

Ministry of Economic Affairs and Communications

National Energy Efficiency Action Plan

Estonia's Communication to the European Commission under Article 24(2) of Directive 2012/27/EU

26.05.2017

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INTRODUCTION

This Communication is drawn up on the basis of Estonia's information obligation as a European Union Member State, in accordance with Directive 2012/27/EU of the European Parliament and of the Council on energy efficiency (hereinafter the 'Directive'). In accordance with Article 24(2) of the Directive, by 30 April 2014, and every three years thereafter, Member States shall submit National Energy Efficiency Action Plans. Under Article 24(1) of the Directive, Estonia must also report on progress achieved towards national energy efficiency targets by 30 April each year as from 2013.

In submitting national energy efficiency action plans, Member States must follow the template for national energy efficiency action plans laid down in European Commission Implementing Decision C(2013) 2882 of 22 May 2013 on the basis of Article 24(2) and Part 2 of Annex XIV of the Energy Efficiency Directive. In drawing up its communication, Estonia has used the template for communicating energy efficiency action plans, which is defined as compulsory in the Implementing Decision.

This document offers an overview of Estonia's energy efficiency targets in the framework of the national energy policy, the effectiveness with which existing measures have been implemented, and policy measures for implementing the Energy Efficiency Directive.

The general direction of Estonia's energy policy to 2020 is described in the 'National energy development plan 2020'¹, which was prepared under the leadership of the Ministry of Economic Affairs and Communications and approved by the *Riigikogu* on 15 June 2009. In October 2016 the Estonian Government approved the new 'National energy development plan 2030'² and submitted it to the *Riigikogu* for approval. In elaborating the new energy development plan, various different energy development scenarios have been assessed, including scenarios that would influence changes in energy efficiency to 2030, and a vision up to 2050 has been laid out. Although the influences of possible measures have been thoroughly assessed³, no choices have yet been made regarding whether measures should in future be taken in the framework of the Energy Management Development Plan, and if so, what form they should take.

The Energy Sector Organisation Act⁴ (hereinafter 'ESOA'), which transposes the Directive and also lays down actions to be taken to achieve the national energy efficiency targets, was passed on 16 June 2016.

¹ '2020 National energy development plan'

https://www.mkm.ee/sites/default/files/elfinder/article_files/energiamaajanduse_arengukava_2020.pdf

² Draft National energy development plan 2030:

https://www.mkm.ee/sites/default/files/enmak_2030_eelnou_23.10.2014.pdf

³ All of the analyses performed in the preparation of the new '2030 Energy Management Development Plan' are available on the internet, at: <http://www.energiatalgud.ee/enmak>

⁴ The ESOA can be found on the *Riigi Teataja* [State Gazette] website: https://www.riigiteataja.ee/en/compare_original/502092016001

2. OVERVIEW OF NATIONAL ENERGY EFFICIENCY TARGETS AND ENERGY SAVINGS

2.1. National 2020 energy efficiency targets

- (1) Please state the indicative national energy efficiency target for 2020 as required by Article 3(1) of the EED (EED Article 3(1), Annex XIV Part 2.1).

Energy efficiency and savings policies are part of Estonia's energy policy. The foundations of Estonia's energy policy are described in the '2020 National energy development plan'. The existing long-term energy efficiency target⁵ for 2020 is laid out in the 'Estonia 2020' competitiveness strategy approved by the Estonian government on 28 April 2011. Pursuant to Guideline 5 of the Annex to European Union Council Recommendation 2010/410/EU, the Government of Estonia has decided that Estonia's 2020 objective will be to maintain final energy consumption at the 2010 level (2866 KTOE [thousand tonnes of oil equivalent], i.e. 120 PJ, forecast). The updated 'Estonia 2020' Competitiveness Strategy' approved by the Estonian government in April 2013 establishes the energy efficiency target that final energy consumption in 2020 should not exceed the 2010 level. According to Statistics Estonia, final energy consumption in 2010 was 119 PJ.

- (2) Please indicate the expected impact of the target on overall primary and final energy consumption in 2020 and explain how, and on the basis of which data, this has been calculated (*Article 3(1) EED*).

The Estonian energy efficiency target described in the above subsection is set as the final consumption figure as defined by Statistics Estonia. Given the base scenario for forecast final energy consumption (i.e. that final energy consumption will be 137 PJ in 2020) and the data on final energy consumption in 2010 which are set out in the 'Renewable Energy Plan 2020', which was approved by the Government on 26 November 2010, this target means that in 2020 Estonia will achieve savings of 18 PJ per year or 13.1% as a result of implementing the energy efficiency policy objective.

- (3) Please provide an estimate of primary energy consumption in 2020, overall and by sectors (*EED Article 24(2), Annex XIV Part 2, point 2*).

The forecast primary energy consumption in 2020 calculated on the basis of the target amounts to a total of 272 PJ. The calculation of estimated primary energy consumption is described in greater detail in Estonia's Communication of April 2013 to the Commission, entitled 'Estonia's energy efficiency policy objective: Estonia's Communication to the European Commission under Articles 3(1) and 24(1) of Directive 2012/27/EU'. Other important data on predicted energy production and consumption in Estonia in 2020 are

⁵ Although the 'Estonia 2020' Competitiveness Strategy uses the concept 'national energy savings target', the concept 'energy efficiency target' is used hereinafter in its place, in order to ensure terminological consistency in this document.

presented in the following table:

Estimated energy consumption in 2020	Quantities, PJ
Total primary energy consumption in 2020	272
Energy from fuels used in electricity generation (electricity generated at thermal power stations)	82.1 – 93.0
Electricity generation output (electricity generated at thermal power stations)	29.6 – 31.6
CHP primary energy	25.4 – 26.2
CHP transformation output – thermal energy	5.1–5.6
CHP transformation output – electricity	14.7 – 14.8
Network losses (all fuels)	6.1 – 6.8
Final energy consumption, total	119.1
Final energy consumption – industry and agriculture	27.4
Final energy consumption – transport	38.4
Final energy consumption – households	39.5
Final energy consumption – services	13.8

2.2. Additional energy efficiency targets

Please list any additional national targets related to energy efficiency, whether addressing the whole economy or specific sectors (EED Annex XIV Part 2, point 1).

This Communication does not examine topics connected with the implementation of Directive 2010/31/EU, including objectives connected with nearly zero-energy buildings.

Additional national targets connected with energy efficiency in particular sectors are described in the national ‘Operational programme for Cohesion Policy Funds 2014-2020’⁶. Chapter 2.6.2.1. of the document describes the operational programme’s performance indicators (for instance calculated average energy savings in renovated apartment buildings), and chapter 2.6.3.5. the operational programme's output indicators (for instance the number of renovated street lights, the area of renovated buildings, the number of construction projects for nearly zero-energy buildings, average annual CO₂ reduction).

⁶ <https://www.strukturifondid.ee/sites/default/files/rakenduska.pdf>

2.3. Primary energy savings

Please provide an overview of the primary energy savings achieved by the time of reporting and estimations of expected savings for 2020 (*EED Article 3(1), Article 24(2), Annex XIV Part 2, point 2(a)*).

The following table offers an overview of forecast primary and final energy savings:

	Primary energy savings (PJ)	Final energy savings (PJ)
2012 - Achieved		4 – 6
2016 - forecast		12
2020 - forecast	18 – 20	18

2.4. Final energy savings

- (1) For the purposes of Directive 2006/32/EC, in the first and the second NEEAP, please provide information on the achieved final energy savings and forecast savings in energy end-use by 2016 (*Article 4(1) and (2) of Directive 2006/32/EC; EED Annex XIV Part 2, point 2(b)*).

General information concerning final energy savings and a forecast of final energy savings by 2016 are provided in point 2.3.

- (2) For the purposes of Directive 2006/32/EC, in the first and the second NEEAP, please provide the measurement and/or calculation methodology used for calculating final energy savings (*EED Annex XIV Part 2, point 2(b), second paragraph*).

In order to determine the savings from primary and final energy consumption, we used the calculation models developed at the Ministry of Economic Affairs and Communications, which have previously been applied in preparing communications submitted to the Commission [*Estonia's Renewable Energy Action Plan 2020* (published 2010), *Estonia's energy efficiency policy objective: Estonia's Communication to the European Commission under Articles 3(1) and 24(1) of Directive 2012/27/EU* (published 2013)] and national energy statistics [Statistics Estonia data on energy consumption].

These models are based on forecast energy consumption for various sectors, taking into account past final energy consumption and the influence of possible energy efficiency measures. In models applied since 2013, the calculation of final energy consumption has taken into account climatic conditions, economic development, the intensity of building reconstruction and new construction and the rate of abandonment of buildings.

In calculating savings from primary energy consumption, we took into account energy losses and energy transformation in the energy sector, based on forecast changes in the energy sector (for instance changes in the structure of oil shale use, changes due to the introduction of CHP

plants, changes in the structure of electricity and thermal energy generation, and changes in distribution network and transmission network losses).

Savings in final energy consumption have been calculated as the difference between the 2009 base forecast of final energy consumption in 2012 and 2012 private consumption figures adjusted to take climate data into account. Forecasts of final energy savings for 2016 and 2020 were determined using the following data:

- The 2009 base forecast for final energy consumption for the years 2016 and 2020;
- The forecast of final energy consumption for 2016 and 2020 calculated on the basis of the energy efficiency scenario drawn up in 2013;
- an estimate of national measures as a proportion of all energy efficiency measures to be implemented.

3. POLICY MEASURES REQUIRED TO IMPLEMENT THE ENERGY EFFICIENCY DIRECTIVE

3.1. Horizontal measures

3.1.1. Energy efficiency obligation schemes and alternative policy measures (EED Article 7, Annex XIV, Part 2, point 3.2)

- (1) Please provide information on the overall amount of energy savings over the obligation period in order to meet the target set in accordance with Article 7(1), and, if applicable, on how the possibilities listed in Article 7(2) and (3) are used (*EED Article 7, Annex XIV Part 2, point 2.(a)*).

The overall amount of energy savings over the obligation period in order to meet the target set in accordance with Article 7(1) represents a total of **9 468 GWh** in Estonia during the period from 1 January 2014 to 31 December 2020.

