedish Environmental Protection Agency, the Swedish Energy Market Inspectorate and the National Agency for Public Procurement are also implementing parts of the directive.

1. Legal context

In Sweden, the EED has been fully transposed in national legislation. The Parliament approved the Governments proposals in April 2014 and the Government decided on publication of acts and ordinances in June and July 2014.

The following new acts have been adopted:

- Act (2014:266) on Energy Audits in Large Enterprises (Art. 8)
- Act (2014:267) on Energy Metering in Buildings (Art. 9)
- Act (2014:268) on Certain Cost-Benefit Analyses in the Energy Sector (Art. 14)

There have also been several new secondary and teritiary legal acts such as ordinance 2014:480 on central governments' purchasing of energy efficient goods, services and buildings.

Amendments to existing legislation have been made in the following areas:

- Act (2012:838) on Certification of Certain Installers
- Electricity Act (1997:857)
- Natural Gas Act (2005:403)
- District Heating Act (2008:263)
- Tenant-Ownership Act (1991:614)
- Co-operative Tenancy Act (2002:93)
- Land Code
- Environmental Code

2. Status of the implementation

2.1. Legislative provisions

This table contains information on how the EED has been implemented by article, including any relevant web links. The table also includes non-legislative provisions for some articles of the directive.

EED Article	Implementation status
Article 3	Sweden has notified the national target for art.3 to the Commission as part of the National Reform Program. The Swedish energy efficiency target for 2020 is set as a relative target, reducing primary energy use per GDP unit. The EED requires the Member States to indicate what would the level of primary and final energy use be if the target is met. For Sweden, this depends on the development of energy use and development of GDP.
Article 4	Sweden notified the long term strategy for energy efficient renovations in April 2014. The plan was based on preparatory work from the Swedish Energy Agency and the Swedish National Board of Housing, Building and Planning. These two organizations have a new assignment from the government to prepare the updated plan which is due April 2017. In 2015, the Swedish Parliament approved financial support for energy efficient renovation of multi-family housing in areas with socio-economic challenges.

Article 5	Sweden has opted for the alternative approach according to Article 5.6 and the Government has assigned the National Property Board of Sweden and the Swedish Fortifications Agency the responsibility to fulfil the requirement through energy efficiency improvements in their building stock. In order to encourage public bodies at regional and local level the Government has in 2015 allocated funds for capacity building for the energy transition among regional and local actors. There are also investment funds for local actions providing long term carbon emissions reductions, including energy efficiency investments.
Article 6	A new ordinance, act 2014:480 on central governments purchasing of energy efficient goods, services and buildings has been adopted.
Article 7	Sweden has notified the implementation of art. 7 to the Commission in December 2013. Sweden has opted for the alternative approach. The cumulative target is 106 TWh and will be achieved through energy and CO2 taxes with complementing measures as a package. To avoid double-counting, the effect of taxes only has been calculated.
Article 8	A new act, (2014:266) on Energy Audits in Large Enterprises has been adopted. The Swedish Energy Agency is responsible for the implementation and follow-up of the new legislation. An intensive work with information and engagement activities has been carried out in 2015. See also http://www.energimyndigheten.se/energieffektivisering/foretag-och-organisationer/ For the promotion of energy efficiency in SMEs, a new program financed through the ERDF was launched in 2015. The program supports energy audits, network activities and capacity building and will be developed further the coming years.
Articles 9-11	A new act, (2014:267) on Energy Metering in Buildings has been adopted. The Swedish National Board of Housing, Building and Planning has been assigned by the Government to analyse in which cases individual metering of heating and hot water would be cost-effective. The provisions are also implemented through amendments to the Electricity Act (1997:857), the Natural Gas Act (2005:403) and the District Heating Act (2008:263). Information and estimates for energy costs are provided to consumers through the website www.elpriskollen.se which also enables consumers to compare deals. The Swedish Energy Markets inspectorate has presented a proposal for new functionalities of smart meters for gas and electricity.
Articles 12 and 17	It has been decided to prolong the state support to the municipal energy- and climate advisors in 290 municipalities until 2017. A new ordinance (2016:385) to further strengthen the municipal energy- and climate advisors was adopted in April 2016.
Article 13	Rules on penalties have been implemented through Act (2014:266) on Energy Audits in Large Enterprises and Act (2014:267) on Energy Metering in Buildings as well as the Electricity Act (1997:857), the Natural Gas Act (2005:403) and the District Heating Act (2008:263).
Article 14	A new law (2014:268) on Certain Cost-Benefit Analyses in the Energy Sector has been adopted. According to this law, a cost-benefit analysis is required for new plants or changes to existing plants fulfilling the following criteria: – Plants for thermal power production >20 MW

