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 May 2012 to January 2013.

The content of the report represents the state of knowledge in February 2013, specific updates were made adding the latest official greenhouse gas emission data by the European Environment Agency (EEA).

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

Short summary

- ***Background:*** *Due to support measures, the development of the renewable energy sector has been rapid in recent years. In contrast, climate change and green growth still receive relatively little attention from policy makers.*
- ***GHG target:*** *Non-ETS emissions have increased in the last years and are in 2011 already at the target for 2013. Up to 2020, the country is expected to meeting its target only with additional measures.*
- ***Policy development:*** *Policies have been aimed at increasing energy efficiency in the building and transport sectors and diversifying energy generation by supporting production from renewables. The most recent policy development was the opening of the Estonian electricity market from 1 January 2013.*

1 Background on climate and energy policies

In general, climate change policy receives relatively little attention from the current government and tends to be taken up in 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 much public debate or media coverage—rather, it is discussed to the extent that it relates to other policy priorities such as energy supply, which has drawn attention recently around the opening of Estonia's electricity market on 1 January 2013 and due to the pre-eminence of oil shale in the country's energy industry. Subsidising renewable energy and environmental concerns related to energy production became the subject of intense debates, both at the governmental level and within the general public. The opening of the electricity market caused a considerable rise in electricity price levels but also brought wider environmental concerns into the spotlight.

The priorities of Estonian energy policy are laid out in the Development Plan of the Estonian Energy Sector until 2020, which was passed by the Parliament in June 2009. The Ministry of Economics and Communications is responsible for the implementations of the programme. This constitutes an "umbrella" strategy encompassing more detailed strategies and action plans for electricity, coal, biomass, bioenergy, and energy efficiency. The plan aims to guarantee energy security for the economy and all consumers in an environmentally sustainable manner, which requires the establishment of sufficient electricity networks and the generation of as much energy as possible from local sources. An important goal of the plan is to diversify Estonia's energy sources (by expanding co-generation and increasing the percentage of renewable energy in final energy consumption to 25% by 2020), as currently almost 90% of electricity in the country is produced from oil shale-fuelled power plants.

Due to the high concentration of fossil fuels in power production, oil shale-fuelled power plants energy efficiency being low (32-36%), and relatively high losses in transport of electricity and heat and losses in end-use, Estonia's energy sector and economy are high emitters of greenhouse gases (Lahtvee 2012). In general, however, the current climate change mitigation and adaption activities remain fragmented between different policies.

The only programme aimed specifically at meeting GHG reduction targets under the UNFCCC is Estonia's National Greenhouse Gas Abatement Programme 2003-2012. An assessment of options for reducing CO_2 emissions is underway, to be released in 2013. A new national plan for GHG reduction will then be developed based upon its conclusions (Interview with the Ministry of Environment 2013). Estonia's larger Environmental Action Plan 2007-2013 also includes measures to reduce GHGs in energy production, consumption, and transport.

Existing policies involving GHG reductions include excise duties in the transport sector as well as efforts toward better public transport systems and promoting the use of electric cars. In the agriculture sector, farmers are eligible for renewable energy subsidies and the State Forest Management Centre (RMK) assures sustainable development of public forests. Regulations constrain excessive deforestation, and support measures exist 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, waste and water management, energy efficiency, air protection, etc.

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, taken altogether, policy measures to support a green economy remain somewhat fragmented and mainly driven by external forces, such as the EU (Lahtvee 2012). Political initiatives rarely have green growth as a core objective. Nonetheless, the need for sustainable economic growth is more and more included in long-term government development plans. One could say that, though environmental issues have been high on the society's agenda since 1990, people's general understanding of the relations between the economy and the environment remains low (Lahtvee 2012). Here it would be useful to raise awareness of the potential positive impact green growth might have on employment. Especially considering that many of Estonia's energy efficiency policies have co-benefits in employment, as building energy efficiency requirements foster expertise in the field of green construction as well as demand for qualified workers in the building sector.

