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MINISTEERIUM

# National Energy Efficiency Action Plan

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



5 May 2014

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## 1. 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 on energy efficiency. Pursuant to Article 24(2) of the Directive, Estonia must submit a national energy efficiency action plan to the European Commission by 30 April 2014 at the latest. 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.

The above-mentioned Implementing Decision also included the Commission's recommended template for drawing up national energy efficiency action plans, but as a result of the higher priority assigned to transposing the other parts of the Directive and implementing national energy efficiency measures, it was decided that the template for communicating energy efficiency action plans, which is defined as compulsory in the Implementing Decision, should be used in drawing up Estonia's communications.

This document offers an overview of Estonia's energy efficiency objectives 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.

In preparing the Communication, we have sought to take into account the European Commission's January 2014 recommendations<sup>1</sup> for Estonia, which were presented on the basis of the communication submitted by Estonia in September 2011, entitled 'Mid-term review of the implementation of the 'Energy Efficiency Plan 2007–2013', and the ongoing implementation of the plan

on the basis of the Second Estonian Energy Efficiency Action Plan'. The Commission Staff Working Document contained the following recommendations regarding the preparation of energy efficiency action plans:

- action plans must list measures that provide real energy savings in the framework of implementing the Energy Efficiency Directive<sup>2</sup>. Measures and their period of implementation should be described in detail. Measures that have little connection with energy efficiency or measures whose date of implementation is unclear should not be described;
- since the forecast energy saving by 2016 is insufficient, Estonia will have to implement additional energy efficiency measures to ensure that the final energy consumption efficiency objectives and the objectives specified in Directive 2006/32/EC on energy end-use efficiency and energy services will be achieved. These measures may target the opportunities for achieving energy savings identified in the 2011 Energy Saving Action Plan, for instance for single-family dwellings or in areas in which previously implemented energy efficiency measures have not proved effective, for instance stimulation of the market for energy services.

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<sup>1</sup> COM(2014) 100 final

<sup>1</sup> Report by the European Commission to the European Parliament and the Council: Progress report on the implementation of Directive 2006/32/EC (on energy end-use efficiency and energy services) and Directive 2004/8/EC (on the promotion of cogeneration based on a useful heat demand in the internal energy market) [COM(2013)

938 final] and the appended Commission Staff Working Document SWD(2013) 541 final.

<sup>2</sup> Since the previous communication was submitted on the basis of Directive 2006/32/EC on energy end-use efficiency and energy services, reference is made to Directive 2006/32/EC.

- Estonia should develop reliable methods for assessing the effectiveness of energy efficiency policy and individual measures.

8.

On 8 August 2013, the Estonian Government approved the proposal to draw up a new Energy Management Development Plan initiated by the Ministry of Economic Affairs and Communications<sup>3</sup>. We plan to send the new '2030 Energy Management Development Plan' to the Government of the Republic in November 2014. In drawing up the new Energy Management Development Plan, we have thoroughly assessed various energy management development scenarios,

including scenarios influencing changes in energy efficiency. Although the influences of possible measures have been thoroughly assessed<sup>4</sup>, 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.

## 2. OVERVIEW OF NATIONAL ENERGY EFFICIENCY OBJECTIVES 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' approved by the Estonian Parliament on 15 June 2009. The existing long-term energy efficiency objective<sup>5</sup> 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 objective 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*).

<sup>3</sup> [https://valitsus.ee/UserFiles/valitsus/et/valitsus/arengukavad/arengukavade-koostamise-ettepanekud/ENMAK\\_koostamise\\_ettepanek.pdf](https://valitsus.ee/UserFiles/valitsus/et/valitsus/arengukavad/arengukavade-koostamise-ettepanekud/ENMAK_koostamise_ettepanek.pdf)

<sup>4</sup> 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>

<sup>5</sup> Although the 'Estonia 2020' Competitiveness Strategy uses the concept 'national energy savings objective',

the concept 'energy efficiency objective' is used hereinafter in its place, in order to ensure terminological consistency in this document.

The Estonian energy efficiency objective 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 objective 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 objective 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 presented in the following table:

| <b>Estimated energy consumption in 2020</b>  | <b>Quantities, PJ</b> |
|--|-----------------------|
| 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.

## 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<br>PJ               | 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 in 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*] 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 **9468 GWh** in Estonia during the period from 1 January 2014 to 31 December 2020. The calculation of the overall amount of energy savings over the obligation period is appended to this Communication (see Annex 1). Final energy use in the transport sector has been completely left out of the calculation of overall energy savings.