	– Industrial power plants >20 MW generating waste heat – Grids for district heating/cooling – Energy production plants >20 MW attached to existing grids for district heating/cooling The result of the cost-benefit analysis shall be attached to the application for permits according to the Environmental Code.
Article 15	The Swedish Energy Market Inspectorate is responsible for most parts of the implementation of Article 15 and there have been amendments to the ordinance regulating the tasks of the inspectorate. Amendments have also been made to the Electricity Act (1997:857).
Article 16	The assessment is that the national level of technical competence, objectivity and reliability is sufficient, thus a certification or accreditation scheme has not been introduced.
Article 18	The Swedish Energy Agency is responsible for the promotion of the energy services market and the access for SMEs to this market. The Agency's website provides information on energy services with a special focus on SMEs.
Article 19	An analysis of split incentives between owners and tenants has been carried out by the Swedish Energy Agency and the National Board of Housing, Building and Planning. Because charges for heating for most apartments in Sweden are included in the rent or in the monthly charges the prevalence of split incentives is low. An analysis of barriers for energy efficiency in the public sector including public purchasing has been carried out by the Swedish Energy Agency and the conclusion is that barriers mostly are in the form of lack of strategy and lack of knowledge among the actors. To reduce these barriers, state support for capacity building and strategic energy efficiency work among local and regional actors has been introduced.
Article 20	Sweden has prioritized energy efficiency in SMEs within the framework of the Regional fund and the state provides co-funding for energy efficiency projects. Proposals for financial mechanisms have been presented within the framework of the national long-term strategy for energy efficient renovations related to Art. 4
Article 24	The third national Energy Efficiency Plan was notified to the Commission in April 2014. The preparations for the fourth plan which is due in April 2017 are on-going.

2.2. Non-legislative provisions

The Swedish energy efficiency policy is based on general measures (such as CO2- and energy taxes and ETS), combined with regulatory measures (such as building codes and energy performance requirements) and supporting measures aimed at removing information and knowledge related market failures. Examples of the latter are energy- and climate advisors, networks, regional energy- and climate strategies, support for energy audits in SME's and market introduction measures.

Here is a selection of the additional measures that are currently in place:

- Energy and Climate advisors in 290 municipalities and 14 Regional energy offices
- State support for capacity building and strategic energy efficiency work at local and regional level including regional energy- and climate strategies.
- ERUF programmes for energy efficiency improvements in SMEs.
- Networks in building, industry, SME – capacity building and market introduction of new technologies
- Information activities, websites and other
- Capacity building for the enforcement of energy efficiency requirements in environmental legislation

3. Future activities

Future activities include an update and implementation of the national strategy for energy efficient renovations. Financial support for the renovation of multi-family buildings in certain areas is planned for in the coming years. The investment support for local projects with a long term CO2-emissions reduction, including energy efficiency investments, will be prolonged to 2020. In addition, the Swedish Energy Commission will present proposals for the frames of long-term energy policy in the end of 2016.

Continued work with the use of EU Regional fund for energy efficiency projects, both at regional and national level. SME's is a targeted group for this action.

Within the framework of the Global Ligthing Challenge, launched at COP 21, with the aim to deploy 10 billion high-efficiency bulbs, Sweden is intensifying the efforts to promote energy-efficient lighting through active collaboration and dialogue with actors in the field, coordinated by the Swedish Energy Agency. See also www.globallightingchallenge.org

4. Relevant information

Ministry of the Environment and Energy: www.government.se/government-of-sweden/ministry-of-the-environment
Swedish Energy Agency: www.swedishenergyagency.se
Swedish Energy Market Inspectorate: www.ei.se
National Board of Housing, Building and Planning: www.boverket.se
Swedish Environmental Protection Agency: www.swedishepa.se
National Agency for Public Procurement: www.upphandlingsmyndigheten.se

EED implementation in the United Kingdom

Introduction

The United Kingdom has fully implemented the Energy Efficiency Directive through the transposition of the requirements into UK law

1. Legal context

Transposition of the Directive has been delivered through amendment of existing secondary legislation combined with new secondary legislation where appropriate. In general, the Directive has been implemented on a UK-wide basis. However, in a number of areas, where the Devolved Administrations in Northern Ireland, Wales and Scotland have responsibility for implementation, legislation has been adopted by the Devolved Administrations rather than on a UK wide basis.

2. Status of the implementation

2.1. Legislative provisions

The table below provides details of implementation in the UK for each Article.

EED Article	Implementation status
Article 4	The United Kingdom has transposed Article 4 of the Directive into domestic law in via The Energy Efficiency (Building Renovation and Reporting) Regulations 2014. These Regulations came into force on 30 April 2014. The Energy Efficiency (Building Renovation and Reporting) Regulations 2014 place an obligation on the Secretary of State for Energy and Climate Change to produce, publish and subsequently update the United Kingdom's building renovation strategy. The regulations are available at http://www.legislation.gov.uk/uksi/2014/1403/made The strategy was published and submitted to the Commission as part of the UK's National Energy Efficiency Action Plan published on 30 April 2014. It will be updated every three years as part of the UK's subsequent National Energy Efficiency Action Plans, which will be submitted in accordance with the Directive's requirements.
Article 5	The UK took the decision to implement the alternative approach allowed for by Article 5(6) and notified to the Commission the alternative measures that we have adopted to achieve an equivalent improvement in the energy performance of the buildings within the central government estate .
Article 6	The UK has transposed Article 6 of the Directive through administrative directions, known as Procurement Policy Notes, Procurement Guidance Notes or Procurement Advice Notes, promulgated by the UK government for England, by the Scottish Government for Scotland, the Welsh Assembly Government for Wales, and by the Northern Ireland Executive for Northern Ireland (NI). The UK Government Procurement Policy Note is here: https://www.gov.uk/government/publications/procurement-policy-note-0714-implementing-energy-efficiency-directive-article-6
Article 7	The UK set its target in December 2013 and notified this, and its proposed policy package for achieving the target, to the European Commission in accordance with Article 7(9). Making use of the derogations available under Article 7, the UK's energy savings target has been set at the level of 324 TWh. The UK will meet its Article 7 energy savings target through a combination of supplier obligation