"Green jobs" is a broadly defined term, and this definition may differ by country. Some countries don't even have a national definition (OECD 2012). Due to the lack of centralised data on eco-industries and green jobs in Europe, a focus on specific sectors is required. For example, the share of employment in the RE sector as % share of total employment in 2010 was slightly above 0.5%.Currently Estonia lacks a definition of "green jobs" and therefore no sector-specific data or comprehensive data are available. No data on the share of employment in water collection, sewerage, waste collection, and remediation activities in Estonia in 2011 was found (Green Jobs 2012).

2 GHG projections

Background information

In 2011, Estonia emitted 21.0 Mt CO_2eq (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 2012c, 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 is minus 8% based on 1990 for CO_2, CH_4 and N_2O and on 1995 for F-gases. The latest available greenhouse gas data (for 2011) show 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.

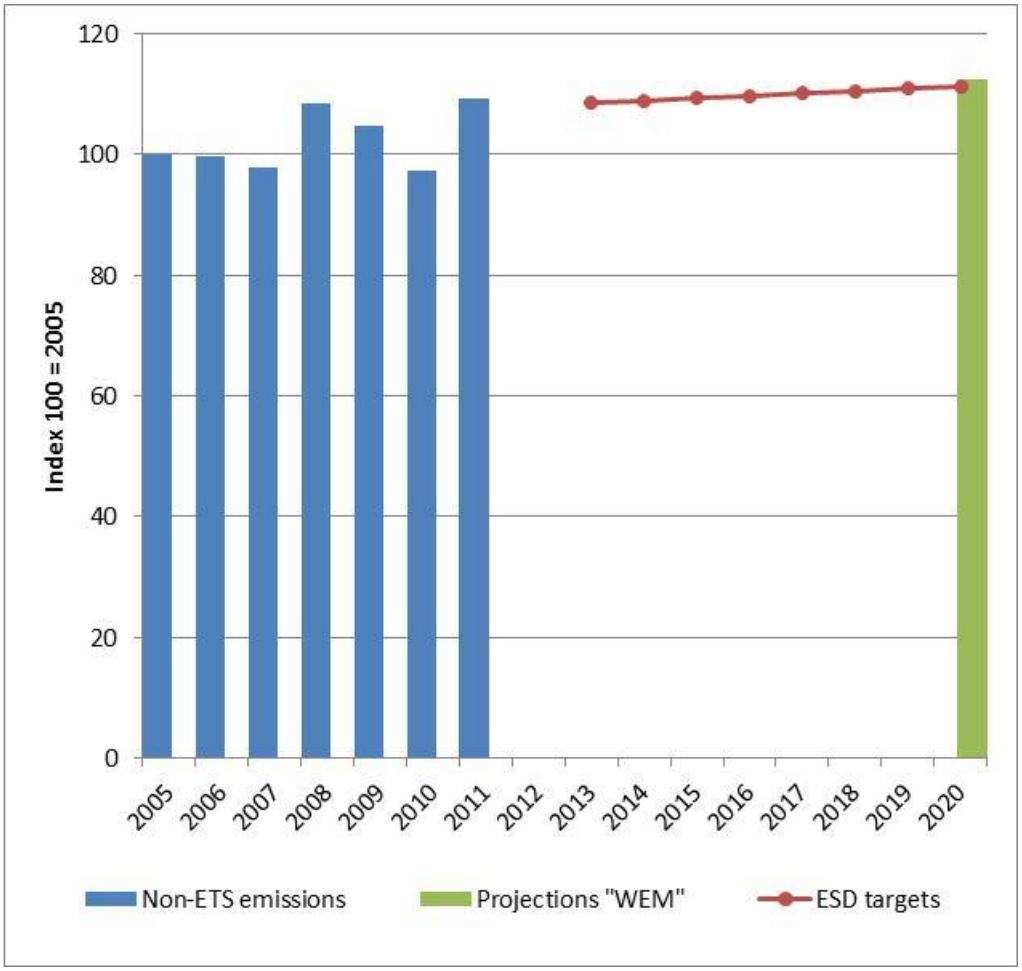
By 2020, Estonia may increase its emissions not covered by the EU ETS by 11% compared to 2005, according to the Effort Sharing Decision (ESD) ([1]). The latest data suggest that Estonia is currently almost on track to meet the target. According to the 2011 inventory data, emissions in 2011 were at the same level as the Annual Emissions Allocation (COM 2013) for the year 2013. Up to 2020, national projections show that Estonia's non-ETS emissions just exceeding the target (at 12% higher than 2005) in scenarios with existing measures. Scenarios with additional measures show non-ETS emissions meeting the target by staying at 8% above 2005 levels ([2]) (EEA 2013b). Most recent data point to Estonia's non-ETS emissions increasing more than expected in the 2011 projections and being already above the Effort Sharing Decision target for 2013. If it is confirmed that Estonia's projections are underestimated, Estonia will fail to meet its GHG emission target for 2020 in the absence of additional measures to improve energy efficiency, in particular in the field of transport and housing, and to reduce the energy intensity of its car fleet.