Estonia will make use of the possibilities listed in Articles 7(2) and (3) within the ranges prescribed in the Directive.

The following options for meeting the overall energy efficiency obligation are available:

- Article 7(2)(a) (reduction of the rate of the energy efficiency obligation in the first years of implementing the obligation). By applying this relaxation measure, overall energy savings in the obligation period could be reduced by **1 972 GWh**.
- Article 7(2)(b) (the exclusion of industrial activities listed in Annex I to Directive 2003/87/EC from the calculation of the amount of energy sold). Nine industrial installations in Estonia are part of the European Union's Emissions Trading System, and their gross energy consumption in 2012 was **2 294 GWh** in total, according to Statistics Estonia.⁷
- Article 7(2)(c) (accounting of energy savings achieved in the energy transformation, distribution and transmission sectors). A study of energy savings in district heating carried out by the Estonian Development Fund has revealed that there are extensive losses along the heating pipelines (the average loss is 21%) in areas with district

⁷ Data obtained from Statistics Estonia through a separate search.

heating, and most functioning boiler units are quite old. On that basis, there is significant potential for energy savings in district heating networks. Based on the results of the research, the potential energy savings from the complete renovation of the heating pipelines would amount to as much as **542 GWh**.

- Article 7(2)(d) (accounting of newly implemented actions). Estonia plans to submit updated information concerning the possibility of counting newly implemented actions in the communication to be submitted under Article 7(3) of the Directive.
- Taking into account the restriction specified in Article 7(3), the overall energy efficiency obligation may not be reduced by more than **2367 GWh**.

By implementing the possibilities and the restriction listed above, Estonia's overall energy efficiency obligation will be 7101 GWh for the period 2014-2020.

- (2) Please provide a short description of the national energy efficiency obligation scheme as referred to in Article 7(1) including information on how monitoring and verification is ensured (*EED Article 7(1) and (6), Article 20(6), Annex XIV Part 2.3.2*).

The grounds for establishing an energy efficiency obligation scheme are laid down in the ESOA. Chapter 6 of the ESOA states the following:

- the Government of the Republic of Estonia is the authority that establishes the amount of the general energy efficiency obligation;
- the reduction of the amount of the general energy efficiency obligation;
- those responsible for implementing the general energy efficiency obligation;
- policy measures facilitating the implementation of the general energy efficiency obligation and requirements for policy measures. The following types of policy measures may be applied:
 - pollution charges and excise taxes that have the effect of reducing end-use energy consumption;
 - financing schemes within the meaning of the State Budget Act that help to implement energy-efficient technology or techniques and have the effect of reducing end-use energy consumption;
 - legislation that helps implement an energy-efficient technology or techniques and has the effect of reducing end-use energy consumption;
 - voluntary agreements that help to implement an energy-efficient technology or techniques and have the effect of reducing end-use energy consumption;
 - standards and norms that aim at improving the energy efficiency of products and services, including buildings and vehicles;
 - energy labelling schemes;
 - training and education that help to apply an energy-efficient technology or techniques and have the effect of reducing end-use energy consumption.
- accounting of the impact of energy saving measures;
- the obligation of major energy utilities (primarily network operators and undertakings that sell fuel) to provide information;

- the energy efficiency obligation apportionment plan;
- Monitoring of the effectiveness of the implementation of policy measures is carried out by the energy savings coordinator, and this is based on undertakings' annual reports.
- State supervision is exercised by the Competition Authority and the Technical Regulatory Authority.

(3) Please provide information on alternative policy measures adopted in application of Article 7(9) and Article 20(6) including information on how monitoring and verification is ensured, and how their equivalence is ensured (*EED Article 7(9) and (10), Article 20(6), Annex XIV Part 2.3.2*).

The following alternative policy measures will be implemented in Estonia during the obligation period:

1. Energy taxes (excise taxes and value added taxes on electricity, natural gas and other fuels);
2. Environmental fees (CO₂ taxes and other resource fees);
3. Funding schemes.

The forecast contribution of alternative policy measures to achieving the requirements laid down in Article 7(1) of the Directive are described in the following table:

Policy measures	Total forecast energy savings over entire obligation period, GWh
1. Energy and CO ₂ taxes	
- excise duty and VAT on natural gas	930
- excise duty and VAT on electricity	752
- excise duty and VAT on fuels used in district heating	918
- excise duty and VAT on petrol	1 086
- excise duty and VAT on light fuel oil and diesel fuel	1 992
- VAT on firewood and wood waste	535
2. Funding schemes	
- support for the reconstruction of apartment blocks	372
- resource efficiency in undertakings	213
- upgrading of street lighting	54
- reorganisation of special welfare institutions	19
- an institutional development programme for research and development institutions and higher education institutions	11

- investment support for primary health centres in infrastructure nodes	9
- the modernisation of sustainable schools as part of the reorganisation of the school network	7
Total for all measures	6 898

The information used to predict the effectiveness of policy measures and information on calculation methods are presented in the study⁸ appended to the communication submitted to the European Commission on 5 December 2013, entitled ‘Estonia’s measures to perform the energy efficiency obligation: Estonia's Communication to the European Commission under Article 7(9) and Annex V point 4 of Directive 2012/27/EU. In the case of excise duties on energy, we have taken into account the increases in excise duties, which entered into force by 28 April 2017 at the latest, through amendments to the Alcohol, Tobacco, Fuel and Electricity Excise Duty Act⁹.

The table shows that the planned alternative policy measures will not cover the entire obligation required under Article 7(1) and taking into account the possibilities and restrictions laid down in Article 7(2) and (3). The following possibilities are being considered to cover the shortfall in achieving the objective (7101 GWh over the entire obligation period, taking into account relaxation measures):

- 1) implementing additional financing plans;
 - 2) amending energy and CO₂ taxes;
 - 3) implementing an energy efficiency obligation scheme.
- (4) Where applicable, please present published energy savings achieved as a result of the implementation of the energy efficiency obligation scheme (*EED Article 7(6) and (8), Annex XIV Part 2, point 2(a)*). .

Estonia has not previously implemented an energy efficiency obligation scheme.

- (5) Where applicable, please present published energy savings achieved as a result of the implementation of alternative policy measures (*EED Article 7(10), Annex XIV Part 2, point 2(a)*).

Information regarding energy savings achieved through the application of alternative policy measures is presented in the communication to be submitted pursuant to Article 7(3) of the Directive.

- (6) Please provide details of the national coefficients chosen in accordance with EED Annex IV (*EED Annex XIV Part 2, point 3.2*).

In setting coefficients, Estonia is guided by Annex IV to the Directive,

⁸ http://ec.europa.eu/energy/efficiency/eed/doc/artide7/2013_et_eed_artide7_et.pdf

⁹ Alcohol, Tobacco, Fuel and Electricity Excise Duty Act, 4 December 2002, <https://www.riigiteataja.ee/akt/124122016020>

- (7) Please provide information on any method, other than the one provided in EED Annex V part 2(e), used to take into account the lifetimes of energy savings, and explain how it is ensured that this leads to at least the same total quantity of savings (*EED Annex V, point 2(e)*).

Estonia provided the European Commission an overview of the planned implementation of the criteria specified in Article 7(10) and Annex V to the Directive in the communication¹⁰ and appended study, which were sent to the Commission on 5 December 2013.

Regulation No 65 of the Minister for Economic Affairs and Communications of 26 October 2016, entitled ‘Rules for calculating energy savings’¹¹, describes various methodologies for calculating energy savings and bases for calculating the lifetime of energy savings. The following methods are used to calculate energy savings:

- the deemed savings method;
- the metered savings method;
- the scaled savings method;
- the questionnaire-based savings method;

The calculation of energy savings shall take into account the lifetime of savings. Pursuant to Regulation No 65, this may be done:

- by adding the total energy savings achieved from all individual actions taken between the date of implementation of each measure and 31 December 2020.
- through the application of other methods for calculating energy savings, which yield roughly the same results for absolute energy savings as those obtained using the method described in the above point. In such cases, it must be ensured that the total amount of energy savings calculated using alternative methods for calculating the lifetimes of measures should not exceed the total amount of energy savings that would be obtained by adding the total energy savings achieved from all individual actions taken between the date of implementation of each measure and 31 December 2020.

3.1.2. *Energy audits and management systems (EED Article 8)*

Please provide an overview of measures planned or already undertaken to promote energy audits and energy management systems, including information on the numbers of energy audits carried out, specifying those carried out in large enterprises, with an indication of the total number of large companies in the Member State territory and the number of companies to which Article 8(5) is applicable (*EED Annex XIV Part 2, point 3.3.*).

To date, the following measures have been undertaken to promote energy audits and management systems:

- Article 8 of the Directive was transposed in Estonian law with the entry into force of

¹⁰ Estonian measures to implement the energy efficiency obligation: Estonia's Communication to the European Commission under Article 7(9) and Annex V point 4 of Directive 2012/27/EU.