EED Article	Implementation status
	schemes and alternative policy measures. and the UK's Article 7 notifications contains a full breakdown of the policy measures being used to meet the target and the energy savings that are projected to be achieved by these
Article 8	Article 8(1) to 8(3) have been transposed into UK law through a combination of new and pre-existing legal requirements. Article 8(4) to 8(6) were transposed into UK law via the Energy Savings Opportunity Scheme Regulations 2014. The regulations are available at http://www.legislation.gov.uk/uksi/2014/1643/pdfs/uksi_20141643_en.pdf The Green Deal established a legal framework for non-domestic energy audits, and has led to the establishment of accredited schemes for non-domestic energy auditors. The Energy Saving Advice Service (operating in England and Wales), the Home Energy Advice Service (operating in Scotland) and the Bryson Energy Advice Service (operating in Northern Ireland) also offer householders and, in some cases businesses, advice on the benefits of energy audits and energy efficiency more generally. The Energy Efficiency (Encouragement, Assessment and Information) Regulations 2014 further created a requirement on the Secretary of State (in respect of England) and the relevant authorities for the Devolved Administrations, to develop programmes to encourage small or medium-sized enterprises to undergo energy audits and encourage the provision of energy efficiency information and training to consumers and relevant market actors. The regulations are available at http://www.legislation.gov.uk/uksi/2014/1403/made The Energy Savings Opportunity Scheme Regulations 2014 establish a new Energy Savings Opportunity Scheme ('ESOS') which places a requirement on large undertakings and associated corporate groups to undertake energy efficiency assessments by 5 December 2015 and thereafter once every four years. The UK Government estimates that there will be around 9,400 ESOS participants in the first phase of the scheme. Audits must be based on up to date energy measurement data, include energy consumption profiles where practicable, and identify cost-effective recommendations to improve energy efficiency. In line with the requirement that audits be proportionate and identify the most significant opportunities for improvement, ESOS participants will be required to measure their total energy consumption (across buildings,transport and industrial processes) and then ensure that at least 90% of total energy consumption is subject to energy audits. Audits must be undertaken or overseen by a qualified energy professional (a 'lead assessor'). The Government commissioned the British Standards Institute to work with industry to develop a publicly available specification (PAS 51215) setting out the level of competence required to act as a lead assessor for the purposes of ESOS. This PAS is available from BSI: http://shop.bsigroup.com. Further information about the Energy Savings Opportunity Scheme can be found on the UK Government website at https://www.gov.uk/guidance/energy-savings-opportunity-scheme-esos
Articles 9-11 Smart metering	Existing UK policy and legislation was largely consistent with the requirements of the Directive. The exception was the requirement for domestic consumers to have easy access to 24 months of daily, weekly, monthly and annual historical consumption data, and to have export data (where it is recorded) made available in an easily understandable format and this has been transposed through changes to licence conditions The UK's Smart Meters Equipment Technical Specification (SMETS)[26] requires meters to be capable of providing customers with near real-time information on their energy use. Licence Conditions set out that only meters that meet SMETS requirements count towards the obligation the UK Government has put on energy suppliers' to have installed smart meters in all domestic

[26] *Smart Metering Equipment Technical Specifications:* Second Version: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/68898/smart_meters_equipment_technical_spec_version_2.pdf