In calculating overall energy savings, we have mainly used Eurostat data. Data used to calculate the quantity of firewood and wood waste gathered in households were obtained through a separate search of Statistics Estonia data. Based on a household energy consumption study performed by Statistics Estonia, 35% of firewood and 49% of wood waste in households was self-supplied.



Estonia plans to make use of the possibilities listed in Articles 7(2) and (3) within the ranges prescribed in the Directive. The following are options for meeting the overall energy efficiency obligation:

- 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 **1972 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 **2294 GWh** in total, according to Statistics Estonia<sup>6</sup>.
- 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 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**.

(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, point 3.2.).*

Estonia has not previously implemented an energy efficiency obligation scheme, but in transposing the Directive we plan to make use of an energy efficiency obligation scheme in addition to the measures ('alternative measures') listed in Article 7(9) of the Directive.

The grounds for establishing an energy efficiency obligation scheme will be laid down in the Organisation of Energy Management Act<sup>7</sup> (*hereinafter* 'OEMA'). The OEMA:

- specifies the authority imposing the energy efficiency obligation (the Government of the Republic);
- restricts the group of persons for which an energy efficiency obligation may be established (primarily system operators, and in some cases enterprises that sell fuel, if the quantity of energy sold exceeds 100 GWh per year).

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<sup>6</sup> <http://www.stat.ee>

<sup>7</sup> <http://www.oema.ee>

<sup>6</sup> Data obtained from Statistics Estonia through a separate search.

<sup>7</sup> The name of the law is tentative, and may change during the drafting process.

- sets out the opportunities for implementing the energy efficiency obligation from the point of view of an obligated enterprise. In the initial phase of implementing the energy efficiency obligation, the primary means for meeting the energy efficiency obligation will presumably be through contributions to the Energy Efficiency National Fund, but enterprises will subsequently be able to reorient and begin to focus on developing energy saving by the final consumer, doing so either independently or in cooperation with other parties. Enterprises' opportunities to modernise their own infrastructure are not ruled out, but the restrictions specified in the Directive must be taken into account in making use of such opportunities;
- lays down the preconditions for the implementation of energy efficiency obligation schemes in enterprises. An energy efficiency plan approved by the regulator<sup>8</sup> is required to implement an energy efficiency obligation scheme;
- states that monitoring of the performance of the energy efficiency obligation will be based on enterprises' annual reports, which must be verified by an independent competent expert.

The annual reports will be collected by the Competition Authority, which will prepare a consolidated document regarding the implementation of the energy efficiency obligation scheme;

- lays down the grounds for establishing restrictions on energy efficiency measures ('individual actions') within the framework of energy efficiency plans. Restrictions are laid down in legislation established on the basis of the OEMA.

(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, point 3.2.*).

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

1. Energy and CO<sub>2</sub> taxes
2. 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 <sub>2</sub> taxes                     |  |
| - Excise duty and VAT on natural gas                    | 512  |
| - Excise duty and VAT on electricity                    | 1 585  |
| - Excise duty and VAT on fuels used in district heating | 940  |
| - Excise duty and VAT on petrol                         | 547  |
| - Excise duty and VAT on light fuel oil and diesel fuel | 1 174  |

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<sup>8</sup> Under the draft Act, the Estonian Competition Authority will perform the functions of a regulator.

|  |              |
|--|--------------|
| Excise duty and VAT on natural gas             | 512          |
| 2. Funding schemes                             |              |
| - Upgrading of street lighting                 | 211          |
| - Undertakings' energy and resource efficiency | 459          |
| - Reconstruction of apartment blocks           | 1 051        |
| <b>Total for all measures</b>                  | <b>6 479</b> |

The information used to predict the effectiveness of policy measures and information on calculation methods are presented in the study<sup>9</sup> 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 not taken into account the increases in the excise duty on fuels that are planned under the Act amending the Alcohol, Tobacco, Fuel and Electricity Excise Duty Act and the Fiscal Marking of Liquid Fuel Act<sup>10</sup>, initiated by the Ministry of Finance on 23 April 2014.

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 CO<sub>2</sub> 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.

<sup>9</sup> [http://ec.europa.eu/energy/efficiency/eed/doc/article7/2013\\_et\\_ee\\_article7\\_et.pdf](http://ec.europa.eu/energy/efficiency/eed/doc/article7/2013_et_ee_article7_et.pdf)

<sup>10</sup> <https://eelnoud.valitsus.ee/main/mount/docList/8fb23828-68a4-4e44-998c-47db0fd80146>



(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 will be guided by Annex IV to the Directive, but will consider the need for derogations for wood and electricity.