¹¹ The ‘Rules for calculating energy savings’ can be found here: <https://www.riigiteataja.ee/akt/128102016018>

- the Energy Sector Organisation Act ('ESOA') in 2016. Chapter 7, Section 27 of the ESOA lays down the requirements for energy audits and management systems;
- minimum requirements for energy audits are established by regulation of the Minister for Economic Affairs and Infrastructure¹²;
 - requirements for energy audits of residential buildings are established by regulation of the Minister for Economic Affairs and Communications¹³;
 - the launching and development of a system for granting qualifications to energy auditors. More precise information regarding the system for the granting of qualifications is available on the website of the Estonian Association of Heating and Ventilation Engineers;¹⁴;
 - the establishment, pursuant to the Building Act, of special requirements for enterprises involved with energy audits. All enterprises involved with energy audits must possess a contractual obligation with a professionally qualified energy auditor and be currently registered in the Register of Economic Activities¹⁵. A list of enterprises involved with energy audits is also published on the website of the Estonian Qualification Authority — known as *Kutsekoda*¹⁶.
 - state support for energy audits of apartment buildings. The conditions for providing this support are laid down in a Regulation of the Minister for Economic Affairs and Communications¹⁷; the funding was issued by SA KredEx;

The following table presents an overview of the number of energy audits that have been performed:

Number of energy audits performed during the period covered by the national energy efficiency action plan (EED Annex XIV, Part 2, point 3.3(a)):	87 ¹⁸
- Energy audits performed in 2014-2017 (covers only building energy audits supported by SA KredEx)	
Number of energy audits performed in large enterprises during the same period (<i>EED Annex XIV, Part 2, point 3.3(b)</i>)	No data available
Number of large enterprises to have carried out energy audits under a voluntarily agreed schedule (<i>EED Annex XIV, Part 2, point 3.3(c)</i>)	0 ¹⁹

¹²Regulation No 76 of the Minister for Economic Affairs and Communications of 22 December 2016,

<https://www.riigiteataja.ee/akt/123122016003>

¹³ Regulation No 16 of the Minister for Economic Affairs and Communications of 4 March 2014 entitled 'Formal requirements for energy audit reports of residential buildings and the rules for issuing the reports',

<https://www.riigiteataja.ee/akt/111032014004>

¹⁴ <http://www.ekvy.ee/et/kutse-andmine/energiatohususe-kutse>

¹⁵ <http://mtr.mkm.ee/>

¹⁶ <http://www.kutsekoda.ee/et/kutseregister/kutsetunnistused>

¹⁷ Regulation No 48 of the Minister for Economic Affairs and Communications of 12 June 2008, entitled 'Conditions and rules for conducting energy audits and expert assessments of buildings and for supporting the preparation of design documentation',

<https://www.riigiteataja.ee/akt/105042012008?leiaKehtiv>

¹⁸ Data from SA Kredex, as at 26 April 2017. In all of the remaining cases, audits were prepared earlier.

¹⁹ There are no voluntary agreement programmes in Estonia under which large enterprises could carry out energy audits.

Total number of large enterprises	Approximately 270 ²⁰
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3.1.3. Metering and billing (EED Articles 9–11)

Please provide a description of the implemented and planned measures adopted or planned to be adopted in metering and billing (*EED Article 9, Article 10, Article 11, Annex XIV Part 2, point 2. first sentence*).

Many of the requirements stipulated in the Directive have already been implemented in existing legislation. Articles 9, 10 and 11 of the Directive are transposed by Chapter 5 of the ESOA, which lays down requirements for the measurement of energy consumption and for the submission of information for the improvement of end-user energy efficiency.

The following measures concerning metering and billing have been implemented in legislation:

- The **Electricity Market Act** (hereinafter 'EMA')²¹ lays down the grounds for metering and requirements for electricity bills.

The most important of these are:

- A system operator must ensure that the amounts of electricity supplied to and from its network are determined and that metering data are collected and then processed by means of metering devices conforming to the technical requirements established by legislation, in accordance with legislation and the contract for the provision of network services (Section 67(1) EMA). The technical requirements for metering devices are specified in the Grid Code²². Section 39 of the Grid Code lays down the requirements applied to measuring devices in the case of electricity consumption at a voltage below 1000 V. If the fuse of the consumer's connection point is up to 63 A, the measuring device must allow the measuring of active energy in kilowatt-hours (kWh). From 1 January 2017 the measuring device must allow the measuring of active energy using a remote reading device. As of 1 January 2013, the metering devices of consumers with connection points above 63 A must allow active and reactive energy to be measured using a remote reading device. The Code also specifies that as of 1 January 2014 active energy must be measured in all apartments using a remote reading device. Under Section 42(7)(1) of the Grid Code, a remote reading device must enable the consumption data registered during each trading period to be transmitted to the system operator

²⁰ Data from the Commercial Register, as of 2016. The number of undertakings is an estimation, since the number of employees, turnover and the volume of the annual balance sheet may have changed by the date of publication of the action plan.

²¹ Electricity Market Act, 11.02.2003, <https://www.riigiteataja.ee/akt/1289467?leiaKehtiv>

²² Government of the Republic Regulation No 184 of 26 June 2003, entitled 'Grid Code', <https://www.riigiteataja.ee/akt/129122012061?leiaKehtiv>

- at least once every 24 hours;
- - A network operator must ensure that a user of network services is notified of meter readings and the resulting calculation of the charge for network services in accordance with legislation and the relevant contract (Section 67(5) EMA);
 - - An information exchange platform is in use in the Estonian electricity market. An information exchange platform is a digital environment for information exchange in the electricity market for the purpose of transmitting metering data and performing the obligations imposed on market participants by law. The grounds for the functioning of the information exchange platform are prescribed in Section 42¹ of the EMA and in Chapter 7¹ of the Grid Code;
 - The requirements for invoices to be submitted to consumers and the information to be submitted with invoices are listed in Section 75¹ of the EMA.
 - Consumers may obtain information regarding their consumption from the information exchange platform (Section 45⁶ (3)(4) of the Grid Code.
- The **Natural Gas Act**²³ (NGA) regulates the importing, transmission, distribution and sales-related activities through the gas network, and connection to the network. The most important of these are:
- - That 'a network operator shall ensure the metering of all quantities of gas consumed from the network and the collection and processing of meter readings and shall keep relevant records'. (Section 24(1) NGA);
 - Unless agreed otherwise with the customer, the gas undertaking presents to the customer at least once a month an invoice for the natural gas consumed by and for the network service provided to the customer. No additional fee is charged for the presentation of the invoice. (Section 9(5) NGA).
- The **District heating Act**²⁴ (DHA) regulates the generation and distribution of thermal energy and activities connected with its sale in the district heating network. A system operator must organise the metering of heat consumed from the network and keep corresponding records, unless agreed otherwise (Section 15(1) NGA). Apartment buildings are important consumers of district heating services. Heating costs in such buildings are distributed on the basis of the Apartment Associations Act or the Apartment Ownership Act. These Acts lay down the principle that the distribution of costs should be proportionate to the size of the apartment, but a building's residents may agree to change the formula for distributing costs (for instance if they apply an individual cost-calculation system).

In addition, the Ministry of Economic Affairs and Communications has carried out a study into the principles for cost distribution when individual cost calculation systems are applied.

²³ The Natural Gas Act, 29.01.2003, <https://www.riigiteataja.ee/akt/127969487leiaKehtiv>

²⁴ The District Heating Act, 11.02.2003, <https://www.riigiteataja.ee/akt/112072014060?leiaKehtiv>

The study was published on the website of SA KredEx²⁵.

3.1.4. Consumer information programmes and training (EED Articles 12 and 17).

Please provide information on measures adopted or planned to be adopted to promote and facilitate efficient use of energy by SMEs and domestic customers (*EED Article 12, Article 17, Annex XIV Part 2, point 2, first sentence*).

Adopted measures to promote and facilitate efficient use of energy by domestic customers:

- support schemes for the reconstruction of apartment buildings, the primary objective of which is to ensure their energy efficiency. Preferential loans, guarantees and support are provided under support schemes organised by the national government. Potential beneficiaries will find information on support schemes on the SA KredEx website²⁶. Estonia's biggest banks (Swedbank, SEB) are also active in implementing support schemes, because beneficiaries' requirement for own contribution is often fulfilled through a bank loan;
- support schemes for improving the energy efficiency of small residential buildings. Potential beneficiaries will find information on support schemes on the SA KredEx website²⁷.
- advertising campaigns have been organised in order to inform residents about energy saving, for instance the Energiatark ('Energy Wise') campaign²⁸;
- the exemption of interest on loans for home renovation from income tax, pursuant to Sections 25(1) and (2) of the Income Tax Act. Information regarding the utilisation of tax benefits is available on the web page of the Tax and Customs Board²⁹;
- in addition, energy companies have developed consumer-oriented information-sharing environments; these are accessible via the energy companies' websites³⁰.

The efficient use of energy by SMEs is promoted through measures whose overall objective is to raise companies' environmental awareness. Information days are organised for companies, and information is also provided online³¹. The Ministry of the Environment applies the measure 'Resource efficiency in undertakings' using resources provided for in the 'Operational programme for Cohesion Policy Funds 2014-2020'. The measure covers four actions: raising awareness, training specialists, carrying out audits or analyses of resource use, and investment. The target groups of these activities are all companies, with a focus on small

²⁵ Reducing the consumption of heating energy in apartment buildings by raising consumer awareness and changing patterns of behaviour, based on the measurement of individual heating costs,

http://www.kredex.ee/public/Uuringud/Allokaatorid_uuring_191112.pdf

²⁶ <http://www.kredex.ee/korteriuhistu/korteriuhistu-laenu-ia-toetused/renoveerimislaen-3/>,

<http://www.kredex.ee/korteriuhistu/korteriuhistu-laenu-ia-toetused/korterelamulaenu-kaendus/>,

<http://www.kredex.ee/korteriuhistu/korteriuhistu-toetused/rekonstrueerimise-toetus/>

²⁷ <http://www.kredex.ee/eramaja/> <http://www.kredex.ee/eraisik/eraisiku-laenu-ia-teenused/kodutoetus-lasterikastele-peredele-2/>

²⁸ <http://energiatark.ee/>

²⁹ <http://www.emta.ee/index.php?id=26872>

³⁰ See for example <http://www.soojus.ee/vaart-info/energiasaast/>, <https://www.energia.ee/et/tark-tarbimine/kokkuhoid>

³¹ <http://eco-net.ee/>, <http://www.ekja.ee/>

and medium-sized enterprises and the manufacturing industry.³²

3.1.5. Availability of qualification, accreditation and certification schemes (EED Article 16)

Please provide information on existing or planned certification or accreditation schemes or equivalent qualification schemes (including, if applicable, training programmes) for providers of energy services, energy audits, energy managers and installers of energy-related building elements as defined in Article 2(9) of Directive 2010/31/EU (EED Article 16, Annex XIV Part 2, point 3.7.).

2.