Figure 1 shows Estonia's non-ETS emissions until 2011, its targets under the ESD for the period 2013-2020 and its projections with existing and additional measures for 2020.

[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] Calculations are based on domestic emissions only, without accounting for possible use of flexibility options. The 2020 targets and 2005 non-ETS emissions are all consistent with 2013-2020 ETS scope, i.e. they take into account the extension of the ETS scope in 2013 and the unilateral inclusion of installation in 2008-2012.

Figure 1: Non-ETS emission trends and projections compared to the ESD targets



Source: EEA - Based on 15/04/2013 draft GHG inventory submissions under the UNFCCC and MS projections submitted until 17/04/2013

Table 1: GHG emission developments, ESD-targets and projections (in Mt CO_2eq)

					ESD target*		2020 Projections**	
	1990	2005	2010	2011	2013	2020	WEM	WAM
Total	40.5	18.5	20.0	21.0				
Non-ETS emissions		5.6	5.5	6.1	6.1	6.3	6.3	6.1
(% from 2005)				9%	9%	11%	12%	8%
Energy supply	28.8	12.4	14.2	14.9				
(% share of total)	71%	67%	71%	71%				
Energy use (w/o transport)	4.5	1.3	1.2	1.4				
(% share of total)	11%	7%	6%	7%				
Transport	2.5	2.1	2.2	2.3				
(% share of total)	6%	12%	11%	11%				
Industrial processes	1.0	0.8	0.5	0.6				
(% share of total)	3%	4%	2%	3%				
Agriculture	3.2	1.2	1.3	1.3				
(% share of total)	8%	6%	6%	6%				

Source: UNFCCC inventories 2011; EEA (2013b); COM (2013). Calculations provided by the EEA and own calculations.

** The ESD target for 2013 and for 2020 refer to different scopes of the ETS: The 2013 target is compared with 2011 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 scope of the ETS from 2013-2020. Non-ETS emissions in the year 2005 for the scope of the ETS from 2013-2020 amounted to 5.6 Mt CO_2eq.
*** 2011 projections with existing measures (WEM) and 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, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism ([3]) every two years, and the latest submission was in 2013. The projections reflect a scenario of emissions reduction from 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).

In the following two tables, these measures - as outlined by Estonia as basis for the projections as of April 2011 ([4]) - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most ([5]). An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

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

Existing Measures (only important national measures; w/o EU legislation)		Status of policy in January 2013
Energy	Improvement of the efficiency in the use of oil shale: Reconstruction of one unit in Narva Elektrijaamad 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.
	Transform energy structure towards renewable energy: 1. 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)	Currently the feed-in tariff as well as the purchase obligation for energy produced from RES are implemented. However, the draft law is currently under discussion in the Parliament (see Policy Development) Investment support schemes for inland wind parks have been implemented.
	Support to efficient cogeneration of heat and electricity: 1) feed-in tariffs (Electricity Market Act); 2) Investment support	Feed-in tariff for cogeneration implemented Investment support for the (re)construction of cogeneration plants applies

[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.

