GHG trends and projections in Estonia

European Environment Agency



Key GHG data (¹)	1990	2008	2009	2010 (²)	Unit	Rank in EU-27 (³)	Rank in EU-15 (³)
Total greenhouse gas emissions (GHG)	41.1	20.1	16.8	20.2	Mt CO ₂ -eq.	23	n.a.
GHG from international bunkers (⁴)	0.7	0.9	0.8	n.a.	Mt CO ₂ -eq.	23	n.a.
GHG per capita	26.1	15.0	12.6	15.1	t CO2-eq. / capita	4	n.a.
GHG per GDP (constant prices) (5)	4 900	1 982	1 931	2 248	g CO ₂ -eq. / euro		
Share of GHG in total EU-27 emissions	0.7 %	0.4 %	0.4 %	0.4 %	%		
EU ETS verified emissions - all installations (⁶)		13.5	10.3	14.4	Mt CO ₂ -eq.	21	n.a.
EU ETS verified emissions - constant scope (7)		13.5	10.3	14.4	Mt CO ₂ -eq.		
Share of EU ETS verified emissions (all installations) in total GHG		67.5 %	61.3 %	71.4 %	%		
ETS verified emissions compared to annual allowances (⁸)		15.9 %	- 12.9 %	21.6 %	%		

Share of GHG emissions (excluding international bunkers) by main source and by gas in 2009 (¹) (⁹)



Key GHG trends	1990	1990-2009		2008-2009		1990–2010 ⁽²⁾		2009–2010 (2)	
	Mt CO ₂ -eq.	%	Mt CO ₂ -eq.	%	Mt CO ₂ -eq.	%	Mt CO ₂ -eq.	%	
Total GHG	- 24.2	- 59.0 %	- 3.2	- 16.1 %	- 20.8	- 50.8 %	3.4	20.0 %	
GHG per capita	- 13.6	- 51.9 %	- 2.4	- 16.1 %	- 11.1	- 42.3 %	2.5	20.1 %	
EU ETS verified emissions - all installations (⁶)			- 3.2	- 23.8 %			4.1	39.7 %	
EU ETS verified emissions - constant scope (7)			- 3.2	- 23.8 %			- 3.2	- 23.8 %	

Assessment of long-term GHG trend (1990-2009)

The decrease in total emissions was mainly caused by the transition from planned to market economy and the implementation of reforms, after Estonia's independence in 1991. Over the period 1990–2009, energy-related emissions decreased by 60 %, mainly due to the closing of factories which reduced the fuel consumption of energy industries. Emissions from agriculture fell by 57 % and waste emissions decreased by 16 %. During the same period, emissions from industrial processes were subject to great variability and dropped sharply in 2009.

Assessment of short-term GHG trend (2008-2009)

Estonia had the highest relative emission decrease in Europe between 2008 and 2009 (– 16 %). The effects of the economic recession were reflected by an 18 % decrease in electricity generation by conventional thermal power plants and a decrease in electricity exports. Additionally, transport emissions decreased for the second consecutive year, as well as process-related emissions from the mineral and chemical industries. The increase in renewables also contributed to lower GHG emissions in 2009.

Source and additional information

Greenhouse gas emission data and EU ETS data www.eea.europa.eu/themes/climate/data-viewers

(1) Total greenhouse gas emissions (GHG), GHG per capita, GHG per GDP and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international bunkers.

(2) Based on EEA estimate of 2010 emissions.

 $(^{3})$ Comparison of 2009 values, 1 = highest value among EU countries.

(⁴) International bunkers: international aviation and international maritime transport.

(⁵) GDP in constant 2000 prices - not suitable for a ranking or quantitative comparison between countries for the same year. 1990 information not available for some countries, replaced by later years: 1991 (Bulgaria, Germany, Hungary and Malta), 1992 (Slovakia), 1993 (Estonia) and 1995 (Croatia). Source GDP: Eurostat, 2011; Ameco database, 2011.

(⁶) All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) as of 29 April 2009 for the reporting years 2005 and 2006, 11 May 2009 for the reporting year 2007, 17 May 2010 for the reporting year 2008 and 23 May for the reporting years 2009 and 2010. The CITL regularly receives new information (including delayed verified emissions data, new entrants and closures) so the figures shown may change over time.

(⁷) Constant scope: includes only those installations with verified emissions available for 2008, 2009 and 2010.

(⁸) "+" and "-" mean that verified emissions exceeded allowances or were below allowances, respectively. Annual allowances include allocated allowances and allowances auctioned during the same year.

(*) LULUCF sector and emissions from international bunkers excluded. Due to independent rounding the sums may not necessarily add up.





 Total emissions excluding bunkers (Kyoto Protocol)

Projections (with existing measures)

Total emissions including bunkers

Projections (with additional measures)

CO2 emissions/removals from carbon sinks

Kyoto target



Note: GHG emission projections are represent either through dashed lines (with existing measures) or dotted lines (additional measures).

Source: National inventory, 2011; EEA proxy estimate; 2011; national projection data.

Progress towards Kyoto target

Average 2008–2010 emissions in Estonia were 55.3 % lower than the base-year level, well below the Kyoto target of -8 % for the period 2008–2012. In the sectors not covered by the EU ETS, emissions were significantly lower than their respective target, by an amount equivalent to 49.6 % the country's base-year emissions. Estonia intends to use the flexible mechanisms at government level by selling an amount of Kyoto units equivalent to 2.8 % of base-year emissions per year. Taking all these effects in to account, average emissions in the sectors not covered by the EU ETS in Estonia were standing below their target level, by a gap representing 46.6 % of the base-year emissions. Estonia was therefore on track towards its Kyoto target by the end of 2010.



Note: The difference between target and GHG emissions concerns the sectors not covered by the EU ETS. A positive value indicates emissions lower than the average target.

GHG trends and projections 1990–2020 — emissions by sector

Emissions included in emission trading (EU ETS)