The obligation to regulate vocational activity in the areas of both energy and construction is laid down in the Professions Act³³ (hereinafter 'PA'). The parties to the professional qualifications system are listed and their tasks are described in Chapter 2 of the PA, which is entitled 'Parties to professional qualifications system'. In accordance with the Act, the Ministry of Education and Research is the institution that organises the development of an integral and structured professional qualifications system, and in accordance with Section 8(6) of the Act, the list of regulated areas of professional activity are established by Government of the Republic Regulation No 165 of 11 December 2008, entitled 'The list of areas of professional activity, the names of professional councils, the procedure for the formation and termination thereof, the organisation of activities, the procedure for appointment of representatives of institutions, and the duration of their appointments'.³⁴ Section 1(2)(1) of this Regulation (Areas of professional activity) lays down the conditions for architecture, geomatics, construction and real estate and Section 1(2)(2) pertains to electricity, mining and the chemical industry.

More specifically, the system of professional qualifications functions as follows: Pursuant to Section 3 of the PA, the Government forms professional councils which, in accordance with Section 4(3) of the Act, consist of the representatives of employees, employers and professional associations of that area of professional activity and representatives of the state. The councils put forward proposals for vocational standards and approve drafted vocational standards. The organisation of the activities of professional councils is prescribed in Chapter 3 of the PA. Minutes are kept of the meetings of professional councils, and these are appended with materials connected with decisions made, as well as the written positions of members of the professional council (Section 12(1) of the PA). Professional councils publish information concerning bodies that award professional qualifications in respect of each professional standard.

The recognition of certificates issued in other Member States in accordance with the criteria is governed by the Recognition of Foreign Professional Qualifications Act.³⁵

The professional qualifications that have been confirmed in Estonia and meet the requirements

³² <http://www.envir.ee/et/eesmargid-tegevused/keskkonnakorraldus/ressursitohusus>

³³ Professions Act, 22.05.2008, <https://www.riigiteataja.ee/akt/123032015261>

³⁴ Government of the Republic Regulation No 165, <https://www.riigiteataja.ee/akt/13091006?leiaKehtiv>

³⁵ Recognition of Foreign Professional Qualifications Act 19.06.2008, <https://www.riigiteataja.ee/akt/12988434?leiaKehtiv>

of Article 16 of the Directive are listed below:

- energy service providers, energy auditors and energy managers:
 - - energy auditor (level 6), diploma specialist in energy performance of buildings (level 7), chartered specialist in energy performance of buildings (level 8);
 - - electrical engineer (level 6), diploma electrical engineer (level 7), chartered electrical engineer (level 8);
 - - diploma thermal engineering engineer (level 7), chartered thermal power engineering engineer (level 8);
 - - engineer in heating, ventilation and air conditioning (level 6), diploma engineer in heating, ventilation and air conditioning (level 7), chartered engineer in heating, ventilation and air conditioning (level 8);
- installers of the energy-related building elements defined in Article 2(9) of Directive 2010/31/EU:
 - plasterer (level 4);
 - oven builder / chimney repairer (level 4), master oven builder / chimney repairer (level 5);
 - heat pump installer (level 4);
 - solar heating system installer (level 4);
 - plumber III;
 - electrician (levels 3-5).

All of the occupational standards for the above-mentioned occupations are published on the web page of the Estonian Qualifications Authority³⁶.

3.1.6. Energy Services (EED Article 18)

- (1) Please provide information on measures adopted or planned to be adopted for the promotion of energy services. The description must include an internet link to the list of available energy service providers and their qualifications (*EED Annex XIV Part 2.2 first sentence, Annex XIV Part 2.3.8*).

The following measures have been implemented in Estonia to promote energy services:

- a system of professional qualifications has been developed and applied, with the objective of creating a network of qualified specialists offering energy services in Estonia. The functioning of the Estonian professional qualifications system is described in greater detail in part 3.1.5 of this document, which also lists professions in which a provider of energy services could be considered to possess competence;
- in order to stimulate the market for energy services, Estonia has supported energy audits of apartment buildings. The conditions for providing this support are laid down in a Regulation of the Minister for Economic Affairs and Communications³⁷; the

³⁶ <http://www.kutsekoda.ee/et/kutseregister/kutsestandardid/otsing>

³⁷ Regulation No 48 of the Minister for Economic Affairs and Communications of 12 June 2008, entitled 'Conditions and rules for conducting energy audits and expert assessments of buildings and for supporting the preparation of design

funding was issued by SA KredEx;

- analyses and projects have been carried out in order to help implement better solutions for providing energy services in Estonia³⁸.

In order to promote energy services in Estonia, we plan to transpose the requirements laid down in Article 18 of the Directive, and continue to develop the provision of project-based energy services and increase the reliability of energy services in Estonia from the point of view of consumers.

Data concerning enterprises operating in different activity areas can be found in the register of economic activities³⁹, in which enterprises must provide notification of their economic activity or information concerning enterprises possessing licences is distributed. If an enterprise's energy service provider also operates as a provider of financial services, it must possess a licence to operate as a financial institution in the register of economic activities. As at May 2017, there are 150 financial institutions operating in Estonia.

- (2) Please provide a qualitative review of the national market for energy services describing its current status and outlining future market developments (*EED Article 18 I(e)*).

Energy service companies (ESCO) are not a significant market segment. In 2013 SA Keskkonnainvesteeringute keskus (the Environmental Investment Centre) carried out a study entitled 'An analysis of the possibilities for creating a market of energy service enterprises', which revealed that without support measures, the ESCO business model might not be sustainable in Estonia, but combined with support, the concept could be implemented.

The following are some of the more important excerpts from the study:

From the introduction to chapter 2.4 of the analysis:

There are only a few companies in Estonia that advertise themselves as energy service enterprises. None of these operates as an energy services undertaking in the sense that payment for services provided is connected with savings to be achieved in the future. Instead, the purchaser pays for the investment, and if this results in energy savings that exceed expectations, in some cases the savings are divided between the client and the energy service undertaking.

In chapter 2.4 of the analysis, the current situation in Estonia, broken down by client segments, was evaluated as follows:

1. The housing market. Dwellings in Estonia are privately owned, and each apartment property has an owner. A small portion of apartments belong to the state or to local governments, but their proportion is decreasing. The rental market in Estonia is estimated to represent about 15% of the total housing market, which is quite small in comparison with the European average. Most apartment buildings have an apartment association founded by the apartment owners in the building, which jointly represents

documentation', <https://www.riigiteataja.ee/akt/105042012008?leiaKehtiv>

³⁸ http://www.praxis.ee/wp-content/uploads/2015/08/KEM-FI-eelhindamine_EY_Praxis.pdf

³⁹ <https://mtr.mkm.ee/>

apartment owners. The board is the body that represents and manages the affairs of an apartment association, while the supreme decision-making and management body is the general meeting, which passes decisions by a majority vote. Obligations undertaken by the apartment association are connected with apartment ownership, i.e. in the event of the sale of the apartment ownership, the obligation will remain tied to the apartment, and will be transferred to the new owner. In connection with the above, there exist sufficient preconditions for the operation of energy services undertakings in the housing market in Estonia. Other markets have, however, been more attractive to energy service undertakings.

2. The market for commercial and public sector buildings. In the commercial sector, buildings also belong to private owners, and as a result there are all of the prerequisites for energy service undertakings to operate in this area. In the case of public sector buildings, the buildings belong to the state, to local governments or to private companies established by them. There exist preconditions for carrying out energy savings projects using the model of energy services undertakings, but one must take into account the various restrictions arising from the legal environment. The service sector's high consumption of thermal energy and electricity is also caused by the condition of the buildings in the commercial sector. It is usually not the building's owner, but its renter, that represents the service sector. As a result, building owners are not interested in investing in energy savings, because their clients are forced to pay the energy costs in any case. Here one can also find the preconditions for a market for energy services, yet the development of the market for energy services goes hand in hand with the development of the real estate sector – if the quality of the rental space increases (and energy consumption falls) as a result, the owners of the rental space will be forced to invest in energy savings themselves. Solutions similar to the energy services model have now been offered to commercial and real estate undertakings in Estonia, and Riigi Kinnisvara AS has added energy efficiency clauses to its long-term rental contracts.

3. The market for industrial clients. The Estonian industrial sector is very energy-intensive, which has an influence on both industrial processes and buildings. In comparison with Finland, the proportion of labour costs in various branches of industry is higher in Finland than in Estonia, but energy costs are higher in Estonia in almost all branches of industry. In the Estonian industrial sector, energy services undertakings would also help reduce energy costs, improve energy efficiency, manage risk and raise competitiveness. In Estonia today there are only a few examples (mainly in food production) of an energy service being used. In the case of Estonia, various experts estimate that there could be significant potential for energy savings in both industrial processes and industrial buildings.

Chapter 3.2.1 of the analysis:

There is a tendency in energy savings projects for clients to be more prepared to undertake projects in which they firstly have a better understanding of the methodology, and secondly if the payback periods are acceptable (short, and up to a

maximum of 5 years) The following are the main areas in which one can speak of enterprises that provide energy services participating in achieving energy savings:

1. Lighting – both indoor and outdoor lighting and street lighting. These projects involve using more effective lamps and lamps that are better suited to various environments, as well as using programmable lamps and sensor-equipped lamps.
2. Heating, ventilation and air conditioning systems (HVAC). These projects involve optimising HVAC systems, using heat pumps, waste heat recovery, etc.
3. Insulating buildings. These projects involve minimising buildings' energy costs, by using comprehensive renovation – insulating the building envelope, installing HVAC systems, changing the windows, insulating roofs and basements, installing electricity generation devices that use sustainable energy (solar panels on rooftops), etc.
4. Automation and control systems. These projects involve optimising the control systems of buildings and processes, consuming energy at times when it is less expensive, introducing sensor solutions, etc.

Chapter 4 of the analysis describes the most important barriers to the provision of energy services in Estonia, namely:

- regulative/administrative problems:
 - the capacity to make public sector investments, and the legal aspects of off-balance sheet investment;
 - the lack of experience in procurement.
- technical problems:
 - clients do not feel like equal partners; above all, they lack technical knowledge and understanding;
 - clients' uncertainty about the future;
 - the technical nuances of energy service contracts.
- problems connected with financing:
 - overall awareness in the area of energy saving is low;
 - energy service enterprises' capacity to finance projects;
 - for Estonian banks and financial institutions, the system of energy services is novel;
 - clients' distrust of energy services – this pertains to financial guarantees and risks.