[4] The respective policies and measures were not available at the time of the preparation of this country report. Thus, policies and measures as outlined in April 2011 are given here.

[5] The implementation of the EU-ETS has not been included. Other EU Directives have only been considered if they have been outlined in the projections as one of the main instruments to reduce GHG emissions.

	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)	Currently, a cogeneration plant is being built on the island of Saaremaa, in the city of Kuressaare. Action supported under the Green Investment Scheme
Energy Efficiency	Investment support and grants for energy efficient renovation of residential buildings (multi-apartment houses), partially under the Green Investment Scheme (GIS)	According to the investment fund Kredex, responsible for the processing of applications to obtain the grant, in 2012 a total of 248 apartment houses were renovated using the energy efficiency support scheme. The legislation regulating the support is still in force and implemented; however, due to exhaustion of the financial resources foreseen for the programme, no more applications are currently accepted.
	Investment support for energy efficient renovation of public buildings supported under the GIS	Implemented. Thanks to the efficient use of resources during the first round of renovations, another 50 public buildings will be renovated in 2013.
	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.
	Grants for energy audits in residential buildings	The legislation for grants concerning energy audits was implemented in April 2012.
Transport	Promotion of public transport: 1) Subsidies to public transport; 2) Investments into the rolling stock (environmentally friendly buses)	1) The environmentally friendly investment programme for public transport has been launched. 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.
Other non-ETS sectors	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)	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. Tax on the landfilling of waste will come into force by 2015
	Modernisation of agricultural holdings including 1) investments in manure handling and biogas equipment and 2) Production of biomass and biofuels	Implemented. Investment support made available to support investments in biogas and bioenergy production for farmers to produce energy for their own use
	Support for organic farming to increase organically farmed area from 72 800 ha to 120 000 ha. This will lead to	According to the “Action Plan of Organic Farming for 2007-2013” activities to support organic farming are ongoing.

	reduction of use of mineral fertilizers.

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

Additional Measures: Still to be implemented (only important national measures; w/o EU legislation)		Status of policy in January 2013
Energy Efficiency	Investment support and grants for energy efficient renovation of private houses	Legislation was adopted in April 2012. Due to the large number of demands, which called for expenditures in excess of double the planned budget, no additional applications to obtain support are currently being accepted. There has been interest in extending the program, but no decisions have been made.
Transport	Introduction of regulation regarding use of biofuels including 1) Introduction of obligation of 5-7% biofuel share in liquid motor fuels; 2) Introduction of obligation of 50% biofuel share in liquid fuels for public transport	1) The most recent amendment to the Liquid Fuel Act, which came to force on 1 January 2013 has no mention of the biofuel share in liquid fuels. 2) Work on the state level still ongoing. Regional projects (Baltic Biogas Bus) and impact assessments on the regional level have been implemented

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

3 Evaluation of National Reform Programme 2012 (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 ([6]).

In the following table, the main policies and measures as outlined in the NRP of April 2012 ([7]) have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

[6] 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).

[7] All NRPs are available at: http://ec.europa.eu/europe2020/documents/related-document-type/index_en.htm

Table 3: Main policies and measures as outlined in the NRP, April 2012

Amending the Development Plan of the Estonian Electricity Sector until 2018 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 Jan 2013	No changes, work continuing.
Description of policy or measure	The aim is to continually increase the diversity of the energy portfolio in order to maintain energy independence, including increasing the share of renewable energy sources and reducing the share of carbon-intensive energy sources. According to the current Development Plan of the Estonian Electricity Sector until 2018, (approved in 2009 by the Ministry of Economics and Communications), reconstruction of the electricity production plants, expanding the cogeneration production, renovation of two units in the Narva Power plant (capacity of 600MW), and the expansion of wind energy sector to a capacity of 900MW are all foreseen. The current plan also foresees the possibility of preparing the opening a nuclear power plant.