(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 communication<sup>11</sup> and appended study, which were sent to the Commission on 5 December 2013. Legislation transposing the Directive (secondary legislation connected with the OEMA) describes various accepted methodologies for calculating energy savings while taking into account the lifetimes of energy saving measures. In developing these methodologies, we will mainly be guided by the same methods as those used in the earlier study<sup>12</sup>.

Legislation regulating the functioning of the energy efficiency obligation scheme will take into consideration all of the various methodologies for the calculation of the lifetime of energy efficiency measures put forward in the Staff Working Document<sup>13</sup>. Rules on calculating the lifetimes of measures prescribed in legislation apply the condition 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*).

<sup>11</sup> 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.

<sup>12</sup> Published in [http://ec.europa.eu/energy/efficiency/eed/doc/article7/2013\\_et\\_eeed\\_article7\\_et.pdf](http://ec.europa.eu/energy/efficiency/eed/doc/article7/2013_et_eeed_article7_et.pdf)

<sup>13</sup> SWD(2013) 451 final 'Commission staff working document: Note regarding Article 7 (energy efficiency obligation schemes) of Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC', see part E2 (pp. 47-55).



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

- the launching and development of a system for granting qualifications to energy auditors. The system establishes requirements for persons applying for qualifications, those granting the qualifications and the procedure for granting qualifications. In the system, a person may apply for various levels of qualifications.

More precise information regarding the system for the granting of qualifications is available on the web page of the Estonian Association of Heating and Ventilation Engineers<sup>14</sup>;

- 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 Activities<sup>15</sup>. A list of enterprises involved with energy audits is also published on the website of SA KredEx, which has supported the carrying out of energy audits<sup>16</sup>;

- state support for energy audits of apartment buildings. The conditions for granting the support are specified in a regulation of the Minister for Economic Affairs and Communications<sup>17</sup>, and the support was issued by SA KredEx;

- the establishing of requirements for energy audits of residential buildings. The requirements are laid down in a regulation of the Minister for Economic Affairs and Communications<sup>18</sup>.

The following measures are planned to promote energy audits and energy management systems:

- transposition of Article 8 of the Directive into Estonian law through the OEMA.

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 ( <i>EED Annex XIV, Part 2, point 3.3(a)</i> ):<br><br>Energy audits performed in 2011-2013 (covers only building energy audits supported by SA KredEx) | 1156              |
| 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 <sup>19</sup>   |

<sup>14</sup> [http://ekvy.ee/index.php?option=com\\_content&view=article&id=13&Itemid=36&lang=et](http://ekvy.ee/index.php?option=com_content&view=article&id=13&Itemid=36&lang=et)

<sup>15</sup> <http://mtr.mkm.ee/>

<sup>16</sup> <http://www.kredex.ee/energiatohususest/energiatohusus/kuttekaardid/energiaaudiitorid/>

<sup>17</sup> 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>

<sup>18</sup> 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>

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

### 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*).

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

- The Electricity Market Act (hereinafter ‘EMA’) 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 (EMA Section 67(1)).

The technical requirements for metering devices are specified in the Grid Code<sup>20</sup>. 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 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 (EMA Section 67(5));
  - 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 42<sup>1</sup> of the EMA and in Chapter 7<sup>1</sup> of the Grid Code; ○ In addition to the requirements for invoices submitted to consumers, Section 75<sup>1</sup> of the EMA stipulates that sellers must provide information concerning the distribution of energy sources which were used for the generation of electricity by the producer or which were purchased from the producer and information concerning websites that provide information on the environmental impact connected with the energy sold.

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<sup>20</sup> Government of the Republic Regulation No 184 of 26 June 2003, entitled 'Grid Code', \_  
<https://www.riigiteataja.ee/akt/129122012061?leiaKehtiv>

Consumers may obtain information regarding their consumption from the information exchange platform (Section 45<sup>6</sup>(3)(4) of the Grid Code.

- The Natural Gas Act (hereinafter 'NGA') lays down the grounds for metering and requirements for electricity bills. The most important of these are:
  - o 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'. (NGA Section 24(1));
  - o Invoices are generally sent to the customer once a month (Section 9(5) of NGA).
- The District Heating Act (hereinafter 'DHA') lays down the grounds for metering. A system operator must organise the metering of heat consumed from the network and keep corresponding records, unless agreed otherwise (Section 14(4) of 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. The study was published on the website of SA KredEx<sup>21</sup>.