The full report is available on the internet⁴⁰.

In 2014 the Ministry of Finance carried out a study in cooperation with AS PricewaterhouseCoopers Advisors on the topic 'The partial ex ante assessment of the proposed financial instruments to be funded from the cohesion policy funds in the period 2014-2020'.⁴¹

⁴⁰ http://www.energiatalgud.ee/img_auth.php/0/08/ESCO_analyys.pdf

⁴¹ https://energiatalgud.ee/img_auth.php/d/dd/Rahandusministeerium_Perioodi_2014-

This study concluded that the use of the ESCO concept using funding from the structural funds required further analysis.

In 2015, Ernst & Young Baltic AS and SA Poliitikauuringute Keskus Praxis carried out an ex ante assessment of proposed financial instruments to be funded from the cohesion policy funds in the period 2014-2020⁴² commissioned by the Ministry of the Environment. In the assessment, the justification of the use of the financial instruments under ‘Operational programme for Cohesion Policy Funds 2014-2020’ measure 4.3, entitled ‘Undertakings’ energy and resource efficiency’ was assessed on the basis of the general evaluation criteria listed in Article 37(2)(a) Based on the ex ante assessment, it was concluded that the implementation of the financial instruments under the measure ‘resource efficiency in undertakings’ was not necessary and justified in the present market situation, due to the absence of market failures or sub-optimal investment situations (i.e. capital for investment is sufficiently accessible to undertakings in priority sectors).

3.1.7. *Other energy efficiency measures of a horizontal nature (EED Articles 19 and 20)*

- (1) Please indicate, in the first NEEAP, energy efficiency measures undertaken to implement Article 19 of EED. In particular, please provide the list of measures undertaken to remove regulatory and non-regulatory barriers to energy efficiency (e.g. split incentives in multi-owner properties, public purchasing and annual budgeting, and accounting of public bodies) (*EED Article 19, Annex XIV Part 2, point 3.9*).

Article 19 of the Directive prescribes that Member States must evaluate and if necessary take appropriate measures to remove regulatory and non-regulatory barriers to energy efficiency.

It is the task of the Energy Department of the Ministry of Economic Affairs and Communications to monitor the effect of legislation on or influencing energy efficiency. This work is carried out continually, mainly by examining and commenting on draft legislation or strategies.

The proportion of housing for rent in the Estonian housing market is not high. The proportion of housing that is rented is about 15% of the total housing supply, and home owners predominately also live in their own homes. The renting of individual houses or terraced houses is not common. Decisions regarding the management of apartment buildings are made by a vote in favour by a majority of the apartment owners in the building. Based on the above, the differences between the interests of owners and renters in Estonia are not a significant obstacle preventing dwellings from being made more energy efficient. We do not plan to implement additional measures.

The market for commercial premises, where renting is more prevalent, generally has the effect of stimulating the achievement of energy efficiency objectives: there is a sufficient supply of rental space to ensure that renters retain freedom of choice.

In Estonia, the management of central government buildings is being consolidated. The

2020_%C3%BChitektuuluvuspoliitika_vahenditest_kavandavate_finantsinstrumentide_eelhindamine._2014.pdf

⁴² http://www.envir.ee/sites/default/files/rahastamisvahendite_eelhindamine_uuring_1.pdf

grounds for that consolidation are described in the 'National Real Estate Strategy'⁴³.

- (2) Please provide information about the Energy Efficiency National Fund (EED Article 20, Annex XIV Part 2, point 2, first sentence).

Estonia does not have a national energy efficiency fund.

3.2. Energy efficiency in buildings

3.2.1. Building renovation strategy (EED Article 4)

Provide the national long-term building renovation strategy (*EED Article 4, final paragraph*).

The building renovation strategy will be presented to the European Commission in a separate communication.

3.2.2. Other energy efficiency measures in the construction sector

Please provide details on significant energy efficiency improvement measures in buildings in view of achieving the national energy efficiency targets referred to in Article 3(1) (*EED Article 24(2), Annex XIV Part 2.2, first sentence*).

Significant energy efficiency improvement measures in Estonia include financing plans supporting the reconstruction of buildings and a state regulation on energy efficiency in buildings, which has been drafted primarily with reference to Directive 2010/31/EU on the energy performance of buildings.

The following significant financing plans have been approved with the aim of contributing to investments in the energy efficiency of buildings:

- support schemes for the reconstruction of apartment buildings, the primary objective of which is to ensure their energy efficiency. Preferential loans, guarantees and support are provided under support schemes organised by the national government⁴⁴;
- support schemes for improving the energy efficiency of small residential buildings⁴⁵;
- reconstruction of central government and local government buildings. In 2010-2013 RKAS (Riigi Kinnisvara AS [State Real Estate Limited]) organised investments for the reconstruction of 540 public buildings or building complexes. The investments totalled EUR 165.6 million⁴⁶.
- In 2014 29 500 m² of new or reconstructed area was completed, of which 26 100 m²

⁴³ The 'National Real Estate Strategy' is available at the following address: <http://riigivara.fin.ee/lr1/web/guest/strateegia>

⁴⁴ See also <http://www.kredex.ee/korteriuhistu/korteriuhistu-laenu-ia-toetused/renoveerimislaen-3/>, <http://www.kredex.ee/korteriuhistu/korteriuhistu-laenu-ia-toetused/korterelamulaenu-kaendus/>, <http://www.kredex.ee/korteriuhistu/korteriuhistu-toetused/rekonstrueerimise-toetus/>

⁴⁵ See also <http://www.kredex.ee/eramaja/>, <http://www.kredex.ee/eraisik/eraisiku-laenu-ja-teenused/kodutoetus-lasterikastele-peredele-2/>

⁴⁶ See also <http://www.rkas.ee/co2>

was financed through the Riigi Kinnisvara AS ('RKAS') [State Real Estate Limited]. Between 2010 and 2014, total annual government investment (including charges still to be paid in respect of finance leases) averaged EUR 228.2 million, of which EUR 66.2 million (29%) was invested in the buildings of public expenditure bodies⁴⁷.

3.3. Energy efficiency in public bodies

3.3.1. Central government buildings (EED Article 5)

Please provide information on the published inventory of heated and cooled central government buildings (*EED Article 5(5), Annex XIV Part 2.2, first sentence*).

Information on central government agencies whose buildings are managed in accordance with Article 5 of the Directive on energy performance of buildings is provided in Annex 1 to this document.

3.3.2. Buildings of other public bodies (EED Article 5)

- (1) Please provide information on measures undertaken or planned to encourage public bodies and social housing bodies governed by public law to adopt energy efficiency plans demonstrating the exemplary role of public bodies in buildings' energy efficiency (*EED Article 5(7)(a), Annex XIV Part 2, point 2, first sentence*).

Section 5¹ of the draft Act Amending the District Heating Act⁴⁸, which deals with the subject of the development of heating infrastructure, prescribes the requirement to prepare a heating infrastructure development plan in municipalities that use district heating. Under Section 5¹(2), the municipal council shall make a decision regarding the heating infrastructure development proposal in the network sector, if the annual volume produced by the network sector is greater than 50 000 MWh.

The development plan for local district heating infrastructure focuses on putting in order the system of energy production and distribution, but the energy efficiency measures that are being introduced, including in buildings in regions with district heating must also be taken into account when assessing needs in the area of thermal energy production. A national support measure is planned in order to help implement the requirement for preparing local district heating development plans.

- (2) Please provide a list of public bodies having developed an energy efficiency action plan (*EED Annex XIV Part 2, point 3.1*).

Public bodies and local governments that have developed energy efficiency action plans are listed in Annex 2.

⁴⁷ Ministry of Finance, October 2015: Summary report on the management of state real estate 2013-2014.

⁴⁸ <http://eelroud.valitsus.ee/main#vqaRTedb>

3.3.3. *Purchasing by public bodies (EED Article 6)*

Please provide information on steps taken or planned to ensure that central government purchases products, services and buildings with high-energy efficiency performance, (EED Article 6(1)), and on measures undertaken or planned to encourage other public bodies to do likewise (*EED Article 6(3), Annex XIV Part 2, point 2, first sentence*).

Section 6 of the ESOA regulates energy-efficient purchasing by public bodies. On the basis of Section 6(2) of the ESOA, the Government of the Republic passed Regulation No 63, entitled ‘Energy efficiency requirements for the purchasing of products, services and buildings by the central government’.⁴⁹ The Regulation specifies that purchases made by public bodies are primarily governed by energy efficiency class or other energy efficiency criteria (for instance when purchasing the products or tyres covered by the Ecodesign Directive or the Energy Star programme).

3.4. **Other end use energy efficiency measures including in industry and transport**

Please provide details on significant energy efficiency improvement measures in industry in view of achieving the national energy efficiency targets referred to in EED Article 3(1) (*EED Article 24(2), Annex XIV Part 2, point 2, first sentence*).

Estonia has sought to improve energy efficiency in industry primarily by raising environmental awareness in undertakings⁵⁰. In addition to existing measures in industry (the tax exemption for reinvested corporate profits), in early 2017 the Ministry of the Environment launched a resource efficiency measure for industry⁵¹. One of the aims of the measure is to achieve energy savings in small and medium-sized industrial undertakings. The resource efficiency measure covers four actions: raising awareness, training specialists, carrying out audits, and investment. The investment support is presently open to five priority sectors:

- Mining
- Food Industry
- Wood Industry
- Pulp and Paper Industry
- Processing of mineral substances.

In 2017 we plan to carry out another study, on which basis we could open applications for investment in other manufacturing sectors.

Chapter 7 of the ESOA requires large undertakings to submit an energy audit. Chapter 7 of the ESOA lays down requirements for energy audits, and Section 28 prescribes that large undertakings must carry out regular energy audits. The energy audit obligation for large

⁴⁹ Government of the Republic Regulation ‘Energy efficiency requirements for the purchasing of products, services and buildings by the central government’, 09.03.2017, <https://www.riigiteataja.ee/akt/110032017016>

⁵⁰ See for instance <http://eco-net.ee/>, <http://www.ekja.ee/>

⁵¹ Resource efficiency measure <http://www.envir.ee/et/eesmargid-tegevused/keskkonnakorraldus/ressursitohusus>

undertakings is more precisely laid down in point 3.1.2. of this communication.