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 Jan 2013	In October 2012 the next phase of the construction of the Estlink 2 was started: the building of the 145km submarine cable.
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

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 Jan 2013	1) The main support scheme for renewable energies in Estonia is the premium tariff. Changes to the Electricity Market Act that may reduce the subsidy and cap the total amount of renewable energy eligible for support are currently under discussion in the Parliament. 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
Description of policy or measure	According to the currently applicable scheme, energy producers from RES and under cogeneration are entitled to a fixed support for each KWh produced. The amendments currently under discussion in the Parliament foresee a reform in the system of the premium tariff (see Chp. Policy Development). Support schemes are being implemented and no relevant changes have taken place.

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 2012-2015
Status as per Jan 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 2012. 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 2011-2012
Status as per Jan 2013	The pilot project was launched in 2011, and the support scheme is fully operational: a network of chargers has been put in place all over Estonia. So far the support has been allocated for the purchase of 76 electric cars.
Description of policy or measure	The program 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 CO_2 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 Jan 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 2011-2013
Status as per Jan 2013	Negotiations in the Parliament concerning the reform of the premium tariff allocated to electricity produced from wind.
Description of policy or measure	Electricity produced from wind is currently supported through the feed-in tariff, as indicated by the Electricity Market Act. If amendments to the Electricity Market Act come into force, the support for wind energy producers would be reduced by approximately 15-20%. 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 Jan 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. As a result of this measure, the oil shale waste station in Ahtme is currently being closed. Project is to be completed by July 2013.
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 Jan 2013	The "ecological tax reform" was first discussed and launched in 2005. However, successive governments have only marginally engaged in the reform and not given it their full attention. There are currently no measures foreseen to implement the ecological tax reform.
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 out by the end of 2013.
Status as per Jan 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. 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. Due to the exhaustion of finances, currently no new applications are being accepted. Most recently, 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. The scheme is also implemented by the Ministry of Communications in cooperation with the financing institutions Kredex.
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.

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. Investment was launched in 2011.
Status as per Jan 2013	According to the work plan for the Ministry of Economics and Communications for the year 2013-2016, in 2012 58 new buses were introduced. The public procurement for the renovation of the tram line and purchasing of new trams in Tallinn was finished in autumn 2012, and the contract signed in November 2012. The new tram lines and trams should be fully operational by 2014.
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 biofuels in transport through introduction of 5% biofuel mixing obligation	
Status as stated in the NRP	To be done by the Ministry of Economic Affairs and Communications in 2012
Status as per Jan 2013	The draft law that foresees a 5% biofuel mixing obligation is currently being prepared by the Ministry of Economics and Communications and should come into force from the 1 January 2015. The most recent change to the Liquid Fuels Act introduced an obligation for the vendors to provide information on the bio energy content of the fuel.
Description of policy or measure	The goal is to increase the use of biofuels in the transport sector.

4 Policy development

This section covers significant developments made in key policy areas between May 2012 and January 2013. It does not attempt to describe every instrument in the given thematic area. The time-frame was chosen based upon the release of the National Reform Programmes (in the section above) in April 2012, which contain the status quo for policy on most topics.

Environmental Taxation

Estonia's economy had the 8th lowest implicit tax rate on energy in the EU at a mere €88.7 per tonne of oil equivalent in 2010, while also having the second-highest energy intensity compared to other EU member states in that year (Eurostat 2013). Revenues from energy taxation as a percentage of GDP were 2.6%, which was the second highest in the EU in 2010. Revenues from environmental taxes amounted to 3.0% of the GDP, putting Estonia in 5th place for this metric compared to other Member States.

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 Program (NRP)—the goal is to increase environmental taxes and reduce labour taxes, building a "well-functioning environmental tax system." According to the 2012 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. So far, this analysis has not been completed. 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," and the main measure to be undertaken in this regard in the near term is implementation of royalties for production of oil shale oil in 2014.

The most recent change in the Environmental Taxation Law represents a step in this direction, as it foresees an increase in the upper limit of the taxes imposed on the mining of natural resources and water used for that matter. Additionally, the change foresees a 20% increase in the tax imposed on oil-shale waste disposal. The goal of the law is 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. The changes will progressively come to force from the 1 April 2013 until the 1 January 2015.