Many of the requirements stipulated in the Directive have already been implemented in existing legislation. Measures transposing Article 9(3) of the Directive will be decided during the drafting of the OEMA.

#### 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 website<sup>22</sup>.

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<sup>21</sup> 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](http://www.kredex.ee/public/Uuringud/Allokaatorid_uuring_191112.pdf)

<sup>22</sup> <http://www.kredex.ee/korteriuhistu/korteriuhistu-laenu-d-ja-toetused/renoveerimislaen-3/>

<http://www.kredex.ee/korteriuhistu/korteriuhistu-laenuud-ja-toetused/korterelamulaenu-kaendus/>,  
<http://www.kredex.ee/korteriuhistu/korteriuhistu-toetused/rekonstrueerimise-toetus/>

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 website<sup>23</sup>.
- a national energy saving week is held once a year. More information regarding the energy saving week is published on its website<sup>24</sup>;
- advertising campaigns have been organised in order to inform residents about energy saving. A description of the measure is published on the internet<sup>25</sup>; the campaigns were organised by SA KredEx;
- 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 Board<sup>26</sup>;

- in addition, energy companies have developed consumer-oriented information-sharing environments; these are accessible via the energy companies' websites<sup>27</sup>.

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 online<sup>28</sup>.

### 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.).

The obligation to regulate vocational activity in the areas of both energy and construction is laid down in the Professions Act (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, and the procedure for appointment of representatives of institutions'<sup>29</sup>.

<sup>23</sup> <http://www.kredex.ee/eramaja/>, <http://www.kredex.ee/eraisik/eraisiku-laenuid-ja-teenused/kodutoetus-lasterikastele-peredele-2/>

24 <http://energiatark.ee/>

25 Measure 'Informing residents about energy savings in residential buildings'.

[http://www.strukturifondid.ee/public/oigusaktid/Teavitamise\\_programm\\_allkirjastatud\\_280408.pdf](http://www.strukturifondid.ee/public/oigusaktid/Teavitamise_programm_allkirjastatud_280408.pdf)

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

27 See for example [http://www.soojus.ee/energiasaast\\_2](http://www.soojus.ee/energiasaast_2), <https://www.energia.ee/et/kokkuhold>

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

29 <https://www.riigiteataja.ee/akt/13091006>

Section 1(2)(1) of this Regulation (Areas of professional activity) lays down the conditions for construction, real estate and geomatics, 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 [sic!] of the PA, the Government forms professional councils which, in accordance with Section 4(3) [sic!] 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 administrative body also grants issuers of professional qualifications the right to award these qualifications and supervises their activities (Section 7(1)(4) of PA).

The lists of professional qualifications and conditions for awarding them are published by the body with authority to award professional qualifications (Section 12(1)(5) of PA).

Professional councils publish information concerning bodies that award professional qualifications in respect of each professional standard. The recognition of certificates issued in accordance with the criteria in other Member States is governed by the Recognition of Foreign Professional Qualifications Act.<sup>30</sup>

The professional qualifications that have been confirmed in Estonia and meet the requirements of Article 16 of the Directive are contained in the following list:

- energy service providers, energy auditors and energy managers:
  - o energy auditor (level 6), diploma specialist in energy performance of buildings (level 7), chartered specialist in energy performance of buildings (level 8);
  - o electrical engineer (level 6), diploma electrical engineer (level 7), chartered electrical engineer (level 8);
  - o diploma thermal engineering engineer (level 7), chartered thermal power engineering engineer (level 8);
  - o 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:
  - o plasterer (level 4);
  - o oven builder / chimney repairer (level 4), master oven builder / chimney repairer (level 5);
  - o heat pump installer (level 4);
  - o solar heating system installer (level 4);
  - o plumber III;
  - o electrician (levels 3-5).

All of the occupational standards for the above-mentioned occupations are published on the web page of the Estonian Qualifications Authority<sup>31</sup>.

The Ministry of Economic Affairs and Communications plans to have completed by 31 December 2014 an analysis of whether the technical competency, objectivity and reliability of energy service providers, energy auditors, energy managers and installers of

energy-related building elements in Estonia is sufficient.

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<sup>30</sup> <https://www.riigiteataja.ee/akt/12988434>

<sup>31</sup> <http://www.kutsekoda.ee/et/kutseregister/kutsestandardid/otsing>

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, point 2, first sentence, Annex XIV Part 2, point 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 Communications<sup>32</sup>; the 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 Estonia.

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.

