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Assessment of climate change policies in the context of the European Semester

Country Report: Estonia



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The report provides an overview of current emission trends and progress towards targets as well as policy developments that took place over the period from February 2013 to November 2013.

Please feel free to provide any comments or suggestions to the authors through the contacts listed above.

Short summary

Background: The concept of “green growth”, along with sustainable development, receives more attention in the public sphere and media than specific environmental issues. However, policy measures to support a green economy remain somewhat fragmented and are mainly driven by external influences, such as the EU. Nonetheless, the need for sustainable economic growth is increasingly included in long-term government development and action plans, such as the ecological tax reform. The expansion of renewable energies has been overly successful; Estonia is on course to significantly overachieve its targets.

Non-ETS emission reduction target: Estonia can increase its 2020 non-ETS emissions by 11% compared to 2005. From 2005 to 2011, emissions increased by 9%. According to the latest national projections and when existing measures are taken into account, the target is expected to be overachieved by 5 percentage points: +6% in 2020 compared to 2005.

Key indicators 2011:

GHG emissions	EE	EU
ESD EU 2020 GHG target (comp. 2005)	+11%	
ESD GHG emissions in 2011 (comp.2005)	+9%	-9%
Total GHG emissions 2012 (comp.2005)	+14%	-12%
GHG emissions/capita (tCO ₂ eq)	15.6	9.0

→ **73% higher** per capita emissions than EU average

GHG emissions per sector	EE	EU
Energy/power industry sector	71%	33%
Transport	11%	20%
Industry (incl. industrial processes)	7%	20%
Agriculture (incl. forestry & fishery)	7%	12%
Residential & Commercial	2%	12%
Waste & others	2%	3%

→ **Energy/power industry sector**

Energy	EE	EU
EU 2020 RES target	+25%	
Primary energy consumption/capita (toe)	4.6	3.4
Energy intensity (kgoe/1000 €)	503	144
Energy to trade balance (% of GDP)	-1.3%	-3.2%

→ **37% higher** per capita consumption, **nearly 4 times higher** energy intensity and contribution of energy to trade balance below EU average.

Taxes	EE	EU
Share of environmental taxes (% of GDP)	2.8%	2.4%
Implicit tax rate on energy (€/toe)	88	184

→ **Slightly higher** share of environmental taxes and around **50% lower** implicit tax rate on energy than EU average.

Key policy development in 2013: Changes in the Liquid Fuel Act, presented in August 2013, foresee biogas mixing obligations starting from January 2016. A programme to subsidise electric car purchases and to improve the network of chargers received additional funds and electric cars have been made available for rent in Tallinn and Tartu. Moreover, the Estonian government tightened energy efficiency requirements for public buildings bringing legislation up to date with the EU Energy Efficiency Directive. Also the support scheme for renovations of apartments was extended in August 2013.

Key challenges: Average emissions for newly registered cars are the 2nd highest in the EU and have decreased at a lower rate than the EU average between 2005 and 2012. Vehicle taxes are well below the EU average or non-existent, registration taxes are not applied at all and ownership taxes do not need to be paid for passenger cars; heavy goods vehicles are charged with a tax that does not take into account CO₂ emissions. Furthermore, indigenous shale oil still accounts for 64% of primary energy consumption and 91% of electricity production. Moreover, Estonia's power capacity is almost exclusively thermal with an efficiency of 32% (which is 7% below EU average). This results in a CO₂ intensity of more than twice the EU average.

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I Background on climate and energy policies

In general, climate change policy receives relatively little attention from the current government and tends to be addressed through the wider framework of energy and environmental policies as part of national long-term development strategies and broader spatial planning. This in turn means that climate change as such is not subject to widespread public debate or media coverage; rather, it is discussed to the extent that it relates to other policy priorities, such as the need to diversify Estonia's energy portfolio, currently still highly dependent on oil-shale. However, in 2013 several steps have been taken to improve climate change policy planning and to encourage public debate. In June 2013 a comprehensive study on Estonia's possibilities to move towards a low CO₂ emissions economy by 2050 was published and in October 2013 a high-level conference regarding climate change took place in Tallinn. Currently discussions are also ongoing regarding possible steps related to long-term climate policy planning document (interview with the Ministry of the Environment).

Most recently the question of subsidizing renewable energy and concerns related to energy production and the environment became a subject of intense debate when the Estonian electricity market was opened on 1 January 2013 and electricity price levels spiked. Environmental issues were propelled a second time on the national agenda in the beginning of 2013 when the Government proposed to change the applicable premium-priced feed-in tariff support system for renewable energy producers that had been in place since 2010. According to the Government, continuing the current support measures would result in Estonia exceeding its renewable energy target set for 2020 and is therefore no longer appropriate. Such changes are likely to have a retroactive effect on the renewable industry and will create legal and economic uncertainty for investors (Põld 2013). At the moment, the draft act amending the support scheme has been stopped in the Estonian Parliament in order to wait for a reply from the European Commission concerning the admissibility of state aid to the renewable energy sector.

In August 2013 the Ministry of Economics and Communications launched the development of a new strategy for the Estonian Energy Sector, which will serve as a basis for the activities up to the year 2030 and replace the former version passed by the Parliament in June 2009 covering activities to 2020. The new strategy is expected to be published in January 2014. The Ministry of Economic Affairs and Communications will be responsible for the implementations of the programme. The plan aims to guarantee energy security for the economy and all consumers at an affordable price. Despite Estonia's energy independence relative to its needs, diversification remains a priority. This will be achieved by expanding co-generation and continuously supporting renewable energy production, with a special focus on biomass and wind.

Estonia's energy sector and economy are high emitters of greenhouse gases (Lahtvee 2012). The current climate change mitigation and adaptation activities often exist as peripheral objectives of other issues (health, forestry, agriculture etc) (Jakobi 2013). Thus, the subject of climate change mitigation and adaptation is included in a variety of national strategies, the larger Environmental Action Plan 2007-2013 and several large projects (Astra, Baltadapt, BaltCica, BalticClimate, RADOST); however, for the moment Estonia lacks a comprehensive framework to address climate change directly. The only programme aimed specifically at meeting GHG reduction targets under the UNFCCC is Estonia's National Greenhouse Gas Abatement Programme 2003-2012. In June 2013 the

final report on Estonia's possibilities to move towards a low CO₂ emissions economy by 2050 was published (*Eesti võimalused liikumaks konkurentsivõimelise madala süsinikuga majanduse suunas aastaks 2050*). This study analysed through modelling the different scenarios for GHG emission reduction and their incurring socio-economic effects, the report will serve as a basis for compiling the corresponding road-map. In addition, a project recently funded by Norway/European Economic Area has been launched and the results will serve as a basis for developing the national adaptation strategy to climate change, expected to be finished by the end of 2015 (interview with the Ministry of the Environment).