EED Article	Implementation status
	properties by the end of 2020. SMETS has been notified to the European Commission and the specification that will replace it (SMETS 2), has also been notified[27]. In addition energy suppliers are required by Licence Conditions to offer customers an In Home Display (IHD) at the point of smart meter installation. The IHD will put customers in control by enabling them to see what energy they are using and how much it is costing and so identify ways of improving their energy efficiency. IHDs must be compliant with Licence Conditions which require minimum functionality that is set out in the Smart Meters Equipment Technical Specification[28]. In line Article 9(2)(b) of the Directive and EU data protection and privacy legislation, the Government has put in place a Data Access and Privacy Framework[29] that gives consumers control over who sees their energy consumption data, apart from where this is required for billing or other regulated duties. This regulatory framework, informed by international experience, has been implemented by Licence Conditions that came into force in June 2013 and: • Require suppliers to get explicit (opt-in) consent in order to use their customers' energy consumption data for marketing purposes; • Allow suppliers to access monthly data for billing and for the purposes of fulfilling any statutory requirement or licence obligation (such as settlement, or preventing theft); • Allow suppliers to access daily data provided that the customer does not object to (i.e. opt out of) this ; and • Require that suppliers must receive explicit (opt-in) consent in order to access half-hourly data. Network Operators will be permitted access to half-hourly energy consumption data provided that they develop and submit for approval plans detailing how privacy will be ensured (e.g. by aggregating the data so that individuals cannot be identified) and outlining what the data would be used for. The Smart Meters Equipment Technical Specification (SMETS)[30] also requires meters to be able to account for up to 3 months of electricity put into the grid. The Government has put into place Licence Conditions to ensure that if domestic customers request metering data on their electricity export and consumption, it will be made available to them by their supplier over the internet or via the provision of a free consumer access device which connects to the meter, according to day, week, month and year. These Licence Conditions came into effect on 4 June 2014. Licence conditions also put into place a smart meter installation Code of Practice[31] on 30 November 2012 that will ensure that at installation consumers are made aware of how to use, and benefit from, the smart metering equipment to improve the energy efficiency of their home and so fulfils the requirements of Article 9(2)(e) of the Directive. The Government has also put into place Licence Conditions to ensure that if domestic customers request metering data on their electricity or gas consumption, it will be made available to them by their supplier over the internet or via the provision of a free consumer access device which connects to the meter, according to day, week, month and year. The minimum requirements for SMETS 1 meters do not include the capability to store 24 months of daily data, but suppliers may choose to upgrade SMETS 1 meters to provide this functionality. If the functionality is not available on the meter, suppliers will have to provide an alternative solution to ensure that they can meet the consumers request for access to 24 months of daily data. The Licence Conditions came into effect on 4 June 2014

[27] Notification reference: 2013/0046/UK.
[28] *Smart Metering Equipment Technical Specifications:* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43087/6425-smart-metering-equipment-technical-specifications-.pdf
[29] *Smart Meter Implementation Programme: Data access and privacy, December 2012:* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43046/7225-gov-resp-sm-data-access-privacy.pdf
[30] *Smart Metering Equipment Technical Specifications:* Second Version: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/68898/smart_meters_equipment_technical_spec_version_2.pdf
[31] Smart Metering Installation Code of practice: http://www.energy-uk.org.uk/publication/finish/37-smart-meter-policies/786-smart-meter-installation-code-of-practice-smicop-january-2013.html

EED Article	Implementation status
	Licence Conditions governing the rollout of smart metering in their entirety are available at: https://www.ofgem.gov.uk/licences-codes-and-standards/licences/licence-conditions
Articles 9-11 Heat Metering	The Heat Network (Metering and Billing) Regulations 2014 (SI 2014/3120) which were made on 20th November 2014 implement the requirements of Article 9-11 as they apply to heat networks. Regulations are available at http://www.legislation.gov.uk/uksi/2014/3120/contents/made
Article 12	The UK Government has introduced a range of policies to promote energy efficient behavioural change; in particular, finance and fiscal incentives for energy efficiency measures are readily available for small energy consumers. The domestic Renewable Heat Incentive (RHI), launched in April 2014, is a subsidy scheme to promote the uptake of renewable heat technologies in households. To be eligible for the domestic RHI, all applicants will need to provide evidence that they have identified which energy efficiency measures would be cost-effective for their property and have, at a minimum, installed loft insulation and cavity wall insulation where these measures are suitable and cost-effective. The Enhanced Capital Allowance Scheme is a key part of the Government's programme to manage climate change and reduce energy demand. It provides businesses with enhanced tax relief for investments in equipment that meets published energy-saving criteria. The Landlords' Energy Saving Allowance is a financial incentive which enables landlords to claim tax relief of up to £1,500 per property for the costs of buying and installing energy-saving products. The roll out of smart meters into homes across Great Britain will require installers to visit around 30 million premises by 2020. This presents an ideal opportunity for energy suppliers to engage their customers on energy efficiency. Energy suppliers are required to adhere to an Installation Code of Practice when installing smart meters. This Code compels suppliers to demonstrate the smart metering system (including the in home display) and offer energy efficiency advice, including highlighting sources of further information.
Article 14	The United Kingdom has transposed Articles 14(1) and 14(3) of the Directive into domestic law via Regulation 4 of the Energy Efficiency (Encouragement, Assessment and Information) Regulations 2014 which were laid in Parliament on 5 June 2014. The Comprehensive assessment and cost-benefit analysis has been completed and submitted to the Commission and can be found at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/499417/Final_NCA_Report_for_publication.pdf Great Britain has transposed Articles 14(10) of the Directive into domestic law via Regulation 5 of the Energy Efficiency (Encouragement, Assessment and Information) Regulations 2014. Regulation 5 applies to England, Wales, and Scotland, and amends the Guarantees of Origin of Electricity Produced from High-efficiency Cogeneration Regulations 2007 (SI 2007/292). Northern Ireland amended its equivalent legislation to transpose Article 14(10). Articles 14(5) to 14(8) were transposed through the Environmental Permitting (England and Wales) (Amendment) Regulations 2015 made on 25 March 2015 and separate legislation in Scotland and Northern Ireland. The legislation is available at http://www.legislation.gov.uk/ukdsi/2015/9780111126028/contents The United Kingdom transposed Article 14(11) of the Directive by continuing to ensure that the existing cogeneration/CHP benefits (Enhanced Capital Allowances, Business Rates exemption, Climate Change Levy exemption, Carbon Price Support) and any future benefits are subjected to this requirement. These benefits are linked to certification to the CHP Quality Assurance Standard, so the UK considers that this requirement is presently met for existing cogeneration/CHP incentives.