Energy Efficiency

As mentioned above, the energy intensity of Estonia's economy is very high and has even increased since 2005. This has occurred alongside increasing overall energy consumption—end-use consumption increased 6% from the 2001-2005 average to 2010, reflecting a decrease in industry but increases in all other sectors (Eurostat 2013).

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. Currently, however, there are no more funds available for the implementation of the measure. 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. There has been interest in extending the program, but no decisions have been made.

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, 484 such buildings have already 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 this year 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, with another 27 buildings being renovated under the scheme this year.

In the field of energy efficiency so far the government measures have mainly been concentrating on elaboration and application of the measures to improve energy efficiency. However, the assessment of outcomes of these measures has so far not been developed to a full extent. As shown by the study conducted to develop energy efficiency assessment measures (Uuring Energiasäästupoliitika seiremehhanismi arendamiseks,

2010) one of the main problems lies in the difficulty to collect viable data based on which it would be possible to assess improvements. Currently, there are no nationally applicable indicators to allow the measurement of energy efficiency in different sectors, the assessment of measures and programmes is done on a case-by-case basis, using expert opinions and the methods developed by the Commission.

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).

It has not yet been evaluated to what degree these measures have positively affected the job market.

Renewable Energy

As a proportion of total energy consumption, renewable sources clocked in at 24.3% in 2010, 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 is thus in an excellent position to meet 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 2010 from 1.3% to 10.75% (Eurostat 2013).

The growth in renewable energy in the power sector is in large part due to existing strong policies in this area, including a feed-in tariff with purchase obligation 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 feed-in tariff will be reformed and the amendments to the Electricity Market Act are currently being discussed in Estonia's parliament. 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 argues that the current levels of support for renewable energy technologies no longer corresponds 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). Accordingly, amendments to Estonia's Electricity Market Act reforming the support scheme for renewable technologies have been sent to the Parliament for approval, but producers of renewable energy and relevant NGOs argue that they will lead to a considerable slowdown of the renewable energy sector and create insecurity for future investments in the sector (Tammist 2012). In summer 2012, the Ministry of Economics and the representatives of the renewable energy sector agreed upon a compromise solution for the new system of support measures for RES producers, which foresaw the decrease in the amount of support, but did not cap support allocated to energy produced from RES. In the amended version of the law sent to the Parliament, however, these agreements were not fully taken into account, as the support was reduced *and* the amount of support allocated was also capped.

It is important to highlight that as previously mentioned, the relevant piece of legislation pertaining to Estonia's feed-in tariff (the draft act changing the Electricity Market Act) completed its second reading in the Parliament on the 27th of February. The next deadline for new amendments is the end of April. Having said that, the explanations provided below refer to the initial draft act and its explanatory letter, meaning that all details and figures are potentially subject to change.

Estonia's current feed-in-tariff 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 must be adjusted after a period of transformation, according to electricity market changes. Estonian authorities thus aim to reform existing renewable energy support so that it takes into account electricity market changes since 2007 - the revised system would differentiate support to renewables by technology type and periodically re-assess the programme in view of achieving climate goals for 2020.

The context for renewable energy support in Estonia has changed significantly since 2007, as the 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 buildout has increased power prices for the 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 (see explanatory letter in references below). The change therefore attempts to reduce the burden on electricity consumers.

Another reason for changing the existing renewables support structure is that, according to Estonia's Competition Authority, it distorts fair competition. The current level of support for renewable electricity producers gives them an unfair advantage 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 subsidises the oil-shale industry - this is no longer compatible with European State Aid rules.

The following are the concrete changes to renewable energy support levels as proposed:

- Rather than a fixed tariff rate, there would be an overall "premium rate" for new renewably produced electricity: €0.093/kWh - the producer would receive only the difference between the wholesale market price and this overall premium level. For example, if wholesale prices are €0.073/kWh the 'benefit' to the producer is 20 Eurocents/kWh but if prices are at or above the premium, there is no extra bonus for renewable power compared to any other type ([8]).
- The overall premium for new CHP plants is € 0.072/kWh - the producer receives only the difference between the wholesale market price and this overall premium level.