Existing policies involving GHG reductions include excise duties in the transport sector, agriculture, forestry, and waste management. In transport, efforts focus on better public transport systems and promoting the use of electric cars. In the agriculture sector, farmers are eligible for renewable energy subsidies. The State Forest Management Centre (RMK) assures sustainable development of public forests with regulations in place to constrain excessive deforestation through for instance, support measures to encourage private forest owners to plant trees. Laws regulating waste management also include obligations to avoid and reduce GHG emissions via, e.g., recycling and proper management of waste stations. Under the Green Investment Programme, money raised from the sales of the Assigned Amount Units (AAUs) is redirected to the financing of various environmental and climate programmes. Combined with state financing and EU funds, several investment supports are made available for raising environmental awareness, in areas such as waste and water management, energy efficiency and improving air quality.

The concept of "green growth," along with sustainable development, receives more attention in the public sphere and media than specific environmental issues such as climate change. Typical sustainability concerns in Estonia include pollution stemming from oil shale industries and environmental problems relating to the growing pollution in the Baltic Sea. However, policy measures to support a green economy remain somewhat fragmented and are mainly driven by external forces, such as the EU (Lahtvee 2012). Despite that prevalence of environmental issues in civil society and public debates since 1990, the public lacks a general understanding of the relations between the economy and the environment (Lahtvee 2012). Nonetheless, the need for sustainable economic growth is increasingly included in long-term government development and action plans. In this regard, the potential of green jobs in four sectors in Estonia (agriculture, forestry, transport, construction) resulted in a report published in December 2012 with support from the Stockholm Environment Institute.

2 GHG projections

Background information

In 2011, Estonia emitted 21.0 Mt CO₂eq (UNFCCC inventory 2011), about half as much as in 1990. More than 70% of the current emissions come from the energy supply sector, in which emissions have dropped 50% since 1990, reflecting the overall emissions trend. Emissions also decreased notably in the energy use, industrial processes, and agricultural sectors between 1990 and 2010 due to the restructuring of the economy after 1991 (UNFCCC inventory 2011, EEA 2012, UNFCCC 2012).

Progress on GHG target

There are two sets of targets to evaluate: 1) the Kyoto Protocol targets for the period 2008-12 (which has just ended) and 2) the 2020 targets for emissions not covered by the EU ETS.

Under the Kyoto-Protocol, Estonia's emission reduction target for the period 2008-2012 was minus 8% based on 1990 for CO₂, CH₄ and N₂O and on 1995 for F-gases. An evaluation of the latest complete set of greenhouse gas data (for the year 2011; there is only preliminary data for 2012) shows that Estonia's emissions decreased by 50.8% since 1990 (EEA 2013a). Estonia is thus expected to meet its Kyoto commitment by a comfortable margin through direct domestic emission reductions.

By 2020, Estonia may increase its emissions not covered by the EU ETS by 11% compared to 2005, according to the Effort Sharing Decision (ESD) ⁽¹⁾. The latest data for 2012 (EEA 2013b) suggest that Estonia is not on track towards the target at present, missing the Annual Emissions Allocation ⁽²⁾ for the year 2013 by a significant margin. However, the EEA (2013b, p.105) notes that "2012 emissions in non-ETS sectors appear to have been overestimated". By 2020, national projections (EEA 2013b) shows that Estonia will overachieve its target with existing measures by 5 percentage points (see **Fehler! Verweisquelle konnte nicht gefunden werden.**).

¹ Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

² Commission decision of 26 March 2013 on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council. Online available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:090:0106:0110:EN:PDF>

Table I: GHG emission developments, ESD-targets and projections (in Mt CO₂eq)

	1990	2005	2010	2011	2012*	ESD target**		2020 Projections***	
						2013	2020	WEM	WAM
Total	40.5	18.5	20.0	21.0	21.0				
Non-ETS (% from 2005)		5.6	5.5	6.1	7.5 32%	6.1 8%	6.3 11%	6 6%	5.7 2%
Energy supply (% share of total)	28.8 71%	12.4 67%	14.2 71%	14.9 71%					
Energy use (w/o transport) (% share of total)	4.5 11%	1.3 7%	1.2 6%	1.4 7%					
Transport (% share of total)	2.5 6%	2.1 12%	2.2 11%	2.3 11%					
Industrial processes (% share of total)	1.0 3%	0.8 4%	0.5 2%	0.6 3%					
Agriculture (% share of total)	3.2 8%	1.2 6%	1.3 6%	1.3 6%					

Source: UNFCCC inventories; EEA (2013b); Calculations provided by the EEA and own calculations.

* national proxies for 2012 emissions summarised by EEA (2013b)

** The ESD target for 2013 and for 2020 refer to different scopes of the ETS: the 2013 target is compared with 2012 data and is therefore consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the adjusted scope of the ETS from 2013-2020. 2005 non-ETS emissions for the scope of the ETS from 2013-2020 amounted to 6 Mt CO₂eq.

*** Projections with existing measures (WEM) or with additional measures (WAM).

Legend for colour coding: green = target is being (over)achieved; orange = not on track to meet the target

Total greenhouse gas emissions (GHG) and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international aviation and international maritime transport.

National projections of GHG emissions up to 2020 need to be prepared by the Member States in accordance with the EU Monitoring Mechanism ⁽³⁾ every two years, and the latest submission was due in 2013. The projections need to be prepared reflecting a scenario that estimates total GHG emissions reductions in line with policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM) may also be submitted.

In the following two tables, these measures have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most. Please note that the table includes also measures that address GHG emissions covered under the ETS such as measures reducing emissions from electricity generation (e.g. feed-in tariffs). An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

³ Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

Table 2: Existing and additional measures as stated in the 2011 GHG projections

Existing Measures (only important national measures)	Status of policy in November 2013
Improvement of the efficiency in the use of oil shale: Reconstruction of one unit in Narva Elektriijaamad AS (Narva Power Plants). One oil shale boiler using conventional pulverized combustion technique should be replaced with circulating fluidized bed combustion (300 MW).	The construction of two new Narva power plants with a capacity of 300 MW each started in April 2012. The project "2X300 MWe Oil Shale Fired CFB Thermal Power Plant" is estimated to be concluded in December 2015.
Energy Transform energy structure towards renewable energy: 1. Premium-priced feed-in tariff with purchase obligation for electricity production from renewable resources (Electricity Market Act); 2. investment support for inland wind parks provided under different schemes (including JI projects and GIS)	The premium-priced feed-in tariff, as well as the purchasing obligation for energy produced from RES, has been in place since 2010. Currently the purchasing obligation no longer applies. Due to the subsequent rapid developments of the renewable energy market and the need to adjust to the new market situation, the Government proposed to reform the applicable system. According to the Government, continuing with the currently applicable support scheme would lead to Estonia exceeding its 2020 RES target and is therefore no longer proportional. Some of the aspects of the draft (for example retroactivity of reducing the premium and capping the support paid for wind energy) were severely criticized by the renewable energy producers and entrepreneurs as they were seen as leading to considerable legal and economic uncertainty for investors. The Government's plan to reform the systems has for the moment been put on hold. Investment support schemes for inland wind parks have been implemented. Most recently new wind park in Paldiski, with a capacity of 45MW and in Narva, with a capacity of 39MW were opened.
Support to efficient cogeneration of heat and electricity: 1) Premium-priced feed-in tariffs (Electricity Market Act); 2) Investment support	Premium-priced feed-in tariff for cogeneration implemented; Investment support for the (re)construction of cogeneration plants applies.
Energy Efficiency Energy efficiency and use of renewables at small boiler houses and improvement of district heating networks supported partially under the Green Investment Scheme. Activities supported: Construction of small combined heat and power plants. (<2MW or on islands)	Support system implemented and ongoing.
Promotion of use of efficient electrical appliances: Ecodesign requirements for energy-using products	Regulation implemented under the Product Conformity Act. The Technical Surveillance Authority is responsible for monitoring the compliance with the regulation.