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Article 15	**Article 15(1)** For electricity, section 3A (1A) of the Electricity Act 1989 requires Ofgem, the GB energy regulator to have due regard to the need to contribute to sustainable development and carry out its functions in the manner which it considers is best calculated to promote the efficient use of electricity conveyed by distribution systems or transmission systems (Section 3A(5) of the Electricity Act 1989. For gas, Ofgem is required by Section 4AA(5) of the Gas Act 1986 to carry out its functions in a manner which it considers is best calculated to promote efficiency and economy in relation to the gas network. Under Section 33BC of the Gas Act 1986, the Secretary of State may order gas transporters and suppliers to comply with energy efficiency targets set by Ofgem. Additionally, Ofgem must have regard to guidance issued by the Secretary of State under Section 3B (4) of the Electricity Act 1989 and under Section 4AB of the Gas Act 1986. This guidance is called the Social and Environmental Guidance to the Gas and Electricity Market Authority and contains an energy efficiency component. Under measures contained in the Energy Act 2013, this Guidance will be replaced with a new Strategy and Policy Statement for Ofgem. **Article 15(2)** For GB, the requirements under Article 15(2) have been transposed through secondary legislation under section 2(2) of the European Communities Act 1972, by placing a requirement on Ofgem to ensure an energy efficiency assessment of gas and electricity infrastructure is undertaken by 30 June 2015 and that improvements are identified. Northern Ireland has full competence in this area and has therefore transposed Article 15 and Annexes XI and Annex XII separately to GB because of differences in their energy market structure. The secondary legislation was laid before Parliament on 5 June 2014 and the assessment has been submitted and can be found at https://www.ofgem.gov.uk/sites/default/files/docs/2015/06/energy_efficiency_directive_report_-_final_for_publication.pdf . **Article 15(3)** There are no GB schemes and tariff structures with a social aim for net-bound energy transmission and distribution, and hence there is no conflict with this requirement. **Article 15(4)** GB was already compliant under this requirement. On the electricity side, transmission and distribution tariffs are required to be cost reflective under Standard Licence Conditions C13 and C5 respectively and designed to drive the overall efficiency of the system. National Grid, in its role as Transmission System Operator is required under the terms of its Transmission Licence Standard Licence Condition C16 not to discriminate against any persons or classes of persons in its procurement or use of balancing services. Furthermore, electricity network operators are incentivised to improve efficiency in infrastructure design and operation through Ofgem's RIIO (Revenue = Incentives + Innovation + Outputs) regulatory price control framework. RIIO is implemented through specific and detailed conditions set out in the network operators' licences. Gas network operators are incentivised under the same framework which is implemented through a number of Standard Special Conditions. The following are a few examples - A5 which details obligations with regards to charging methodology; A11 which sets out the requirements to comply with the Network Code and the Uniform Network Code; A12 with regards to Joint Office governance arrangements for gas distribution networks. On the National Transmission License, Special Condition D3 in in Part C sets out obligations in respect of external incentives, revenue and costs in relation to revenue restriction. **Article 15(5)** GB was already compliant with this requirement. On the electricity side, the Transmission System

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	Operator is required to enter into an agreement for an application for use of the system and, once connected, generators of all types – including high-efficiency cogeneration – have a particular level of capacity which the System Operator is required to accept from the user. Where it is not possible to ensure transmission without affecting the reliability or safety of the grid, financial compensation is given to those producers. Otherwise, a generator would always be able to dispatch. The framework for these arrangements is as follows: Section 9 of the Electricity Act 1989 (general duties of licence holders) requires Transmission Licensees to develop, operate and maintain an efficient and economical electricity transmission system. Standard Licence Condition C17 of the Transmission Licence sets out the quality and safety standards that need to be maintained. Standard Licence Condition C16 sets out requirements in relation to procurement and use of balancing services. Standard Licence Condition C3 requires the licensee to have in place a Balancing and Settlement Code (with sections Q, T & U of most relevance). Rules relating to access and dispatch arrangements are set out and published in the Balancing and Settlement Code, as required under Standard Licence Condition C3 of the Transmission Licence (see: http://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/consolidated-bsc/ The requirements set out in Annex XII are already prescribed in the standard licence conditions for transmission and distribution system operators. For all micro generation units with a capacity of less than 3.68kW, GB already has an 'install and inform' approach which is required by Engineering Recommendation G83/1.1. This recommendation forms part of the Distribution Code. Distributors have a regulatory requirement through a licence obligation (Standard Licence Condition 21) to comply with the Distribution Code. For larger micro generation projects, GB does not consider an 'install and inform' approach is appropriate as these larger installations have the potential to cause problems for other customers' supply, primarily by affecting voltage. Hence they need to be subject to a co-ordinated connection process. **Article 15(6)** For electricity, in its role as Transmission System Operator, National Grid is required under the terms of its Transmission Licence (Standard Licence Condition C16) not to discriminate against any persons or classes of persons in its procurement or use of balancing services. Also in accordance with Condition C16, National Grid publishes a number of statements and reports on the procurement and use of Balancing Services -see http://www.nationalgrid.com/uk/Electricity/Balancing/transmissionlicencestatements/ **Article 15(7)** GB was already compliant with this requirement. Generators of all types are permitted to build their own connection assets. For transmission connections, this is specified in the Statement of Connection Charging Methodology, which is located at 14.7 of the Connection and Use of System Code. In Distribution, there is competition in the connections market for this work. Customers' ability to seek alternative parties to construct the connection assets is set out within the Common Connection Charging methodology, which distributors have a regulatory requirement to prepare under Standard Licence Condition 14. This methodology also forms part of the Distribution Connection and Use of System Agreement (DCUSA). Distributors have a regulatory requirement to comply with DCUSA under Standard Licence Condition 22. **Article 15(8)** For electricity, as part of its statutory duties as set out in Section 3A of the Electricity Act 1989, Ofgem must have regard to the need to contribute to the achievement of sustainable development. Ofgem requires electricity suppliers, under the terms of their Supply Licences (Standard Licence Condition C39), to ensure that a smart metering system is rolled-out. New licence conditions 48 and 49 require suppliers to comply with the Smart Energy Code and set operational requirements for smart metering systems. Also, GB network tariffs enable suppliers to charge their customers different prices for use of the network, incentivising them to avoid peak times. Ofgem will have oversight of the forthcoming Capacity Market which will include a programme to grow the size and