[8] This approach encourages renewable producers to contribute toward balancing electricity load, i.e. running their plants at the times of highest electricity demand: power is most expensive at peak times, so if they can sell power into the grid at these times when it is most needed, the wholesale price goes down and they get more money because there is a greater difference between the (lower) wholesale price and the premium price.

- For existing renewable generation and CHP plants with a capacity below 10 MW, the existing tariff levels remain: € 0.0537 /kWh and € 0.032/kWh, respectively.
- The tariff for biomass plants with a capacity between 10-50 MW would depend on the market price of biomass in Estonia.

The Estonian Renewable Energy Association has estimated that the above proposed changes will result in losses to renewable energy producers in the range of €40-€140 million. It argues that if the changes are applied retroactively, they would create insecurity for investors and considerably slow down the development of the entire sector.

Energy Networks

Currently, Estonia is connected to Latvia and Lithuania within the ENTSO-E Baltic regional grid. 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 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, covered by the EU, the MS involved, the Nordic Investment Bank, and the European Investment Bank. Having been started in November 2011, the connection is expected to become operational in early 2014.

Transport

Greenhouse gas emissions from the transport sector slightly increased from 2005 to 2011 making up 11% of total emissions (see Table 1). Revenues from taxation of transport (excluding fuels) are among the lowest in Europe (Eurostat 2012). New cars in Estonia have the highest average emissions per km in the EU. They emitted on average 156.9 gCO_2/km in 2011, 13% above the EU average in 2011 (EEA 2012e).

Though the share of renewable energy in Estonia's overall energy consumption has been growing, 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 until 2011, Estonia promoted the use of biofuels in the transport sector by excusing biofuels partly or completely from excise duties (policy made possible by the exception provided by the EU concerning state aids). Since then, the primary instrument for influencing energy use in the Estonian transport sector has been excise duties—the fuel excise has been raised 10 times in the last 15 years with no results: cargo transport in Estonia fell in 2011, but this was due to the overall economic slowdown and not any national programmes (Estonian Environment Indicators 2012). The draft law that foresees a 5% biofuel mixing obligation is currently being prepared by the Ministry of Economics and Communications and should become into force from the 1 January 2015.The most recent change to the Liquid Fuels Act introduced an obligation for the vendors to provide information on the bio energy content of the fuel.

Recent policies focus on the incentives side, improving and fostering public transport such as buses and trams—new hybrid and natural gas buses are being purchased and new trams and tram lines built (see evaluation of National Reform Program). 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. By Summer 2013 electric cars should become available for rent in the biggest towns. 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).

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.

Waste

Similarly, support is available on a round-based scheme under the Environmental Programme managed by the Environmental Investment Centre. The objective of this waste treatment program 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.

LULUCF

A support mechanism for private forest owners foresees support for several activities that aim to provide the 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 programme 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.

Approximately half of Estonia's land area or 2.2 million hectares is covered with forest. 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 2012 are listed, and their progress towards their implementation is assessed.

Existing Country Specific Recommendations	Progress
Improve energy efficiency in buildings and transport	Energy efficiency requirements in the building code implemented. An additional support scheme was put in place to support the reconstruction of private houses to raise their energy efficiency. Major investments were made in public transport and more are planned. The support scheme encouraging the purchasing of electric cars was prolonged. A charger system for electric cars covering Estonia was put in place. Environmentally friendly public transport investment programme will be implemented by the end of 2013.
Continue the development of cross-border connections to end relative market isolation	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 Continuing construction of the Estlink 2 high voltage cable between Estonia and Finland
Foster renewable energy use, including through upgraded infrastructure and legislation	To increase the use of biofuel in the transport sector, the draft law that foresees an obligation of 5% biofuel mixing is in preparation and will be launched in 2013. The law should come into force on 1 January 2015. A programme to support bioenergy production (biogas, biomass) for on-site use on farms was extended into 2013. Investment support schemes for inland wind parks and cogeneration plants have been implemented.

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