Transport	<p>Promotion of public transport:</p> <p>1) Subsidies to public transport;</p> <p>2) Investments into the rolling stock (environmentally friendly buses)</p>	<p>1) The environmentally friendly investment programme for public transport is being implemented.</p> <p>2) Public procurements for the purchase of environmentally friendly buses have partially taken place (50 buses purchased in 2012); public procurement for the renovation of the tram line in the city of Tallinn has taken place. Starting from 1 January 2013, public transport is free for the residents of Tallinn. Moreover, the second biggest city, Tartu, has started to use environmental criteria in its public procurements for transport.</p>
Other non-ETS sectors	<p>Reduction of landfilled waste with rules on municipal waste planning, rules on producer responsibility for certain goods, and an ordinance concerning percentage of biodegradable waste deposited (Waste Act), and tax on landfilling of waste (Environmental Charges Act)</p> <p>Modernisation of agricultural holdings including 1) investments in manure handling and biogas equipment and 2) Production of biomass and biofuels</p> <p>Support for organic farming to increase organically farmed area from 72 800 ha to 120 000 ha. This will lead to reduction of use of mineral fertilizers.</p>	<p>Amendments to the Waste Act foresee greater producer and retailer responsibility concerning obligatory information provided to consumers about recycling. The changes equally set obligatory targets for recycling of different waste categories by 2020 and set a maximum limit on the proportion of waste disposed at a landfill that can be biodegradable.</p> <p>Tax on the landfilling of waste will come into force by 2015.</p> <p>Implemented: Investment support made available to support investments in biogas and bioenergy production for farmers to produce energy for their own use.</p> <p>Implemented: According to the "Action Plan of Organic Farming for 2007-2013" activities to support organic farming are ongoing.</p>

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, May 2013.

Additional Measures(only important national measures)		Status of policy in November 2013
Energy Efficiency	<p>Increasing energy efficiency in manufacturing industries and construction.</p>	<p>Developing training courses on energy conservation and energy management in enterprises. Analysis and development of energy efficient technical solutions. Measure is planned.</p>
Transport	<p>Introduction of regulation regarding use of biofuels including:</p> <p>1) Introduction of obligation of 5-7% biofuel share in liquid motor fuels;</p> <p>2) Introduction of obligation of 50% biofuel share in liquid fuels for public transport</p>	<p>1) In July 2013, the amendments to the Liquid Fuel Act were presented by the Ministry of Economic Affairs and Communications. They foresee a 5% mixing obligation with biofuels for the retailers by 2016. The mixing obligation will increase to 10% by 2020. The amendments proposed are currently subject to review by other ministries.</p> <p>2) Investment support to increase the use of renewable energies in public transport derived from the sales of the CO₂ quotas is implemented and ongoing. By September 2013 another 7 buses working on gas and 3 gas-electric hybrid buses have been purchased. Some municipalities have started to include the obligation for the use of alternative fuels in their public procurements.</p>

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, May 2013.

According to the current state of implementation, most WEM policies are implemented and/or ongoing. Considering the overachievement under the currently applicable support schemes, the indicated deviation is not likely to change the target achievement as such. There has also been progress on WAM measures, especially concerning the transport sector. The effect of the proposed additional policies is yet to be evaluated, as none of the measures have yet been finally implemented.

3 Evaluation of National Reform Programme 2013 (NRP)

In April of each year, Member States are required to prepare their National Reform Programmes (NRPs), which outline the country's progress regarding the targets of the EU 2020 Strategy. The NRPs describe the country's national targets under the Strategy and contain a description of how the country intends to meet these targets. For climate change and energy, three headline targets exist: 1) the reduction of GHG emissions, 2) the increase of renewable energy generation, and 3) an increase in energy efficiency (⁴).

The NRP approved by the Government in April 2013 mainly focuses on continuing the implementation of the measures already laid out in the previous reform programme, as the implementation period for some measures has been extended. The current NRP brings out the need to compile a new national development plan for the Estonian energy sector until 2030, which would take into account the rapid developments of the sector during the last years. The preparations for the plan are ongoing and the strategy should be published by November 2013. In other areas the NRP again focuses on measures increasing energy efficiency, particular focus is on making energy efficiency requirements more stringent, better urban planning and investing into energy efficiency in public sector and local government buildings, apartment buildings, private homes and industry. Another focus is on the transport sector, with various activities aiming at decreasing energy use in transport. As an additional feature an added emphasis on supporting R&D in resource efficiency and eco-innovation is mentioned. No measures with an implicit focus on adaption to climate change are mentioned.

In the following table, the main policies and measures as outlined in the NRP of April 2013 (⁵) have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

⁴ There are specific targets for all MS by 2020 for non-ETS GHG emission reductions (see section 2) as well as for the renewable energy share in the energy mix by 2020 (see section 4, renewable energies). Specific energy efficiency targets will be defined (or revised) by the MS until the end of April 2013 in line with the methodology laid out in Article 3 (3) of the Energy Efficiency Directive (Directive 2012/27/EU).