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	capability of GB's Demand Side Response industry. The proposed charging system for the Capacity Market will be based on share of customer market demand on winter weekday evenings, with the intention of incentivising suppliers to reduce their demand through demand response and time-of-use tariffs. In its role as Transmission System Operator, National Grid is required under the terms of its Transmission Licence (Condition C16) as follows: "Having taken into account relevant price and technical differences, the licensee shall not discriminate as between any persons or classes of persons in its procurement or use of balancing services". National Grid actively encourages demand side providers – including aggregators – to participate in the standard market tender process used to procure balancing and ancillary services. There is no concept of dispatch at the distribution level – if the generator has a buyer for its output, it runs. Hence this requirement is not relevant to distribution system operators in GB. National Grid actively encourages the involvement of demand-side resources in balancing, reserve and other system services. In accordance with Condition C16, National Grid publishes details of its procurement procedures and technical requirements for participation in this market in its Balancing Services Contract Information Pack (see: http://www.nationalgrid.com/uk/Electricity/Balancing/services/balanceserv/intro/). The technical requirements for participants in the Short Term Operating Reserve (STOR) market can also be found in the standard STOR framework agreement and the STOR aggregator framework agreement (see: http://www.nationalgrid.com/NR/rdonlyres/D9E17ADD-9E28-437F-8E31-188404D251C9/60298/Short_Term_Operating_Reserve_Framework_Agreement_2013.pdf
Article 16	The UK has a range of trusted qualification, accreditation and certification schemes in place; and these are widely and publicly available, and transparent to consumers. The UK Government considers that these existing legal arrangements already delivered the requirements of Article 16 and that no further action was required to transpose Article 16. Energy Service Providers Underpinned by the 2011 Energy Act, the Green Deal went live in Great Britain in January 2013. The Green Deal is intended to encourage consumers in household and commercial sectors to undertake energy assessments. It offers energy efficiency assessments, financing and the installation of energy efficiency measures through a network of approved assessors, installers and providers. Strict qualification and accreditation requirements have been developed for Green Deal providers. • Asset Skills, the appropriate Sector Skills Council, developed a suite of National Occupational Standards (NOS) for Green Deal Advisors (GDAs)1, building on existing Energy Assessor NOS and qualifications. • A syllabus was developed by Asset Skills that provides detail on the expectations of all GDAs2. • The United Kingdom Accreditation Service (UKAS) oversees the certification framework for GDAs. All providers of Green Deal Advice Services must be certified by an approved, independent Certification Body against the scheme standards3 and adhere to a strict, legally-binding code of practice. • The Green Deal Oversight and Registration Body (ORB) is responsible for maintaining a register of all authorised Green Deal Assessors, Certification Bodies, Installers, and Providers; maintaining the Green Deal Code of Practice and controlling the use of the Green Deal Quality Mark; monitoring Green Deal Participants compliance with the Code of Practice; and gathering evidence of non-compliance and referring participants to the Ombudsman or the Secretary of State for further action, which can include sanctions. Energy Performance Certificates (EPCs) operate across the UK4 and are produced by accredited energy assessors using standardised methods and assumptions about energy usage. An EPC is mandatory for all properties when they are built, sold or rented. Display Energy Certificates (DECs) apply in England, Wales, and Northern Ireland to public buildings with a total useful floor area in excess of 500m2.5 The skills and knowledge required to carry out an energy assessment (EPC or DEC) are outlined in the NOS for Energy Assessors, available from Asset Skills.6 Energy assessors must be registered with a Government approved Accreditation Scheme operator before