Please provide details on significant energy efficiency improvement measures in passenger and freight transport in view of achieving the national energy efficiency targets referred to in EED Article 3(1) (*EED Article 24(2), Annex XIV Part 2, point 2, first sentence*).

State activities in the transport sector are based on the 'Transport Development Plan 2014-2020' approved by the Estonian Parliament on 19 February 2014⁵². The following are the most important energy efficiency improvement measures in passenger and freight transport:

- replacing unnecessary travel ('Transport Development Plan 2014-2020', measure 1.1);
- reducing unnecessary travel (measure 1.2);
- giving preference to more sustainable means of transport (measure 1.3);
- developing intelligent transport systems (measure 1.4);
- promoting the use of renewable fuel sources in road transport (measure 4.1);
- improving car fleet economy (measure 4.2);
- developing nationwide public transport connections (measure 5.1);
- developing regional public transport connections (measure 5.2);
- developing local public transport connections (measure 5.3);
- integrating and improving access to public transport (measure 5.4).

(3) Please provide details of other significant end use energy efficiency measures which contribute towards national energy efficiency targets which are not reported on elsewhere in the NEEAP (*EED Article 24(2), Annex XIV Part 2, point 2, first sentence*).

The Ministry of Economic Affairs and Communications has commissioned an analysis of existing energy saving measures⁵³ for the assessment of the impacts of the measures implemented under the Operational programme for Cohesion Policy Funds 2014-2020', which was approved by Government of the Republic Regulation No 296 of 4 July 2014 and Government of the Republic Regulation No 528 of 4 December 2014. The analysis was carried out by Ernst & Young Baltic AS. On the basis of the above-mentioned study, the following are the other significant end use energy efficiency measures and the energy savings that could be achieved as a result thereof:

- Reconstruction of local governments' street lighting systems.
As a result of the implementation of the measure, the direct energy savings in the period from 2014-2020 are estimated to be roughly 15.7 GWh.
- The reorganisation of the school network: - the modernisation of sustainable schools as part of the reorganisation of the school network. As a result of the implementation of the measure, the direct energy savings in the period from 2014-

⁵² See for instance <https://www.riigiteataja.ee/aktiisa/3210/2201/4001/arengukava.pdf#>

⁵³ Ernst & Young Baltic AS 'The impact of measures funded through EU structural instruments on the performance of national energy efficiency targets' (March 2017)
https://www.mkm.ee/sites/default/files/ey_mkm_energiamaajandus_lopparuanne.pdf

2020 are estimated to be roughly 7.2 GWh.

- Support for investment in primary health centres in infrastructure nodes, guaranteeing available and diverse primary services. As a result of the implementation of the measure, the direct energy savings in the period from 2014-2020 are estimated to be roughly 9.2 GWh.
- Reorganisation of special welfare institutions. As a result of the implementation of the measure, the direct energy savings in the period from 2014-2020 are estimated to be roughly 19.5 GWh.
- Increasing the competitiveness of Estonian research and development and participation in Europe-wide academic initiatives, as well as an institutional development programme for research and development institutions and higher education institutions. As a result of the implementation of the measure, the direct energy savings in the period from 2014-2020 are estimated to be roughly 11 GWh.
- Efficient generation and transmission of thermal energy, as well as the renovation of district heating boilers, and fuel changeover. As a result of the implementation of the measure, primary energy savings in the period from 2014-2020 are estimated to be roughly 23 GWh. The second measure in this areas is the renovation of obsolete and ineffective heating pipes; the implementation of this measure is estimated to achieve a direct primary energy savings of roughly 148 GWh in the period 2014-2020.

3.5. Promotion of efficient heating and cooling

3.5.1. Comprehensive assessment (EED Article 14)

- (1) In the second and subsequent NEEAPs please provide an assessment of the progress achieved in implementing the comprehensive assessment of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling referred to in Article 14(1) (*EED Article 14(1), Annex XIV Part 2.3.4*).

On 26 February 2016, Estonia submitted to the Commission a comprehensive assessment of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling referred to in Article 14(1) of the Directive.

Of the possibilities mentioned in the assessment, three cogeneration plants are already in operation, and the implementation of the other possibilities is under way.

- (2) Please provide description of the procedure and the methodology used for carrying out a cost benefit analysis to satisfy the criteria of EED Annex IX (*EED Article 14(3), Annex IX Part 1, last paragraph, Annex XIV Part 2.2, first sentence*).

Chapter 4, Section 10 of the ESOA describes the cost-benefit analysis for high-efficiency cogeneration installations. The minimum requirements for cost and benefit analyses of transforming installations into efficient cogeneration plants are laid down in Regulation No 13

of the Minister for Economic Affairs and Infrastructure⁵⁴, which was adopted on 6 March 2017. Section 2 of that regulation lays down the general requirements, which are:

- The discount rate used in the analysis is the Competition Authority's weighted average cost of capital applied when the price cap for heating is coordinated.
- When the construction or refurbishment of an installation where the generated thermal energy is not used in an economically efficient manner is planned, the planned or refurbished installation is compared to an equivalent installation that generates the same quantity of electricity or thermal energy but recovers the waste heat and generates heat through high-efficiency cogeneration for local consumption or distribution through a district heating network.
- The analysis is based on the description of an installation that is planned or to be refurbished and a comparable high-efficiency cogeneration plant, particularly electricity and thermal energy capacity, the type of fuel used, the planned use and the planned number of operating hours per year, the plant's location and the capacity of electricity and thermal energy generation.
- The analysis contains an economic analysis that must include a financial analysis of the cash flow transactions from investment in the installation and operation of the installation.
- In an economic analysis where the project yields a positive revenue and expenditure result, the discounted revenue amount exceeds the discounted expenditure amount.
- Determination of the region to be served by the installation is based on the existing and potential new heating demand. The analysis compares the price of energy in the area to be served by the installation and the price of energy generated by the installation that is planned or is to be refurbished.

Section 3 of the same regulation lays down the minimum requirements for calculating heating demand.

3.5.2. *Other measures ensuring efficient heating and cooling (EED Article 14)*

Please provide a description of measures, strategies and policies, including programmes and plans, at national, regional and local levels to develop the economic potential of high-efficiency cogeneration and efficient district heating and cooling and other efficient heating and cooling systems as well as the use of heating and cooling from waste heat and renewable energy sources (*EED Article 14(2) and (4), Annex XIV Part 2, point 2, first sentence*).

Measures implemented in Estonia to develop the economic potential of high-efficiency cogeneration and efficient district heating and cooling and other efficient heating and cooling systems as well as the use of heating and cooling from waste heat and renewable energy sources:

⁵⁴ The minimum requirements for cost and benefit analyses of transforming installations into efficient cogeneration plants, 6.03.2017, <https://www.riigiteataja.ee/akt/110032017013>

- national regulation:
 - support measures for high-efficiency combined heat and power plants in the Electricity Market Act (operating support based on the quantity of electricity supplied to the network);
 - the possibility for local governments to establish district heating regions which would, in justified cases, rule out competition with other energy carriers in regions where district heating exists or is planned);
 - a planned requirement that district heating development plans be prepared in local governments where district heating is used⁵⁵;
- funding schemes:
 - State support schemes implemented by the Environmental Investment Centre⁵⁶ for the modernisation of district heating infrastructure, as a result of which 9 combined heat and power plants have been completed (56 MW_{th} / 11 MW_{el});
 - a support measure for the modernisation of district heating networks has been launched, and it is funded in the ‘Operational programme for Cohesion Policy Funds 2014-2020’. Information on the support measure is published on the website of the Environmental Investment Centre⁵⁷.

3.6. Energy transformation, transmission, distribution, and demand response

3.6.1. Energy efficiency criteria in network tariffs and regulation (EED Article 15)

Please describe planned or adopted measures to ensure that incentives in tariffs that are detrimental to the overall efficiency of the generation, transmission, distribution and supply of energy, or might hamper participation of demand response in balancing markets and ancillary services procurement, are removed (*EED Article 15(4), Annex XIV Part 2, point 2. first sentence*).

Existing measures to ensure that incentives in tariffs that are detrimental to the overall efficiency of the generation, transmission, distribution and supply of energy, or might hamper participation of demand response in balancing markets and ancillary services procurement, are removed:

- Chapter 4, Section 7 of the ESOA establishes energy efficiency measures in energy transformation, transmission and distribution;
- monitoring of legislation in this sector by the Energy Department of the Ministry of Economic Affairs and Communications, and if necessary amendment of that legislation. The monitoring and assessment of the effect of energy-related legislation is among the tasks specified in the statutes of the Energy Department of the Ministry of Economic Affairs and Communications;

⁵⁵ See also <http://www.riigikogu.ee/?op=ems&page=eelnou&eid=f37107db-fb77-4e68-8689-67a9702f43ad&>

⁵⁶ Information regarding financed projects is available on the internet, at: <https://www.kik.ee/et/rahastatud-proiektid#edit-field-maakond-tid-i18n%3Dnull%26edit-field-taotlusvoor-value%3D%26edit-field-rahastusallikas-tid-i18n%3Dnull%26edit-field-valdkonnagrupp-tid-i18n%3Dnull%26edit-title%3D%26edit-field-toetuse-saaja-nimi-value%3D%26edit-field-aasta-tid-i18n%3Dnull%26edit-field-with-research-value-i18n-1%3D1%26edit-field-with-research-value-i18n%3Don%26edit-sort-by%3Dtitle%26edit-sort-order%3DDESC>

⁵⁷ <https://www.kik.ee/et/toetatav-tegevus/efektiivne-soojusenergia-tootmine-ja-ulekann>

- The 'Integral methodology for the calculation of network charges for electricity'⁵⁸, to be implemented by the Competition Authority⁴⁴, which lays down principles for the calculation of network charges. The methodology specifies which methods are used by the Competition Authority to analyse network losses. The analysis of network losses is used to predict future network losses, which are taken into account in the system operator's network charge. The methodology also stipulates that as far as costs are concerned, the Competition Authority may (through conditions specified in an operating licence) impose upon an undertaking a development obligation to raise technical effectiveness for a specific period of time.