⁵ All NRPs are available at: http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index_en.htm

Table 3: Main policies and measures as outlined in the NRP, April 2013

Development and implementation of energy and resource saving measures for industrial enterprises and SMEs	
Status as stated in the NRP	Measures are to be worked upon by the Ministry of the Environment and the Ministry of Economic Affairs and Communications throughout 2013-2015
Status as per Nov 2013	Work ongoing.
Description of policy or measure	The focus is on promoting energy and resource efficiency in industrial companies and outside the ETS, including SMEs, which will be supported through innovative investment schemes.
Support R&D in resource efficiency and eco-innovation	
Status as stated in the NRP	Continuing and ensuring the achievement of set goals of the R&D programmes for biotechnology and green technologies is a joint venture of several ministries and will be worked upon throughout 2013-2015
Status as per Nov 2013	Work ongoing.
Description of policy or measure	Supporting R&D in resource efficiency and eco-innovation means economic development and increased industrial competitiveness. Here the development of green technologies in water and waste management are put under special attention as natural circumstances offer a competitive advantage in these areas. R&D should also be aimed at enhancing the value of biomass in Estonia.
Compiling and adapting the National Development Plan of the Estonian Energy Sector until 2030 in line with the developments of recent years	
Status as stated in the NRP	To be worked on by the Ministry of Economic Affairs and Communications in 2012-2015
Status as per Nov 2013	In August 2013, the Ministry of Economic Affairs and Communications launched the process to develop a new Estonian Energy Sector Strategy, which will serve as a basis for the Estonian energy policy up to the year 2030. The new strategy is expected to be published by November 2013.
Description of policy or measure	According to the Ministry of Economic Affairs and Communications, the new strategy will aim at ensuring competitiveness while taking into account the main goals of the state's energy policy, which is to guarantee the security of supply for a reasonable price. The new long-term plan is expected to improve security for investors and take into account the rapid changes in the Estonian energy sector during the last years. Estonian energy resources continually allow the country to maintain a very low energy dependency and have allowed the country to develop a considerable know-how in the sector of oil-shale production and processing. The new strategy will continue working on ways to diversify Estonian energy portfolio, which also means supporting the production of energy from renewable sources (expansion of co-generation of electricity and heat, increasing the share of energy from biomass and wind) and reconstruction of oil-shale fired plants. The new development plan also aims to find better synergies among different types of energy production, including electricity, liquid fuels and heat.

Developing energy connections with Nordic countries and Baltic countries (completion of Estlink 2 cable, strengthening energy connections with Latvia)

Status as stated in the NRP	To be worked on by the Ministry of Economic Affairs and Communications in 2012-2015
Status as per Nov 2013	The building of the 145km submarine cable Estlink 2 is finished and the functional tests are being carried out. The Estonian system operator Elering signed a memorandum with its Latvian counterpart AST in March 2013 for the construction of a third electricity connection to Latvia.
Description of policy or measure	The Estlink 2 cable project was started in November 2011 and the connection is expected to come into operation in early 2014. The third Estonian-Latvian electricity cable connection is estimated to improve transmission between the two countries by 500-600MW and is expected to be finished until 2020.

Development of a renewable energy support scheme

Status as stated in the NRP	To be worked on by the Ministry of Economic Affairs and Communications in 2012-2015
Status as per Nov 2013	<p>1) The main support scheme currently applicable for renewable energies in Estonia is the premium-priced feed-in tariff, in place since 2010. According to the Government, continuing with the currently applicable support system would mean that Estonia would exceed its 2020 targets and is therefore no longer proportional and needs to be changed in order to correspond to the changed situation on the market. As a result, modifications to the Electricity Market Act were proposed, which included (also retroactive) reduction of support for RES and the capping of support for wind energy. Reducing the support retroactively to RES producers received a lot of criticism due to the legal and economic uncertainty it brought for investors. Consequently the reading of the draft was stopped in the Parliament in order to allow for the complete redrafting of the amendments. Currently Estonia is waiting for the reply from the European Commission concerning the admissibility of state aid to continue the renewable energies support scheme. .</p> <p>2) In addition to this, several renewable energy support schemes are available: for the (re)construction of CHP plants and infrastructure related to it; for the development of the technology necessary for processing and producing energy from biomass, and for the development of energy production from wind.</p>
Description of policy or measure	<p>According to the currently applicable scheme, energy producers from RES and under cogeneration are entitled to a fixed support for each kWh produced.</p> <p>The changes to the main renewable energy support scheme, premium-priced feed-in tariff, are currently on hold, but the Government intends to proceed with the reform. Currently support schemes are being implemented as they were and no relevant changes have taken place.</p>

Mapping the situation and defining the necessary directions of development in the heat supply sector

Status as stated in the NRP To be worked on by the Ministry of Economic Affairs and Communications in 2014-2015

Status as per Nov 2013 No information was available concerning the mapping of the heat supply sector. However, under the Environmental Programme a significant number of public buildings, such as schools, municipal buildings, and local culture centres received financing for the reconstruction of their heating systems using renewable energy or heat pumps during 2013. The activities supported included the reconstruction of boiler houses for biomass, the installation of heating systems based on solar power, and the adaptation of heating systems previously working on oil-shale for renewables.

Description of policy or measure Mapping the effective heating districts and measures to support their sustainability; mapping ineffective heating districts and development of measures for their replacement with alternative solutions.

Development of electromobility including an Estonia-wide electric car charging network and a support measure for acquiring 500 electric cars for private consumers

Status as stated in the NRP To be worked on by the Ministry of Economic Affairs and Communications in 2011-2014

Status as per Nov 2013 The pilot project was launched in 2011, the support scheme to promote the use of electric cars is by now fully operational: a network of 163 chargers has been put in place all over Estonia since February 2013. So far the support has been allocated for the purchase of 167 electric cars by private persons and currently thanks to the system over 500 electric cars are in use in Estonia. The support system to promote the purchasing of electric cars by private persons was extended up to 2014. Since June 2013 electric cars are available for rent in the biggest cities, Tallinn and Tartu.

Description of policy or measure The programme is financed through €45 million from the sale of 10 million Estonian Assigned Amount Units (AAUs) to Mitsubishi Corporation

Introducing energy class labels for vehicles, including search options by CO₂ emission figures in car sales portals

Status as stated in the NRP To be worked on by the Ministry of Economic Affairs and Communications in 2011-2015

Status as per Nov 2013 Measure included as a top priority in the 2013-2016 work plan for the Ministry of Environment. No concrete measures have so far been launched.

Description of policy or measure The objective is to increase consumer awareness of vehicle emissions.

Supporting investment in wind as an energy source

Status as stated in the NRP	To be worked on by the Ministry of Economic Affairs and Communications in 2011-2014
Status as per Nov 2013	Negotiations in the Parliament concerning the reform of the premium-priced feed-in tariff were stopped in April 2013, currently the Estonia government is waiting for the reply from the European Commission concerning the admissibility of allocation of state aid in order to continue supporting the renewable energy sector
Description of policy or measure	Electricity produced from wind is currently supported through premium-priced feed-in tariff, as indicated by the Electricity Market Act. Additional investment support is available to encourage the construction of wind energy plants and technologies.

Measures for decreasing the production of industrial waste

Status as stated in the NRP	To be worked on by the Ministry of Environment in 2012-2015
Status as per Nov 2013	The Government has a measure in place that foresees support for the closure of waste stations of oil shale and the renewal of recycling stations of oil shale.
Description of policy or measure	Includes measures to increase recycling of oil shale waste.