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	they can commence working as an energy assessor and separate training is available for conducting assessments of dwellings, non-dwellings, public buildings and air conditioning systems. The Accreditation Schemes cover all aspects of EPCs, DECs for buildings occupied by public authorities, and air conditioning inspection reports. Energy Auditors In addition to the qualification routes for GDAs, EPCs and DECs, the market in the UK provides a wide range of training and qualification opportunities for energy auditors, including post-graduate level qualifications in energy and environmental management. Established bodies such as the Institute for Energy Management (IEMA) and the Energy Institute also peer-review registers of energy auditors. As part of the UK Government's implementation of Article 8(4)-8(6) of Directive 2012/27/EU on energy efficiency, the UK Government commissioned the UK's national standards body (BSI) to develop PAS 51215, working with industry. PAS 51215 established the level of competence for lead energy efficiency auditors who are deemed qualified to conduct energy efficiency audits under the UK scheme – the Energy Saving Opportunities Scheme. The PAS will be published in June 2014 and the UK Government expects a range of professional bodies in the UK, which currently issue qualifications for professional auditors, to have their existing qualifications assessed against this standard. Energy Managers The UK has a well-established framework for energy managers. The Energy Institute offers a variety of training schemes and education packages – including a Certificate in Energy Management Essentials and a Chartered Energy Manager Qualification - while members of IEMA are required to sign a professional code of conduct. Installers of energy-related building elements The installation of new building elements must meet the standards set out in Building Regulations and building work undertaken must be checked by either the Local Authority Building Control or a private Approved Inspector. Approved Inspectors must be an installer registered with a Competent Persons Scheme. Green Deal installers are certified through authorised Certification Bodies for the different Green Deal measures they wish to install, and registered with the ORB. Green Deal Installers must: • Be certified by a Green Deal accredited Certification Body as meeting the standard (PAS 2030) for the measures they wish to install. • Comply with the conditions in the Green Deal Code of Practice. • Keep clear records of work done and allow monitoring of installation work when requested. In addition, air conditioning systems with an effective rated output of more than 12kW must undergo a regular inspection at intervals not exceeding five years. These inspections will include systems comprising individual units which are less than 12kW but which are sited within the envelope of a single building and whose combined effective rated output is more than 12kW. Air Conditioning Inspection Reports (ACIRs) are produced by accredited air conditioning energy assessors. The Devolved Administrations In most cases, the above schemes apply to the whole of the United Kingdom (or Great Britain in the case of the Green Deal). In particular, the Devolved Administrations have a shared interest with regard to NOS, as these are funded and developed across all four nations.
Article 17	The UK has transposed Articles 17(1) and 17(4) via regulation 7 of the Energy Efficiency (Encouragement, Assessment and Information) Regulations 2014. Article 17(2) had already been transposed through pre-existing legal requirements. Information on all UK Government and Devolved Administration policies is freely available on the GOV.uk website. In addition, the Government supports a number of dedicated webpages that host

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	information and guidance about: the UK Green Investment Bank, the CRC Energy Efficiency Scheme, Climate Change Agreements, Enhanced Capital Allowances, the Green Deal, the Energy Company Obligation, the Renewable Heat Incentive, Smart Meters and Building Regulations. The provision of information to financial institutions is also facilitated by the Green Investment Bank, which seeks to invest in partnership with private sector banks, and the Green Deal Finance Company, an industry-led consortium with over 50 private and public sector members. The UK operates a free market for energy efficiency services with appropriate conditions for market operators to provide adequate and targeted energy efficiency information and advice to energy consumers. The Government has introduced a number of policies which encourage and facilitate the provision of energy efficiency information and advice. In particular: • The smart meter Installation Code of Practice requires that energy suppliers provide energy efficiency information and advice to consumers when installing smart meters. • Additionally, the Energy Saving Advice Service and the Home Energy Scotland Advice Centres provide households with access to impartial, free advice on energy efficiency measures. • Applicants for the domestic Renewable Heat Incentive, launched in April 2014, will need to provide evidence that they have identified, through a Green Deal assessment, which energy efficiency measures would be cost-effective for their property. • The Energy Performance of Buildings regime and the requirement for EPCs and DECs facilitate the establishment of information and advice to consumers. • The Energy Savings Opportunity Scheme, introduced to meet the requirements of Article 8(4)-8(6) of the Directive, will ensure that large enterprises undergo a detailed audit of their energy use and obtain recommendations for cost-effective energy efficiency improvements.
Article 18	The UK has transposed Articles 18(1), 18(2)(a) and 18(2)(b) via the Energy Efficiency (Encouragement, Assessment and Information) Regulations 2014 (a copy of the regulations is attached). Article 18(2)(c) and 18(3) have been transposed in the UK through pre-existing legal requirements. Article 18(2)(d) did not require transposition as there is no restriction on market intermediaries promoting energy performance contracts and services The GOV.uk website hosts information and links, including: • a 'model' energy performance contract and contract guidance note; • a best practices guide, which will detail clauses that should be included in contracts to guarantee savings and final customers' rights; • an updated "Guide to financing energy efficiency in the public sector" and a new "Guide to financing energy efficiency in the private sector"; • details of available energy services contracts, which will be included in the Energy Services Markets Review; and a qualitative review of the current and future development of the energy services market as part of the National Energy Efficiency Action Plan (NEEAP). • links to existing, publicly available registers of energy service providers with appropriate certifications and qualifications. The Government has carried out extensive analysis into the barriers to energy efficiency, including a review of the regulatory barriers, and published its findings in the 2012 Energy Efficiency Strategy. This did not identify any specific barriers to the take up of energy performance contracting and other energy efficiency service models. However, several concerns were identified. These include: a lack of contract standardisation; few ways to benchmark new contracts to assess value for money and few common standards for calculating the savings that the ESCO had delivered. These concerns have been addressed by the development of a model contract with accompanying guidance and best practices guidance, in order to fulfil the requirements of Article 18(1). Where a complaint or dispute occurs in the energy services market, parties to the dispute have