(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(1)(e)).*

In 2013 the Environmental Investment Centre carried out a study entitled 'An analysis of the possibilities for creating a market of energy service enterprises'. 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:

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<sup>32</sup>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>

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

The full report is available on the internet<sup>33</sup>.

[http://www.energiatalgud.ee/img\\_auth.php/0/08/ESCO\\_analyys.pdf](http://www.energiatalgud.ee/img_auth.php/0/08/ESCO_analyys.pdf)

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 grounds for that consolidation are described in the 'National Real Estate Strategy'<sup>34</sup>.

(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. In drafting the OEMA, we plan to introduce the possibility of making payments into an energy efficiency fund as one option for undertakings to fulfil their energy efficiency obligation (see also part 3.1.1, sub-point 2). The aim of the national energy savings fund is to support the implementation of the energy savings measures provided for in the national energy policy<sup>35</sup>.

<sup>34</sup>The 'National Real Estate Strategy' is available at the following address: <http://riigivara.fin.ee/lr1/web/guest/strateegia>

<sup>35</sup>The '2030 Energy Management Development Plan' is in the process of being drafted.



### **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, point 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 government<sup>36</sup>;

- support schemes for improving the energy efficiency of small residential buildings<sup>37</sup>;

- 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 million<sup>38</sup>.

### **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, point 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 an annex to this document (see Annex 2).

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<sup>36</sup> See also <http://www.kredex.ee/korteriuhistu/korteriuhistu-laenuj-ja-toetusd/renoveerimislaen-3/>, <http://www.kredex.ee/korteriuhistu/korteriuhistu-laenuj-ja->

[toetused/korterelamulaenu-kaendus/](http://www.kredex.ee/korteriuhistu/korteriuhistu-toetused/rekonstrueerimise-toetus/), <http://www.kredex.ee/korteriuhistu/korteriuhistu-toetused/rekonstrueerimise-toetus/>

<sup>37</sup> See also <http://www.kredex.ee/eramaja/>, <http://www.kredex.ee/eraisik/eraisiku-laenud-ja-teenused/kodutoetus-lasterikastele-peredele-2/>

<sup>38</sup> See also <http://www.rkas.ee/co2>

### 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).

Information on measures planned to encourage public bodies and social housing bodies governed by public law to adopt energy efficiency plans:

- An Act amending the District Heating Act is currently before the Estonian Parliament<sup>39</sup>. The Act lays down the obligation that a district heating development plan must be drawn up in local governments in which district heating is used. 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:

- City of Tallinn (<https://oigusaktid.tallinn.ee/?id=savepdf&aktid=119834>);
- City of Tartu ([http://trea.ee/pagas/Meshartility/BEI\\_Tartu.pdf](http://trea.ee/pagas/Meshartility/BEI_Tartu.pdf));
- City of Võru ([http://trea.ee/pagas/Meshartility/BEI\\_V%C3%B5ru.pdf](http://trea.ee/pagas/Meshartility/BEI_V%C3%B5ru.pdf));
- City of Valga ([http://trea.ee/pagas/Meshartility/BEI\\_Valga.pdf](http://trea.ee/pagas/Meshartility/BEI_Valga.pdf));
- City of Jõgeva ([http://trea.ee/pagas/Meshartility/BEI\\_J%C3%B5geva.pdf](http://trea.ee/pagas/Meshartility/BEI_J%C3%B5geva.pdf));
- City of Rakvere.

### 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).

Purchases made by public bodies are primarily governed by the public procurement procedures laid down in the Public Procurement Act. Estonia does not plan to add to the Public Procurement Act the special conditions governing purchases by the central government provided for in Annex III to the Directive. We plan to introduce these in the OEMA instead.

<sup>39</sup> See also <http://www.riigikogu.ee/?op=ems&page=eelnou&eid=f37107db-fb77-4e68-8689-67a9702f43ad&>



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

(1) 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 undertakings<sup>40</sup>. In addition to existing measures in industry (the tax exemption for reinvested corporate profits), Estonia plans a resource efficiency measure for industry, one aim of which is to achieve energy savings in industrial undertakings.

The OEMA will introduce compulsory energy audits for large enterprises.

(2) 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 2014<sup>41</sup>. 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*).

<sup>40</sup> See for instance <http://eco-net.ee/>, <http://www.ekja.ee/>

<sup>41</sup> See for instance <https://www.riigiteataja.ee/akti/isa/3210/2201/4001/arengukava.pdf#>



Other significant end-use energy efficiency measures:

- Reconstruction of local governments' street lighting systems.