Continuing implementation of ecological tax reform

Status as stated in the NRP	To be worked on by the Ministry of Finance in 2011-2015
Status as per Nov 2013	The development of the environmental taxing system details continues with the gradual aim of increasing environmental taxes and reducing labour taxes. Special attention will be given to the efficiency of tax revenue use and the monitoring of implementation of charges. In June, an impact assessment of Estonian environmental fees was published. The goal of the study was to analyze the impact of fees levied on the use of mineral resources and the release of pollution, including non-ETS emissions, since 2000. The analysis also provided recommendations for the Government's environmental fees policy for the years 2016-2020.
Description of policy or measure	Increase of environmental taxes and reduction of labour taxes in public sector incomes.

Completion of the first stage of investments into energy conservation

Status as stated in the NRP Investments will be carried throughout 2011-2015

Status as per Nov 2013

The support schemes enabling renovations of public sector and local government buildings as well as apartment buildings were implemented throughout 2012 under the Green Investment Scheme as a part of the Government's wider Energy Efficiency Programme for 2007-2013. The renovation support for apartment buildings is implemented by the Ministry of Economics and Communications in cooperation with the financing institution Kredex, the company responsible for providing loans and support for energy efficient renovations. According to Kredex, in 2012 the support helped to make a total of 248 apartment buildings more energy efficient. The amount of the support allocated was 14 Million Euro. In August 2013, the Ministry of Economic Affairs and Communications signed a renewed contract with Kredex, according to which the state will provide € 3 Million for the energy efficient renovation of approximately 50 apartment buildings, with the rate of the support varying from 15 to 35%.

In April 2012 a regulation came into force that made private houses eligible for the support aimed at energy-efficiency renovations. However, as the amount of applications for the support called for expenditures in excess of double the programme's budget, for the moment the issuing of investment support has been stopped.

Description of policy or measure

The objective of the package of investments is to carry out energy efficient renovations in three building categories: public sector and local government buildings in public use, apartment buildings, and private homes. The total volume of the package is close to €198 million, of which the majority (€146 million) is comprised by the renovation of public buildings. Since 2010 € 150 Million have been invested in the energy efficient renovation of 490 public buildings. In addition, 570 apartment buildings have been renovated. The new budget period 2014-2020 foresees a total of € 102 Million for the programme.

Implementing an environmentally friendly public transport investment programme

Status as stated in the NRP The measure is to be completed by June 2013 is part of Estonia's pledge to the Euro Plus Pact.

Status as per Nov 2013

The environmentally friendly public transport investment programme is to be implemented throughout the years 2012-2015 by the Ministry of Economic Affairs and Communications.

Description of policy or measure

The goal is to reduce the environmental burden of transport and increase the number of users of public transport. Targets were to acquire 110 new environmentally friendly buses for serving county bus routes and Tallinn city routes, acquire 13 natural gas and hybrid powered buses for serving Narva and Pärnu routes, develop tram infrastructure, and acquire trams on the longest and most heavily used tram line in the city of Tallinn. The volume of the programme is €86 million.

Increasing the use of vehicles using alternative fuels (including bio methane) by developing and implementing a set of measures

Status as stated in the NRP	The set of measures is to be developed by the Ministry of Economic Affairs and Communications in 2014-2015
Status as per Nov 2013	The amendments to the Liquid Fuel Act presented by the Ministry of Economic Affairs and Communications in July 2012 foresee a mixing obligation for retailers. If the law, currently under review by the ministries, would come into force, the share of biofuels would need to be 5% in 2016 and would increase to 10% by 2020 (MKM, Eelnõu 2013). Additional measures will be defined in the Estonian Transport Sector Development plan 2014-2020, which will be published by the Ministry of Economic Affairs and Communications by autumn 2013 and in the implementation plan of the National Renewable Energy Action Plan 2020.
Description of policy or measure	The goal is to increase the number of vehicles using alternative fuels. This includes increasing the use of biofuels in the transport sector through the introduction of a mixing obligation in the Liquid Fuel Act as well as promoting the use of bio methane.

4 Policy development

This section covers significant developments made in key policy areas between February 2013 and November 2013. It does not attempt to describe every instrument in the given thematic area.

Environmental Taxation

The share of Estonia's environmental tax revenues in its overall tax revenues was relatively high at 8.58%, compared to the other MS. Compared to the GDP, the value was at 2.82%, which is also well above the EU average. These environmental taxes in Estonia include both environmental charges on the use of natural resources (f. e for water abstraction and mineral abstraction) and pollution charges upon emission of pollutants into the environment, as well as various excise duties on fuel, electricity, packaging and vehicles. Estonia has a carbon tax in place for the generation of thermal energy; the sum for releasing 1 ton of carbon dioxide is € 2. The implicit taxes on energy amounted to 87.6 € per tonne of oil equivalent (toe) in 2011 and was the 8th lowest in the EU. Estonia has also a very energy intense economy. In 2010 it was the second most energy intense economy of all MS. The share of energy tax revenues in total tax revenues is the 3rd highest in the EU (Eurostat 2013a).

This relatively high ranking on the environmental taxation front is due in part to Estonia's ongoing ecological tax reform mentioned in its National Reform Programme (NRP) the goal is to increase environmental taxes and reduce labour taxes, building a "well-functioning environmental tax system." According to the 2013 NRP, this system is largely completed but requires an analysis of tax systems' effects on companies and the efficiency of tax revenue use in order to establish long-term tax rates. In June, the Stockholm Institute for Sustainable Development's Tallinn Centre, in cooperation with the Social Sciences Research Centre of the University of Tartu, published an impact assessment of Estonian environmental fees. The goal of the study was to analyze the impact of fees levied on the use of mineral resources and the release of pollution,

including non-ETS emissions, since 2000 and provided recommendations for the Government's environmental fees policy for the years 2016-2020. One of Estonia's stated goals is "continuing the gradual reduction of taxes on labour and profits and increase of taxes on consumption and environmental burden." One of the measures to be undertaken in this regard is the setting of new goals for environmental charges for the years 2016-2020 and reviewing the structure and rates of the charges, including charges imposed on the oil shale industry. In addition the 2013 NRP continues to underline the need to "assess the efficiency of tax revenue use and the monitoring of implementation charges".

Recent changes in Environmental Taxation Law represent a step in the opposite direction. In October 2009 government issued a bylaw nr 171 regulating an environmental tax for special water usage ("*Vee erikasutusõiguse tasumäärad veevõtu eest veekogust või põhjaveekihist*") and a bylaw nr 172 regulating the cost of the mining of the state-owned mineral resources ("*Riigile kuuluva maavaravaru kaevandamisõiguse tasumäärad*"). Both bylaws regulated the environmental taxes from 2010 until 2015. The named bylaws were amended by the government in October 2012 and amendments came into force in January 2013. Changes foresaw an increase in the charge rates imposed on the mining of natural resources and water used for that matter. Additionally, the change foresaw a 20% increase in the tax imposed on oil-shale waste disposal. The goal of the law was to protect and ensure a more sustainable use of resources and water and to motivate the entrepreneurs to invest in the recycling of oil-shale waste. Sudden increases in the environmental taxes motivated mining professional associations to make a complaint to Chancellor of Justice who challenged the legality of the bylaws in Supreme Court of Estonia. The matter is expected to be ruled by the Supreme Court in December 2013.