Please describe planned or adopted measures to incentivise network operators to improve efficiency through infrastructure design and operation (*EED Article 15(4) Annex XIV Part 2.2, first sentence*).

Existing measures to incentivise network operators to improve efficiency through infrastructure design and operation:

- The 'Integral methodology for the calculation of network charges for electricity' to be implemented by the Competition Authority. The methodology prescribes that, as concerns costs, the Competition Authority may determine (through the conditions of an operating licence) an undertaking's development obligation for a specific period of time, in order to increase technical efficiency.

(3) Please describe planned or adopted measures to ensure that tariffs allow suppliers to improve consumer participation in system efficiency including demand response (*EED Article 15(4) Annex XIV Part 2, point 2, first sentence*).

Existing measures to ensure that tariffs allow suppliers to improve consumer participation in system efficiency:

- differentiating the cost of a unit of electricity depending on the time of day at which it is consumed. Sellers of electricity offer consumers packages with two rates, one for daytime and the other for night-time electricity;
- technology permitting, consumers can purchase electricity by the hour. When consumers purchase electricity by the hour, they can decide how to distribute their consumption over a particular period of time. The installation of remote reading devices increases the technical possibilities for such energy purchasing (see also comments on the Electricity Market Act in part 3.1.3).

3.6.2. *Facilitate and promote demand response (EED Article 15)*

Please provide information on other measures adopted or planned to enable and develop demand response, including those addressing tariffs to support dynamic pricing (*EED Annex XI(3), Annex XIV Part 2, point 3.6*).

⁵⁸ <http://www.konkurentsiamet.ee/?id=18288>

Information on other measures adopted or planned to enable and develop demand response, including those addressing tariffs to support dynamic pricing:

- A project entitled ‘Energy data feed platform’⁵⁹, initiated by AS Elering, the main system operator, and co-funded through the Norway-Estonia cooperation programme ‘The development of environmentally-friendly innovation through information technology and communications technology’ was carried out in the period from 1 December 2013 to 10 November 2015. Under this project, a data portal (Estfeed) was established, permitting both organisations and individuals to organise their energy consumption more effectively. Estfeed can be used to monitor and manage energy consumption. This platform enables bilateral communication with the electricity network as well as data streams to increase the efficiency of energy consumption.

3.6.3. *Energy efficiency in network design and regulation (EED Article 15)*

Please report on progress achieved in the assessment of the energy efficiency potential of national gas and electricity infrastructure, as well as adopted and planned measures and investments for the introduction of cost effective energy efficiency improvements in network infrastructure and a timetable for their introduction (*EED Article 15(2), Annex XIV Part 2, point 3.5*).

Chapter 4, Section 7 of the ESOA establishes energy efficiency measures in energy transformation, transmission and distribution. Subsection 1 of the same Section requires transmission network operators and distribution network operators to determine, in relation to their network, the cost-effective energy efficiency improvement measures and the necessary investments, to draw up a timetable for the introduction of such measures and investments and to submit an overview of these to the energy savings coordinator.

⁵⁹ See also <http://estfeed.ee/>

ANNEXES

Annex 1: Central government bodies to which Article 5 of Directive 2012/27/EU applies

Annex 2: Public bodies that have developed energy efficiency action plans

Annex 1: Central government bodies to which Article 5 of Directive 2012/27/EU applies

Pursuant to Annex IV to Directive 2004/18/EC on public procurement, the following is the list of central government bodies to which Article 5 of the Directive applies:

7 leading state institutions:

1. Office of the President of the Republic;
2. Chancellery of the Estonian Parliament;
3. Supreme Court;
4. State Audit Office;
5. Chancellor of Justice;
6. Office of the Prosecutor General;
7. Government Office;

11 ministries:

8. Ministry of Education and Research;
9. Ministry of Justice;
10. Ministry of Defence;
11. Ministry of the Environment;
12. Ministry of Culture;
13. Ministry of Economic Affairs and Communications;
14. Ministry of Agriculture;
15. Ministry of Finance;
16. Ministry of Internal Affairs;
17. Ministry of Social Affairs;
18. Ministry of Foreign Affairs

31 executive agencies:

19. Office of the Prosecutor General
20. Information Board
21. Land Board
22. Centre of Forest Protection and Silviculture
23. Heritage Board
24. Patent Office
25. Consumer Protection Board
26. Public Procurement Office
27. Agricultural Registers and Information Board
28. Veterinary and Food Board
29. Competition Authority
30. Tax and Customs Board
31. Statistics Estonia
32. Security Police Board
33. Citizenship and Migration Board
34. Border Guard Board
35. Police Board
36. Forensic Science Institute
37. Central Criminal Police
38. Rescue Board

39. State Agency of Medicines
40. Social Insurance Board
41. Labour Market Board
42. Health Care Board
43. Civil Aviation Administration
44. Road Administration
45. Maritime Administration
46. Personal Protection Service
47. Defence Resources Agency
48. Defence Forces Logistics Centre
49. Technical Regulatory Authority

6 inspectorates:

50. Language Inspectorate;
51. Environmental Inspectorate;
52. Data Protection Inspectorate;
53. Labour Inspectorate
54. Plant Production Inspectorate
55. Health Protection Inspectorate

State Real Estate Register

Information on real estate possessed and used by the state is entered in a publicly accessible State Real Estate Register, which is available at the following internet address: <https://riigivara.fin.ee/kvr/>. The State Real Estate Register is tied to the State Register of Construction Works, <http://www.ehr.ee/>, i.e. for each individual property entered in the register, a reference to that property's entry in the State Register of Construction Works is also entered in the State Real Estate Register. Data on energy labels is published in the State Register of Construction Works.

Annex 2: Public bodies that have developed energy efficiency action plans⁶⁰

No	Authority name	Project name	Achievement rate as percentage of target level (cumulative information) ⁶¹
1	Abja Municipal Administration	Heating infrastructure development plan for Abja-Paluoja City in Abja Municipality, for years 2016 - 2026	100.00 %
2	Ahja Municipal Administration	Preparation of Ahja Municipality heating infrastructure development plan	100.00 %
3	Anija Municipal Administration	Preparation of heating infrastructure development plan for Kehra-Lehtmetsa and Alavere district heating districts in Anija Municipality	100.00 %
4	Antsla Municipal Administration	Preparation of Antsla Municipality heating infrastructure development plan for 2016-2026	100.00 %
5	Aseri Municipal Administration	Preparation of Aseri Municipality heating infrastructure development plan for 2016-2026	100.00 %
6	Avinurme Municipal Administration	Preparation of heating infrastructure development plan for Avinurme and Ulvi network sectors for 2016-2026	100.00 %
7	Harku Municipal Administration	Preparation of heating infrastructure of Harku town district heating district	100.00 %
8	Harku Municipal Administration	Preparation of heating infrastructure of Tabasalu town district heating district	100.00 %
9	Imavere Municipal Administration	Preparation of Imavere village heating infrastructure development plan	100.00 %
10	Juuru Municipal Administration	Preparation of heating infrastructure development plan for Juuru and Järlepa district heating districts in Juuru Municipality for 2015-2025	100.00 %
11	Jõelähtme Municipal Administration	Kostivere town heating infrastructure development plan	100.00 %
12	Jõelähtme Municipal Administration	Preparation of Loo town heating infrastructure development plan	100.00 %
13	Jõgeva City Government	Preparation of Jõgeva heating infrastructure development plan	100.00 %
14	Järva-Jaani Municipal Administration	Preparation of Järva-Jaani Municipality energy development plan and Järva-Jaani town heating infrastructure development plan 2016-2016 [sic! 2026?]	100.00 %
15	Kadrina Municipal Administration	Preparation of heating infrastructure development plan for district heating districts in Kadrina and Hulja towns and Kihlevere village for 2016-2026	100.00 %
16	Kallaste City Government	Preparation of City of Kallaste heating infrastructure development plan	100.00 %
17	Kambja Municipal Administration	Kambja town heating infrastructure development plan	100.00 %
18	Kanepi Municipal Administration	Preparation of Kanepi town heating infrastructure development plan	100.00 %
19	Kehtna Municipal Administration	Preparation of heating infrastructure development plan for Kaerepere town in Kehtna Municipality for 2017-2027	

⁶⁰ The data originate from the structural funds information system and are as of 2017.

⁶¹ '100%' or '200%' means that the project has been completed. A blank indicates that the project is still under way.

20	Keila City Government	Preparation of Keila urban heating infrastructure development plan for 2016-2026	100.00 %
21	Keila Municipal Administration	Preparation of Keila Municipality heating infrastructure development plan for 2015-2025	100.00 %
22	Kernu Municipal Administration	Preparation of Kernu Municipality heating infrastructure development plan	100.00 %
23	Kiili Municipal Administration	Preparation of Kiili Municipality heating infrastructure development plan for 2017-2030	
24	Kiviõli City Government	Preparation of City of Kiviõli heating infrastructure development plan	100.00 %
25	Kohila Municipal Administration	Updating of Kohila Municipality heating infrastructure development plan	100.00 %
26	Kohtla-Järve City Government	City of Kohtla-Järve heating infrastructure development plan for years 2015-2025	100.00 %
27	Koigi Municipal Administration	Koigi and Päinurme village heating infrastructure development plan for 2016-2026	100.00 %
28	Koonga Municipal Administration	Preparation of Koonga Municipality heating infrastructure development plan	100.00 %
29	Kose Municipal Administration	Preparation of Kose Municipality heating infrastructure development plan	100.00 %
30	Kunda City Government	Kunda heating infrastructure development plan for years 2015-2025	100.00 %
31	Kuusalu Municipal Administration	Heating infrastructure development plans for the Kuusalu and Kolga district heating districts in Kuusalu Municipality for 2015-2025	100.00 %
32	Kõlleste Municipal Administration	Preparation of heating infrastructure development plan for Krootuse village in Kõlleste Municipality for 2017-2030	100.00 %
33	Laekvere Municipal Administration	Preparation of Laekvere village heating infrastructure development plan for 2016-2026	100.00 %
34	Laheda Municipal Administration	Preparation of Laheda Municipality heating infrastructure development plan for 2017-2030	100.00 %
35	Leisi Municipal Administration	Preparation of heating infrastructure development plan for Pärsama district heating district in Leisi Municipality for 2016-2026	100.00 %
36	Lihula Municipal Administration	Preparation of City of Lihula heating infrastructure development plan	100.00 %
37	Luunja Municipal Administration	Preparation of Luunja Municipality heating infrastructure development plan	200.00 %
38	Lääne-Nigula Municipal Administration	Preparation of heating infrastructure development plan for Linnamäe district	100.00 %
39	Lääne-Nigula Municipal Administration	Preparation of heating infrastructure development plan for Palivere district heating district	100.00 %
40	Lääne-Nigula Municipal Administration	Preparation of heating infrastructure development plan for Taebla district	100.00 %
41	Lääne-Saare Municipal Administration	Preparation of heating infrastructure development plan for Kaarma, Kärla and Lümända districts in Lääne-Saare Municipality for 2016-2026	100.00 %
42	Lüganuse Municipal Administration	Preparation of heating infrastructure development plan for City of Püssi district heating district	100.00 %
43	Martna Municipal Administration	Preparation of heating infrastructure development plan for district heating district in Martna village, Martna Municipality	100.00 %
44	Mooste Municipal Administration	Preparation of Mooste town district heating district development plan for 2016-2026	100.00 %
45	Muhu Municipal Administration	Preparation of Muhu Municipality heating infrastructure development plan for 2016-2030	