### **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  
(EED Article 14(1), Annex XIV Part 2, point 3.4.).

This is not dealt with in this document, because this is the first energy efficiency plan within the meaning of Directive 2012/27/EU.

(2) Please provide a 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, point 2, first sentence).

Legislation transposing the Directive (legislation secondary to the OEMA) describes various acceptable methodologies for preparing a cost-benefit analysis. In drawing these up, we plan to be guided primarily by Annex IX to the Directive.

#### *3.5.2. Other measures 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:

- national regulation:
  - o 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 used<sup>42</sup>;
- funding schemes:
  - State support schemes implemented by the Environmental Investment Centre<sup>43</sup> for the modernisation of district heating infrastructure, as a result of which 9 combined heat and power plants have recently been completed or will soon be completed (56 MW<sub>th</sub> / 11 MW<sub>el</sub>);
  - a planned support measure for the modernisation of the district heating networks with funding from EU structural funds.

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

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

(1) 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:

- 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;
- The 'Integral methodology for the calculation of network charges for electricity', to be implemented by the Competition Authority<sup>44</sup>, 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.

<sup>42</sup> See for instance <http://www.riigikogu.ee/?op=ems&page=eelnou&eid=f37107db-fb77-4e68-8689-67a9702f43ad&>

<sup>43</sup> Information regarding financed projects is available on the internet, at: <http://www.kik.ee/et/taotlejale/roheline-investeerimiskeem/rahastatud-projektid>

<sup>44</sup> <http://www.konkurentsiamet.ee/?id=18288>

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.

Additional measures:

- transposition of Article 15 of the Directive in the OEMA.

(2) 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, point 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*).

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

- AS Elering, the main system operator, has launched a project entitled 'Energy data feed platform'<sup>45</sup>. This project will develop, introduce and test an open software platform that could be used to monitor and manage energy consumption.

This platform must enable 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*).

The obligation, prescribed in Article 15(2) of the Directive, to prepare by 30 June 2015 an analysis of possibilities for increasing the energy efficiency of gas and electricity infrastructure will be described in the OEMA; the Ministry of Economic Affairs and Communications will prepare the analysis. This process has not yet begun.

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<sup>45</sup> See also <http://estfeed.ee/>

## **ANNEXES**

Annex 1: The overall amount of energy savings over the obligation period in order to meet the target set in accordance with Article 7(1)

Annex 2: Central government bodies to which Article 5 of Directive 2012/27/EU applies

## Annex 1: The overall amount of energy savings over the obligation period in order to meet the target set in accordance with Article 7(1)

### 1. Gross final energy consumption [TJ]

| Estoni   |  |                          | Unit      | 2010          | 2011          | 2012          | Average       |
|----------|--|--------------------------|-----------|---------------|---------------|---------------|---------------|
| a        |  | Source of data           |           |               |               |               |               |
| 1.       | Final Energy Consumption                                       | Eurostat - Code B_101700 | TJ        | 121 679       | 118 764       | 120 253       | 120 232       |
| 1.1.     | industrial sector  | Eurostat - Code B_101800 | TJ        | 24 062        | 25 417        | 23 989        | 24 489        |
| 1.2.     | transport sector   | Eurostat - Code B_101900 | TJ        | 32 877        | 32 777        | 33,222        | 32 959        |
| 1.3.     | other sectors  | Eurostat - Code B_102000 | TJ        | 64 739        | 60 570        | 63 043        | 62 784        |
| 1.3.1.   | - households   | Eurostat - Code B_102010 | TJ        | 42 992        | 39 157        | 40 647        | 40 932        |
| 1.3.2.   | - fishing  | Eurostat - Code B_102040 | TJ        | 14            | 32            | 32            | 26            |
| 1.3.3.   | - agriculture/forestry   | Eurostat - Code B_102030 | TJ        | 3 968         | 4 531         | 4 608         | 4 369         |
| 1.3.4.   | - services   | Eurostat - Code B_102035 | TJ        | 17 764        | 16 850        | 17 756        | 17 457        |
| 1.3.5.   | - unspecified  |                          | TJ        | 0             | 0             | 0             | 0             |
| <b>A</b> | <b>Final energy consumption not including transport sector</b> |                          | <b>TJ</b> | <b>88 802</b> | <b>85 987</b> | <b>87 031</b> | <b>87 273</b> |