Energy Efficiency

As mentioned above, the energy intensity of Estonia's economy is still very high in 2011 and has even increased since 2005 by 2%. This trend is contradicted by a slight decline of the overall energy consumption, which decreased by 1% between 2005 and 2011. Estonia was able to improve its performance between 2010 and 2011, when consumption decreased by 2% but still remains above the EU average (Eurostat 2013a).

Estonia's industrial sectors increased energy efficiency between 1996 and 2010 by 67%, mostly by structural changes in the late 1990's. Of particular mention, the chemical, machinery manufacturing and food industries contributed to these achievements most significantly. In contrast, the situation in the pulp and paper industry has vastly deteriorated since 2005. In the household sector energy efficiency improvements of 27% were achieved between 1996 and 2010 (Odyssey 2012).

To counteract this energy consumption trend, the Estonian government updated minimum energy efficiency requirements for new buildings, which came to force in January 2013. The regulation supplementing the existing Building Code tightened energy efficiency requirements for public buildings and brings the legislation up to date with the Energy Efficiency Directive 2010/31/EL. Throughout 2012, 248 apartment buildings were renovated and made more energy-efficient through the existing support scheme for the renovation of apartment buildings. In August 2013, the Ministry of Economic Affairs and Communications decided to renew the contract with the financing institution Kredex, according to which the state will provide another € 3 Million for the energy efficient renovations of approximately 50 apartment buildings. In April 2012, the government set

up a similar programme to support energy efficiency and renewable energy related renovations in private homes. The measure turned out to be so popular that due to the large number of applications received, surpassing two times the finances foreseen for the measure, the support scheme has been stopped for the moment and no new applications are being accepted. The new budget period 2013-2020 foresees a total of € 102 Million for the programme.

Funds continue to be available for upgrades in public and municipal buildings. Estonia is using the proceeds from the sale of its Assigned Amount Units (AAUs) under the Kyoto Protocol to fund environmental projects, including renovations to make buildings more energy efficient. The aim is to renovate 540 public and administrative buildings (municipalities, high-schools, hospitals etc) - so far, over 500 such buildings have been renovated. The €146.5 million in AAU proceeds dedicated to this purpose was foreseen to be used through the end of 2012, but on 3 January 2013 the Ministry of Environment announced that due to the efficient management of the money so far, the government is able to continue the project until the end of 2013, allowing for the renovation of an additional 27 buildings under the scheme this year.

An interim report assessing the progress of the government's Energy Efficiency Action Plan 2007-2013 attempted a rough estimate of energy savings and concluded that the measures it included will have collectively led to an overall savings of 3.5 quadrillion joules (PJ) by 2016 (see Ministry of Economics and Communications (2010)). The final report of the Energy Efficiency Action Plan 2007-2013 has not yet been published (as of November 2013). As stated in District Heating Act (*Kaugkütteseadus*), the government will unveil a new Energy Conservation Programme in 2014.

Furthermore, indigenous shale oil still accounts for 64% of primary energy consumption and 91% of electricity production. Estonia's power capacity is almost exclusively thermal with an efficiency of 32% (7% below EU average). This results in a CO₂ intensity (CO₂ emissions per GDP) of more than twice the EU average (ABB 2011).

Renewable Energy

As a proportion of total energy consumption, renewable sources accounted for 25.9% in 2011, mainly due to the widespread use of primary energy from firewood, wood chips, and wood waste in recent years. The trend in production is increasing, especially in wood chips and wood waste. Estonia has therefore already reached its 2020 target of 25% of total energy use from renewable energy technologies. In the electricity sector, the proportion of final consumption produced from renewable sources increased substantially between 2005 and 2011 from 1.3% to 12.3% (Eurostat 2013b).

The growth in renewable energy in the power sector is in large part due to existing strong policies in this area, including a premium-priced feed-in tariff for power companies according to the country's Electricity Market Act (see existing measures table) and strong investment support for inland wind parks, energy produced from biomass, and reconstruction of cogeneration plants.

The Government is of the opinion that continuing the current support scheme for renewable energy production would mean that Estonia would surpass the targets set for 2020. Therefore, the currently applicable system is no longer proportional to the targets and needs to be reformed in order to take into account changes that have taken place on the energy market since 2010. In case of approval, the support for electricity produced

from renewable energy sources would be decreased by 15-20%. The Ministry of Economics and Communications argued that the current levels of support for renewable energy technologies no longer correspond to the country's actual power market, which has seen a constant increase in the share of renewable energy production over the last decade. Because energy prices have risen considerably due to the opening of the electricity market, the cost of energy for the consumers needs to be kept in check by reducing the support allocated for renewable energy. Additionally, the Ministry contends that financial support for this sector must be modified to comply with the European State Aid rules (E24 2012).

The following is a longer overview of the explanatory letter accompanying the draft amendments prepared by the Ministry of Economic Affairs and Communications.

Estonia's current premium price feed-in-tariff policy for renewable energies came to force in 2007 and is based on the Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. As per this Directive, the support scheme must be proportional and adjusted after a period of transformation, according to electricity market changes. Estonian authorities thus aimed to reform existing renewable energy support in order to achieve climate goals for 2020.

The context for renewable energy support in Estonia has changed since 2007, as the premium-priced feed-in tariff turned out to be much more successful than foreseen. Initially, policymakers aimed for renewable energy to account for 5.1% of the country's overall electricity consumption - in the first half of 2012, it accounted for 20.4%. This rapid renewables build-up has increased power prices for end-consumers. The Ministry of Economics and Communications calculated that continuing the current scheme would result in doubling the renewable energy fee passed on to the consumers by 2020. The proposed change therefore aimed to reduce the burden on electricity consumers. Since 2010 the premium-priced feed-in tariff was the same for every type of renewable energy producers. It was €0,0537 per KWh in addition to the income from the sale of the electricity. In 2012 the payment of subsidy was changed. For companies whose renewable energy production facilities are using renewable energy sources, except wind, or who have by the date of 15 July 2012 arranged an agreement for selling the heat or who has by the date of 15 July 2012 received a building permission and whose output does not exceed 10MW are entitled to premium-priced feed-in tariff of € 0,0537 per KWh for period of 12 years in the future. The projects started after 15 July 2012 will be calculated with a formula € 0,093 minus last month's weighted average spot price. The premium-priced feed-in tariff will be valid for a certain producer for 12 years.

A reason to change renewable energy support was articulated by the Competition Authority on the basis that such supports distort fair competition considering their average payback time on investments under current electricity market conditions and prices (see explanatory letter). A final reason for changing the current renewables support scheme is that it also partly subsidises the oil-shale industry - this is no longer compatible with European State Aid rules. Accordingly, amendments to Estonia's Electricity Market Act reforms of the support scheme for renewable technologies were sent to the Parliament, but producers of renewable energy, relevant NGOs, as well as big entrepreneurs argue that this would have led to legal and economic uncertainty for future investments and considerable slowdown of the renewable energy sector (Tammist 2012, Põld 2013). Consequently, the reading of the draft amendments was stopped in the Parliament and withdrawn from the legislative process. The Estonian Government is waiting for European

Commission's reply concerning the admissibility of the new state aid for the renewable energy sector.