46	Mustvee City Government	Preparation of City of Mustvee heating infrastructure development plan for 2017-2030	100.00 %
47	Mõisaküla City Government	Preparation of City of Mõisaküla heating infrastructure development plan for 2015-2025	100.00 %
48	Mäetaguse Municipal Administration	Preparation of heating infrastructure development plan for Mäetaguse town and Kiikla village in Mäetaguse Municipality for 2017-2030	
49	Narva-Jõesuu City Government	Preparation of heating infrastructure development plan for City of Narva-Jõesuu district heating district for 2016-2025	
50	Nõo Municipal Administration	Preparation of Nõo Municipality heating infrastructure development plan	100.00 %
51	Orissaare Municipal Administration	Preparation of Orissaare town heating infrastructure development plan	100.00 %
52	Otepää Municipal Administration	Modernisation of Otepää Municipality heating infrastructure development plan	100.00 %
53	Paide Municipal Administration	Preparation of Tarbja network sector heating infrastructure development plan	100.00 %
54	Palamuse Municipal Administration	Heating infrastructure development plan for Palamuse Municipality	
55	Paldiski City Government	City of Paldiski heating infrastructure development plan	100.00 %
56	Puhja Municipal Administration	Preparation of heating infrastructure development plan for Puhja town district heating network sector, Ulila town and Rämsi town	100.00 %
57	Puurmani Municipal Administration	Preparation of Puurmani Municipality heating infrastructure development plan for 2017-2030	100.00 %
58	Põltsamaa City Government	Preparation of City of Põltsamaa heating infrastructure development plan for 2016-2026	100.00 %
59	Põltsamaa Municipal Administration	Preparation of heating infrastructure development plan for Adavere town	100.00 %
60	Põlva Municipal Administration	Preparation of Põlva Municipality heating infrastructure development plan for 2015-2030	100.00 %
61	Põide Municipal Administration	Preparation of heating infrastructure development plan for Tornimäe and Kärneri villages in Põide Municipality	100.00 %
62	Raasiku Municipal Administration	Preparation of Raasiku Municipality heating infrastructure development plan for 2015-2025	100.00 %
63	Rae Municipal Administration	Preparation of heating infrastructure development plan for district heating district of town of Jüri in Rae Municipality	100.00 %
64	Rae Municipal Administration	Preparation of heating infrastructure development plans for district heating districts of town of Peetri in Rae Municipality	100.00 %
65	Rae Municipal Administration	Preparation of heating infrastructure development plans for district heating district of towns of Pildiküla, Rae and Lehmja in Rae Municipality	100.00 %
66	Rae Municipal Administration	Preparation of heating infrastructure development plans for district heating district of town of Vaida in Rae Municipality	100.00 %
67	Rakke Municipal Administration	Preparation of Rakke Municipality heating infrastructure development plan for 2016-2026	100.00 %
68	Rakvere City Government	Preparation of heating infrastructure development plan for City of Rakvere district heating district for 2016-2026	100.00 %
69	Rapla Municipal Administration	Preparation of heating infrastructure development plan for Alu town	100.00 %
70	Rapla Municipal Administration	Preparation of City of Rapla heating infrastructure development plan	100.00 %
71	Ridala Municipal Administration	Preparation of heating infrastructure development plan for Uuemõisa district heating district in Ridala Municipality for 2015-2025	100.00 %

72	Roosna-Alliku Municipal Administration	Preparation of heating infrastructure development plan of Roosna-Alliku town for 2016-2026	100.00 %
73	Rõngu Municipal Administration	Heating infrastructure development plans of Rõngu and Käärdi towns	100.00 %
74	Rõuge Municipal Administration	Preparation of development plan for district heating system of Rõuge town	100.00 %
75	Räpina Municipal Administration	Modernisation of heating infrastructure development plan of Räpina, Ruusa, Linte and Ristipalo in Räpina Municipality for the years 2016-2026	100.00 %
76	Saare Municipal Administration	Preparation of Saare Municipality heating infrastructure development plan for 2017-2027	100.00 %
77	Salme Municipal Administration	Preparation of heating infrastructure development plan for Salme town	100.00 %
78	Sangaste Municipal Administration	Preparation of Sangaste Municipality heating infrastructure development plan for 2016-2026	100.00 %
79	Saue City Government	Preparation of City of Saue district heating district development plan for 2015-2025	100.00 %
80	Saue Municipal Administration	Preparation of heating infrastructure development plan for district heating district of Laagri town in Saue Municipality for 2015-2025	100.00 %
81	Sauga Municipal Administration	Preparation of Sauga Municipality district heating system development plan	100.00 %
82	Suure-Jaani Municipal Administration	Preparation of development plan for Suure-Jaani, Olustvere and Sürgavere district heating districts in Suure-Jaani Municipality for 2016-2025	100.00 %
83	Sõmeru Municipal Administration	Preparation of Sõmeru Municipality heating infrastructure development plan for 2016-2026	100.00 %
84	Tabivere Municipal Administration	Preparation of heating infrastructure development plan for Tabivere town district heating district	100.00 %
85	Tallinn City Government	Kadriorg district heating system development plan	
86	Tallinn City Government	Preparation of heating infrastructure development plan for Merirahu district heating district	100.00 %
87	Tartu Municipal Administration	Preparation of heating infrastructure development plan of district heating network sector of town of Lääte	100.00 %
88	Tarvastu Municipal Administration	Preparation of Mustla district heating system development plan for 2016-2026	100.00 %
89	Tootsi Municipal Administration	Preparation of Tootsi Municipality heating infrastructure development plan for 2016-2026	100.00 %
90	Tori Municipal Administration	Preparation of Tori Municipality heating infrastructure development plan for 2017-2030	100.00 %
91	Tudulinna Municipal Administration	Preparation of heating infrastructure development plan for town of Tudulinna	100.00 %
92	Tõrva City Government	Preparation of City of Tõrva heating infrastructure development plan	200.00 %
93	Tähtvere Municipal Administration	Heating infrastructure development plan of Ilmatsalu and Märja network sectors in Tähtvere Municipality for 2017-2030	
94	Türi Municipal Administration	Heating infrastructure development plan of town of Oisu in Türi Municipality	100.00 %
95	Türi Municipal Administration	Heating infrastructure development plan of town of Türi-Alliku in Türi Municipality	100.00 %
96	Türi Municipal Administration	Heating infrastructure development plan of City of Türi in Türi Municipality	100.00 %
97	Valgjärve Municipal Administration	Preparation of Valgjärve Municipality heating infrastructure development plan	100.00 %

98	Vasalemma Municipal Administration	Preparation of Vasalemma Municipality heating infrastructure development plan	100.00 %
99	Vastseliina Municipal Administration	Preparation of Vastseliina heating infrastructure development plan for 2015-2025	100.00 %
100	Viimsi Municipal Administration	Preparation of Viimsi Municipality heating infrastructure development plan for 2016-2026	100.00 %
101	Viljandi Municipal Administration	Preparation of development plans of Päre and Ramsi district heating district network sectors for 2016-2026	100.00 %
102	Viljandi Municipal Administration	Preparation of development plans of Viiratsi and Vana-Võidu district heating district network sectors for 2016-2026	100.00 %
103	Vinni Municipal Administration	Preparation of Vinni Municipality heating infrastructure development plan for 2016-2026	100.00 %
104	Võhma City Government	Preparation of City of Võhma heating infrastructure development plan	100.00 %
105	Võnnu Municipal Administration	Heating infrastructure development plan of town of Võnnu in Võnnu Municipality	100.00 %
106	Võru City Government	Preparation of heating infrastructure development plan for the Laane network sector and potential new network regions in the City of Võru.	100.00 %
107	Võru City Government	Preparation of heating infrastructure development plan for the Võrukivi network sector in the City of Võru.	100.00 %
108	Võru Municipal Administration	Preparation of Võru Municipality heating infrastructure development plan for 2015-2025	100.00 %
109	Väike-Maarja Municipal Administration	Preparation of heating infrastructure development plans for Vao and Triigi village district heating network sector for 2016-2026	100.00 %
110	Väike-Maarja Municipal Administration	Preparation of heating infrastructure development plans for Väike-Maarja town district heating network sector for 2016-2026	100.00 %
111	Vändra Town Government	Preparation of heating infrastructure development plan for Vändra town	100.00 %
112	Väätsa Municipal Administration	Preparation of heating infrastructure development plan for Väätsa town in Väätsa Municipality for 2017-2030	100.00 %
113	Ülenurme Municipal Administration	Preparation of heating infrastructure development plans for Ülenurme, Tõrvandi and Uhti districts in Ülenurme Municipality	100.00 %