### 2. Quantity of energy from firewood and wood waste gathered by consumers

| Estoni   |                                   |                                      | Unit      | 2010         | 2011         | 2012         | Average      |
|----------|-----------------------------------|--------------------------------------|-----------|--------------|--------------|--------------|--------------|
| a        |                                   |                                      |           |              |              |              |              |
| 2.       | Firewood                          | Statistics Estonia                   | TJ        | 17 214       | 14 699       | 16 092       | 16 002       |
| 2.1.     | Firewood                          | Statistics Estonia                   | TJ        | 12 895       | 12 496       | 11 455       | 12 282       |
| 2.1.1.   | Gathered by consumer (35%)        | Statistics Estonia – separate search | TJ        | 4 513        | 4 374        | 4 009        | 4 299        |
| 2.2.     | Wood wastes                       | Statistics Estonia                   | TJ        | 4 319        | 2 203        | 4 637        | 3 720        |
| 2.2.1.   | Gathered by consumer (49 %)       | Statistics Estonia – separate search | TJ        | 2 116        | 1 079        | 2 272        | 1 823        |
| <b>B</b> | <b>Total gathered by consumer</b> |                                      | <b>TJ</b> | <b>6 630</b> | <b>5 453</b> | <b>6 281</b> | <b>6 121</b> |

### 3. Gross amount of energy sold

| Estoni   |   |  | Unit      | 2010          | 2011          | 2012          | Average       |
|----------|---|--|-----------|---------------|---------------|---------------|---------------|
| a        |   |  |           |               |               |               |               |
| A        | Final energy consumption not including transport sector |  | TJ        | 88 802        | 85 987        | 87 031        | 87 273        |
| B        | Total gathered by consumer                              |  | TJ        | 6 630         | 5 453         | 6 281         | 6 121         |
| <b>C</b> | <b>Gross amount of energy sold</b>                      |  | <b>TJ</b> | <b>82 172</b> | <b>80 534</b> | <b>80 750</b> | <b>81 152</b> |

### 1. Gross final energy consumption [GWh]

| Estoni   |  |  | Unit       | 2010          | 2011          | 2012          | Average       |
|----------|--|--|------------|---------------|---------------|---------------|---------------|
| a        |  |  |            |               |               |               |               |
| 1.       | Final Energy Consumption                                       |  | GWh        | 33 800        | 32 990        | 33 404        | 33 398        |
| 1.1.     | industrial sector  |  | GWh        | 6 684         | 7 060         | 6 664         | 6 803         |
| 1.2.     | transport sector   |  | GWh        | 9 133         | 9 105         | 9 228         | 9 155         |
| 1.3.     | other sectors  |  | GWh        | 17 983        | 16 825        | 17 512        | 17 440        |
| 1.3.1.   | - households   |  | GWh        | 11 942        | 10 877        | 11 291        | 11 370        |
| 1.3.2.   | - fishing  |  | GWh        | 4             | 9             | 9             | 7             |
| 1.3.3.   | - agriculture/forestry   |  | GWh        | 1 102         | 1 259         | 1 280         | 1 214         |
| 1.3.4.   | - services   |  | GWh        | 4 934         | 4 681         | 4 932         | 4 849         |
| 1.3.5.   | - unspecified  |  | GWh        | 0             | 0             | 0             | 0             |
| <b>A</b> | <b>Final energy consumption not including transport sector</b> |  | <b>GWh</b> | <b>24 667</b> | <b>23 885</b> | <b>24 175</b> | <b>24 243</b> |

### 2. Quantity of energy from firewood and wood waste gathered by consumers

| Estoni   |                                   |  | Unit       | 2010         | 2011         | 2012         | Average      |
|----------|-----------------------------------|--|------------|--------------|--------------|--------------|--------------|
| a        |                                   |  |            |              |              |              |              |
| 2.       | Firewood                          |  | GWh        | 4 782        | 4 083        | 4 470        | 4 445        |
| 2.1.     | Firewood                          |  | GWh        | 3 582        | 3 471        | 3 182        | 3 412        |
| 2.1.1.   | Gathered by consumer (35%)        |  | GWh        | 1 254        | 1 215        | 1 114        | 1 194        |
| 2.2.     | Wood wastes                       |  | GWh        | 1 200        | 612          | 1 288        | 1 033        |
| 2.2.1.   | Gathered by consumer (49 %)       |  | GWh        | 588          | 300          | 631          | 506          |
| <b>B</b> | <b>Total gathered by consumer</b> |  | <b>GWh</b> | <b>1 842</b> | <b>1 515</b> | <b>1 745</b> | <b>1 700</b> |

