

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.

1. 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 <u>National Energy Efficiency Action</u> 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 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 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





EED Article	Implementation status
	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 m³ 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 infrontructure
	infrastructure. 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
Article 8 (1)	obligated energy traders achieved 43 % of their total energy savings target. 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:
	 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; 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,





EED Article	Implementation status
	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.
Article 8 (4)	 SEDA is the authority responsible for the control on the energy auditors' qualification and for the quality of the conducted by them energy audits. According to the Energy Efficiency Law: All of the following shall be subject to mandatory energy efficiency audit: 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; enterprises within the meaning given by Article 3 of the Small and Medium-Sized enterprises within the meaning given by Article 3 of the Small and Medium-Sized Enterprises Act; industrial systems with annual energy consumption exceeding 3,000 MWh; 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 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: technical and metrological provision, development and modernization of the commercial metering devices; 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 -





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	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.
	\rightarrow <u>Natural Gas:</u> 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: 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; The procedure for switching and information that users of energy services do not owe additional payments when changing supplier; Actually consumed quantities and costs incurred with no obligation for extra payment for this service; Preparation of a final closure account following any change of supplier; 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; 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 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.





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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: - <u>"Energy Saver"</u> (by electricity supplier company); - <u>"The energy and the children" Campaign</u> (by electricity supplier company); - <u>Information video clips "Advices for the households"</u> (by natural gas supplier company); - <u>"Energy efficiency projects - funding sources" Brochure</u> (by natural gas
Article 14	supplier company). 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 <u>Assessment in</u> <u>2008</u> , 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.
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





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	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:
	Architecture or industrial and civil construction, or construction of buildings and facilities; Heating technology or power systems; Electrical Power Engineering and / or Electrical Power buildings
	 Power systems; Heating technology; Electrical power engineering or electric equipment engineering and/or Electrical Power supply and electric equipment engineering.
	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 <u>Ordinance under the EE Act</u> .
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





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	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 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 <u>EU Structural funds in</u> <u>Bulgaria</u>:

- 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".
- <u>Rural Development Programme 2014-2020</u> 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 <u>National Programme for Energy Efficiency of Residential Buildings</u>. 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 <u>Programme BG04 "Energy</u> <u>Efficiency and Renewable Energy"</u> 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: <u>http://seea.government.bg/en/</u> Ministry of Energy: <u>http://me.government.bg/en</u>

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): <u>http://whitecertificates.bg</u>