The amendments to the Ambient Air Protection Act, which became applicable from August 2013 foresee the allocation of funds gained from the ETS to the use of bio methane in the transport sector and small scale renewable energy solutions. The Ministry's current calculations foresee € 43 Million to support the use of bio methane in the transport sector starting from 2015. By 2020 the use of bio methane should substitute 30,000 tons of petrol. For small scale wind and solar energy solutions the additional sum foreseen until 2020 is € 5 Million.

Energy Networks

Currently, Estonia is connected to Latvia and Lithuania within the ENTSO-E Baltic regional grid. The Estonian transmission system operator Elering signed a memorandum with its Latvian counterpart AST in March 2013 for the construction of a third electricity cable connection between the two countries. The connection is expected to improve the transmission between Estonia and Latvia by 500-600MW and is expected to be finished by 2020. No connection to the main continental European grid exists, although one is planned to run through Poland. Underwater cable connections (Estlink 1 and 2) to Finland will allow Estonia to increase its security of supply and will support the development of its electricity market. The first transfer of electricity has already taken place and functional tests will be carried out in the coming months. The final acceptance and full operation date of the EstLink 2 is scheduled for the beginning of February 2014. The Estlink2 cable connecting high-voltage, direct current between Estonia and Finland represents one part of the increased Baltic-Nordic energy flow being fostered by the EU also in Lithuania and Poland. The projects are run jointly by the Finnish and Estonian transmission system operators, Fingrid and Elering, and the expected cost is € 320 million and is covered by the different actors: the EU, the MS involved, the Nordic Investment Bank, and the European Investment Bank.

Transport

Emissions from transport have decreased between 1990 and 2011. However, since 2005 this trend has reversed and emissions have slightly increased. Also, their proportion among Estonia's total emissions has increased to 11%. The overall negative trend indicates that these emissions need to be addressed in the future (Table 1).

Average emissions for newly registered cars are very high in Estonia with a level of 150.1 CO₂/km. The level is the 2nd highest in the EU and has decreased at a lower rate than the EU average between 2005 and 2012 (Eurostat 2013a). In Estonia, vehicle taxes are well below the EU average or non-existent. Registration taxes for example are not applied at all and ownership taxes do not need to be paid for passenger cars. HGVs are charged with a tax according to number of axles, weight, and suspension type (ACEA 2012). However, the tax is below the EU average and CO₂ emissions are not taken into account. Furthermore, there is no charge applying to road use (CE Delft 2012).

Estonia levies taxes on petrol and diesel that are below or at EU average, with diesel taxed at slightly lower rates (European Commission 2013).

Though the share of renewable energy in Estonia's overall energy consumption has increased, the transportation sector has remained largely untouched by these developments. In 2011, the share of biofuels in the overall consumed motor fuels was

roughly only 0.33%. During the years between Estonia's accession to the EU and 2011, Estonia promoted the use of biofuels in the transport sector by excusing biofuels partly or completely from excise duties. The fuel excise has been raised 10 times in the last 15 years but with little impact on energy consumption. Only cargo transport in Estonia fell in 2011, but due to the overall economic slowdown (Estonian Environment Indicators 2012).

Funds for road management and road construction come with at least 75% from the excise duties and 25% from the excise duties on fiscal marked fuel. According to the Transport Development Plan for 2014-2020 (*Transpordi arengukava 2014-2020*), 10% of the funds will be distributed to local governments to improve infrastructure on local roads. Additional funds from the European Union will also be mobilised. As the usage of alternative fuels has increased over recent years and internal combustion engines have become more effective, there is a possibility that received excise duties will decrease until year 2020. This means that in order to fund road management and construction, supplementary funds are needed. Therefore, the possibility of a road usage tax or other means is likely to be decided on during development period (Transport Development Plan for 2014-2020).

The changes to the Liquid Fuel Act presented by the Government in August foresee a biofuels mixing obligation for retailers. Starting from the 1st of January 2016 the obligation would be 5% and would increase to 10% by 2020. Amendments to the Ambient Air Protection Act, which entered into force on 1 of August, foresee from now on the allocation of resources gained from the sales of the ETS to bio methane. The Ministry of the Environment's current calculations foresee € 43 Million to support the use of biogas bio methane in the transport sector starting from 2015. By 2020 the use of bio methane should substitute 30,000 tons of petrol.

Recent policies focus on the incentives side, improving and fostering public transport such as buses and trams. New hybrid and natural gas buses are purchased and new trams and tram lines built (see evaluation of National Reform Programme).

With the purpose of developing and improving environmentally friendly transport in Tartu County, the Ministry of Economy and Communication, the Estonian Road Administration, the Tartu County Government and the Tartu City Government have been working together and signed a Memorandum of Understanding in November 2013. According to the Memorandum, companies taking part in the public procurement for Tartu County bus transport services, in the period from 2015 to 2022, must regularly use at least eight buses fuelled by compressed natural gas (CNG). In addition, the buses must be capable of using environmental friendly biomethane. The Tartu City has set a target that foresees half of the buses (25 buses) running exclusively on compressed natural gas by the year 2018. Governments of Tartu County and Tartu City will provide planning assistance to companies willing to build natural gas stations.

The latest efforts to improve the fuel efficiency of vehicles as a part of the Estonian electromobility programme foresee measures to promote electric cars. Five hundred and seven Mitsubishi iMiev electric cars have been purchased and will be used by the Ministry of Social Affairs in order to set an example. Additional finances to subsidise electric car purchases and to cover Estonia with a network of chargers were made available for 2013. The project, which was first introduced as a pilot measure, has proven successful and popular among car users. Since June 2013 electric cars have been made available for rent in the biggest towns, Tallinn and Tartu. The financing of the Estonian

electromobility programme is based on the contract concluded between the Government of the Republic of Estonia and the Mitsubishi Corporation for the sale of 10 million AAUs (assigned amount units).

In addition, specific targets of Estonian energy and environment impacts are implemented from the EU's climate and energy policy. Estonia is hoping to reduce the transport sector's energy consumption by the year 2020 to the level it was 2010. In addition greenhouse gas emissions are targeted to be no more than 11% from the level it was in 2005 and 10% use of renewable energy in the field of transport is foreseen. In attempt to promote the use of public transport, the Transport Development plan for 2014-2020 (*Transpordi arengukava 2014-2020*) articulates several new support mechanisms for transport infrastructure in relation to bus lines, the railway and ferry transport.