### 3. Gross amount of energy sold

| Estoni   |   |  | Unit       | 2010          | 2011          | 2012          | Average       |
|----------|---|--|------------|---------------|---------------|---------------|---------------|
| a        |   |  |            |               |               |               |               |
| A        | Final energy consumption not including transport sector |  | GWh        | 24 667        | 23 885        | 24 175        | 24 243        |
| B        | Total gathered by consumer                              |  | GWh        | 1 842         | 1 515         | 1 745         | 1 700         |
| <b>C</b> | <b>Gross amount of energy sold</b>                      |  | <b>GWh</b> | <b>22 826</b> | <b>22 371</b> | <b>22 430</b> | <b>22 542</b> |



**4. Total required energy savings**

| Year         | Required energy savings | Unit      |              |
|--------------|-------------------------|-----------|--------------|
| 2014         | 1 217                   | TJ        | 1.5%         |
| 2015         | 2 435                   | TJ        | 3.0%         |
| 2016         | 3 652                   | TJ        | 4.5%         |
| 2017         | 4 869                   | TJ        | 6.0%         |
| 2018         | 6 086                   | TJ        | 7.5%         |
| 2019         | 7 304                   | TJ        | 9.0%         |
| 2020         | 8 521                   | TJ        | 10.5%        |
| <b>Total</b> | <b>34 084</b>           | <b>TJ</b> | <b>42.0%</b> |

**5. Alternative required energy savings**

| Year         | Required energy savings | Unit      |               |
|--------------|-------------------------|-----------|---------------|
| 2014         | 812                     | TJ        | 1.0%          |
| 2015         | 1 623                   | TJ        | 2.0%          |
| 2016         | 2 637                   | TJ        | 3.25%         |
| 2017         | 3 652                   | TJ        | 4.5%          |
| 2018         | 4 869                   | TJ        | 6.0%          |
| 2019         | 6 086                   | TJ        | 7.5%          |
| 2020         | 7 304                   | TJ        | 9.0%          |
| <b>Total</b> | <b>26 983</b>           | <b>TJ</b> | <b>33.25%</b> |

**4. Total required energy savings**

| Year         | Required energy savings | Unit       |              |
|--------------|-------------------------|------------|--------------|
| 2014         | 338                     | GWh        | 1.5%         |
| 2015         | 676                     | GWh        | 3.0%         |
| 2016         | 1 014                   | GWh        | 4.5%         |
| 2017         | 1 353                   | GWh        | 6.0%         |
| 2018         | 1 691                   | GWh        | 7.5%         |
| 2019         | 2 029                   | GWh        | 9.0%         |
| 2020         | 2 367                   | GWh        | 10.5%        |
| <b>Total</b> | <b>9 468</b>            | <b>GWh</b> | <b>42.0%</b> |

**5. Alternative required energy savings**

| Year         | Required energy savings | Unit       |               |
|--------------|-------------------------|------------|---------------|
| 2014         | 225                     | GWh        | 1.0%          |
| 2015         | 451                     | GWh        | 2.0%          |
| 2016         | 733                     | GWh        | 3.25%         |
| 2017         | 1 014                   | GWh        | 4.5%          |
| 2018         | 1 353                   | GWh        | 6.0%          |
| 2019         | 1 691                   | GWh        | 7.5%          |
| 2020         | 2 029                   | GWh        | 9.0%          |
| <b>Total</b> | <b>7 495</b>            | <b>GWh</b> | <b>33.25%</b> |

## Annex 2: Central government bodies to which Article 5 of Directive 2012/27/EU applies

### Central government bodies

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 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;

26 26 executive agencies:

19. State Archives;
20. Information Board;
21. Land Board;
22. National Heritage Board;

**State Real Estate Register**

23. Patent Office;
24. Consumer Protection Board;
25. Agricultural Board;
26. Agricultural Registers and Information Board;
27. Veterinary and Food Board;
28. Competition Authority;
29. Tax and Customs Board;
30. Statistics Estonia;
31. Internal Security Service;
32. Police and Border Guard Board;
33. Rescue Board;
34. State Agency of Medicines;
35. National Social Insurance Board;
36. Health Board;
37. Civil Aviation Administration;
38. Road Administration;
39. Maritime Administration;
40. Defence Resources Agency;
41. Technical Surveillance Authority;
42. Information System Authority;
43. Environmental Board;
44. Emergency Response Centre;

4 4 inspectorates:

45. Language Inspectorate;
46. Environmental Inspectorate;
47. Data Protection Inspectorate;

48. Labour Inspectorate.

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.