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	recourse to existing arbitration services and independent regulators, including the Competition and Markets Authority, Office of Gas and Electricity Markets (Ofgem) and the Energy Ombudsman. Contractual disputes can also be referred to mediation through the Centre for Effective Dispute Resolution, an independent charity which provides mediation services. Finally, pre-existing legal requirements, for example the Practice Direction on Pre-action Conduct, encourage parties to use alternative dispute resolution procedures as an alternative to litigation. Section 2 of the Competition Act 1998 prohibits agreements which preclude, restrict or distort competition. Section 18 of the Competition Act 1998 prohibits conduct which amounts to the abuse of a dominant position in the ma
Article 20	The requirements of Article 20(1) were transposed in the UK via pre-existing measures further details of which are provided below. The UK Government has established a number of financing facilities for energy efficiency improvement measures. These include the following financing facilities and mechanisms that stimulate investment in energy efficiency in the public sector: • Salix Finance Ltd provides interest free loans to the public sector for the installation of energy efficiency measures. The scheme received additional funding of £18 million in 2012/2013. • RE:FIT delivers energy efficiency improvements to the public sector estate, through a simplified procurement framework under which public sector organisations are able to procure energy conservation measures installed by energy service companies. Together with Local Partnerships, the Government is jointly funding the initial England-wide rollout of RE:FIT to the public sector. In the household sector, existing financing facilities and mechanisms include: • The Green Deal, pursuant to which the Green Deal Finance Company and Green Deal Providers offer finance to customers for the installation of energy efficiency improvements in their homes. Green Deal Plans attach to the electricity meter rather than the occupant and repayments under a Green Deal Plan must be no greater than the energy bill savings which are estimated to result from the energy efficiency improvements that have been installed. • The Energy Company Obligation, the UK's most recent supplier obligation. This works alongside the Green Deal, driving the uptake of measures that could not be fully financed under a Green Deal Plan. • The domestic Renewable Heat Incentive, which provides subsidies for the uptake of renewable heating technologies. Applicants for this scheme must comply with minimum energy efficiency requirements. • The Landlords Energy Saving Allowance, which enables landlords to claim tax relief of up to £1,500 per property for the costs of buying and installing energy-saving products. In the commercial sector financing facilities and mechanisms include: • The Green Investment Bank, set up by the Government in October 2012, has energy efficiency as one of its key investment priorities. • Climate Change Agreements provide energy-intensive industries with tax discounts in return for meeting energy efficiency targets. CCAs cover over 9,000 facilities. • The Enhanced Capital Allowances Scheme provides businesses with enhanced tax relief for investments in equipment that meets published energy-saving criteria. • In 2014 the Government piloted a £20 million Electricity Demand Reduction project. EDR aims to incentivise businesses and other organisations to install measures that deliver verifiable reductions in demand by offering a financial incentive for them to do so.

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Article 24	The United Kingdom has transposed Article 24 of the Directive into UK law via The Energy Efficiency (Building Renovation and Reporting) Regulations 2014. These Regulations came into force on 30 April 2014. The Energy Efficiency (Building Renovation and Reporting) Regulations 2014 place an obligation on the Secretary of State for Energy and Climate Change to fulfil the reporting requirements of Article 24(1), (2) and (6) in accordance with Annexes I, II and XIV. The United Kingdom's National Energy Efficiency Action Plan was published and submitted to the Commission by 30 April 2014. The 2014 NEEAP is publicly available at https://www.gov.uk/government/publications/the-uks-national-energy-efficiency-action-plan-and-building-renovation-strategy This NEEAP will be updated every three years, by no later than 30 April, in accordance with the Directive's requirements.

2.2. Non-legislative provisions

The UK has not adopted national co-operation mechanisms.

3. Future activities

Future changes will be considered in the context of the review of the Directive that is currently underway.

4. Relevant information

Details of all UK energy efficiency policy and programmes can be found at https://www.gov.uk/government/policies?organisations%5B%5D=department-of-energy-climate-change

For more information please email
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Legal Disclaimer

The Concerted Action for the Energy Efficiency Directive (CA EED) was launched by Intelligent Energy Europe (IEE) in spring 2013 to provide a structured framework for the exchange of information between the 29 Member States during their implementation of the Energy Efficiency Directive (EED).

For further information please visit **www.eed-ca.eu** or contact the CA EED Coordinator Lucinda Maclagan at **lucinda.maclagan@rvo.nl**

CONCERTED ACTION
ENERGY EFFICIENCY
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