In recent years, Estonia has developed several electric solutions in the transport sector. For example short-time rental of electric cars by cell phones has become popular as a fast and cost-effective solution. Mobile parking system has been working successfully for years. The strategy for coming years is to continue developing electric systems which would enable real-time monitoring of the traffic situation. The aim is to make traffic monitoring a sensor-based process.

Agriculture

In the agricultural sector, support measures are made available to promote the wider use of renewable energy produced from biomass by farmers for their own use. Under the scheme, support can be allocated to a variety of activities, such as growing an energy culture, producing heat and transport fuel from biomass, constructing a facility to produce bioenergy, or purchasing the necessary equipment for bioenergy production. The support can cover up to 40% of the total cost of the project. The allocation of funds is round-based. The applications are evaluated by the Estonian Agricultural Registers and Information Board. This support mechanism was renewed for the year 2013. Similarly, support measures are available to promote the modernisation of agricultural holdings and investments to livestock holdings. Currently the Ministry of Agriculture is working on the new Development plan for organic farming 2014-2020, which will be released in the beginning of 2014.

Waste

The Ministry of Environment has composed a report on the implementation of the Pollutant Release and Transfer Register (PRTR). Pollutant Release and Transfer Register is a national electronic database that provides access to information regarding environmental issues at the national and international level. The registry includes information about emissions related to air, soil and water as well as hazardous and regular municipal waste transfer, including export. The report outlines how information is gathered on the topics mentioned above in Estonia and explains how to secure the quality of this information (*"Heite- ja ülekanderegistri (PRTR) elluviimise aruande kommenteerimine", 12.11.2013*).

Support is available on a round-based scheme under the Environmental Programme managed by the Environmental Investment Centre. The objective of the waste treatment programme is to expand the hazardous waste collection system to cover all the counties and local governments, to develop the sorted waste collection and recovery infrastructure, and to prevent and reduce environmental pollution caused by waste

through the application of modern waste treatment principles. Applications are generally accepted three times a year. Support can be allocated to local governments, companies, environmental protection authorities, or public entities in addition to NGOs and foundations involved in environmental protection activities.

Recent changes to the Water Act aim at better protecting the groundwater from the pollution stemming from agriculture by applying stricter rules for the use of fertilizers and making monitoring more efficient. Since approximately 60-80% of the effects on the groundwater stem from agriculture, the new rules aim at reducing this pollution by limiting the nitrogen and phosphorus amount in the fertilizers and their use according to seasons. The changes also established a common basis on the calculation of plant nutrients in manure. Additionally, as a result of the changes the environmental inspection will have a wider scope of manoeuvre concerning the allocation of fines.

In June 2013, Eesti Energia AS, which is state-owned energy company, opened the first waste-to-energy power plant in Tallinn. The output of the power plant for electricity is 17 MW and for the heating 50 MW. Plant consumes nearly 220 thousand tonnes of waste. The cost of the power plant was € 105 million (*Eesti Energia AS*)

Land Use, Land Use Change and Forestry

The forest industry in Estonia is regulated in general under the "Estonian Forestry Development plan until 2020" (hereafter Development plan). The development plan until 2020 and the Forestry Act are the legal basis of support mechanisms, aiming to provide forest owners with the necessary expertise (in the form of advising) and finances to manage the forest in a sustainable manner. The indirect aim of the development plan is to reduce GHG emissions by encouraging the forest owners to plant more trees. More specifically, the support scheme aims to subsidise the planning of trees and ensure sustainable management. The allocation of support is round-based, and the applications are evaluated by the Private Forest Centre Foundation, a foundation governed by the Ministry of Environment. The programme was renewed for the year 2013.

Estonia will face new changes in its forest industry in 2014. In November 2013, Estonian Parliament passed a draft for the amendment of the Forest Act (*Metsaseadus*). Amendments include developing an electronic forest registry, which makes forest management more transparent. The electronic registry will include information about forests (e.g age, type, situation). One objective of the registry is to relieve the administrative burden currently associated with forest matters. The new registry should allow most permits, planning, and permissions to take place online..

The new Forest Act also includes stricter control mechanism for the inspection of usage of the support mechanisms which under the new Forest Act, the government will have more authority in relation to inspections of the support mechanism ("*Eesti arendab välja Euroopas ainulaadse metsaregistri*, 20.11.2013)".

Approximately half of Estonia's land area or 2.2 million hectares is covered with forest. Every year, around 12 million m³ of forest grows back. In 2012, 9million m³ of forest were cut down. Roughly 40% of Estonian forests belong to the Estonian state, which are maintained, grown, and managed by the State Forest Management Centre (RMK). In their activities, the RMK tries to strike a balance between the economical, ecological, and social aspects of forest management. Their activities in different regions are based on the long-term programmes until the year 2021, which were elaborated in summer 2012. In

December 2012, the Estonian Ministry of Agriculture published a National Forest Management Plan for 2013-2017 that pertains to national forestland. It sets maximum allowable harvest levels for different tree species, aiming to keep national forest growth on a regenerative path in this 5-year timeframe. This preserves Estonia’s carbon sink capacity.

5 Policy progress on past CSRs

As part of the European Semester, Country Specific Recommendations (CSRs) for each MS are provided by the EU Commission in June of each year for consideration and endorsement by the European Council). The recommendations are designed to address the major challenges facing each country in relation to the targets outlined in the EU 2020 Strategy. In the following table, those CSRs that are relevant for climate change and energy that were adopted in 2013 are listed, and their progress towards their implementation is assessed.

Existing Country Specific Recommendations	Progress
<p>Improve energy efficiency, in particular in buildings and transport, and strengthen environmental incentives concerning vehicles and waste.</p>	<p>Energy efficiency requirements in the building code implemented.</p> <p>In August 2013, the support scheme for making soft loans available for the energy efficient renovation of apartment buildings was extended by additional € 3 Million, which will allow the renovation of approximately 50 apartment buildings. The new budget period for 2014-2020 foresees an additional € 102 Million for the programme. Major investments were made in public transport and continued investments are planned.</p> <p>In parallel, improved energy efficiency and reduction of GHG emissions is pursued through policies aimed at vehicles specifically. The support scheme encouraging the purchasing of electric cars was prolonged until 2014</p> <p>A charger system for electric cars covering Estonia was put in place in February 2013 establishing a network of 163 chargers covering Estonia. Electric cars were made available for rent in the biggest cities of Estonia, Tallinn and Tartu.</p> <p>Environmentally friendly public transport investment programme will be implemented by the end of 2013.</p>
<p>Step up the development of cross-border energy connections to diversify energy sources and promote competition in the energy market.</p>	<p>The amendments of the Electricity Market Act, which came to effect on 1 January 2013, mean that the Estonian electricity market is now fully open to competition</p> <p>Continuing testing of the Estlink 2 high voltage cable between Estonia and Finland. A third electricity cable between Estonia and Latvia is planned, which is estimated to improve the transmissions between the two countries by 500-600MW. The cable should be finalized by 2020.</p>

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