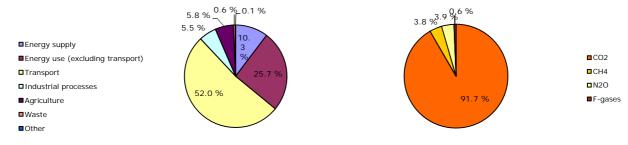
GHG trends and projections in Luxembourg

European Environment Agency

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Key GHG data (¹)		2008	2009	2010 (²)	Unit	Rank in EU-27 (³)	Rank in EU-15 (³)
Total greenhouse gas emissions (GHG)	12.8	12.3	11.7	12.2	Mt CO ₂ -eq.	24	15
GHG from international bunkers (⁴)	0.40	1.32	1.27	n.a.	Mt CO ₂ -eq.	17	15
GHG per capita	33.8	25.3	23.7	24.4	t CO ₂ -eq. / capita	1	1
GHG per GDP (constant prices) (⁵)	953	411	407	411	g CO ₂ -eq. / euro		
Share of GHG in total EU-27 emissions	0.2 %	0.2 %	0.3 %	0.3 %	%		
EU ETS verified emissions - all installations (⁶)		2.10	2.18	2.25	Mt CO ₂ -eq.	26	15
EU ETS verified emissions - constant scope (7)		2.10	2.18	2.25	Mt CO ₂ -eq.		
Share of EU ETS verified emissions (all installations) in total GHG		17.1 %	18.7 %	18.4 %	%		
ETS verified emissions compared to annual allowances (8)		- 15.6 %	- 12.3 %	- 9.5 %	%		

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	- 1.1	- 8.9 %	- 0.6	- 4.7 %	- 0.6	- 4.7 %	0.5	4.6 %	
GHG per capita	- 10.1	- 30.0 %	- 1.7	- 6.6 %	- 9.5	- 28.0 %	0.7	2.9 %	
EU ETS verified emissions - all installations (⁶)			0.08	3.9 %			0.07	3.3 %	
EU ETS verified emissions - constant scope (7)			0.08	3.9 %			0.08	3.9 %	

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

After a strong decline between 1993 and 1998, due in particular to the conversion of the steel industry to electric arc furnaces, emissions increased sharply up to 2004, mainly driven by the road transport and power generation sectors. They stabilized between 2004 and 2006 and experienced in 2007 a significant decrease for the first time since 1998. High transport emissions are mainly driven by 'road fuel exports' (road fuels sold to non-residents) resulting from lower fuel prices, an important cross–border workforce and of Luxembourg's location at the heart of a main traffic axes for Western Europe. However, these emissions decreased between 2006 and 2009, combined with a diminution of GHG emissions from the power generation sector.

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

Repercussions of the economic crisis to heavy good transportation were the main reason for emission decreases. Declining steel production added to this trend. These reductions were partly offset by increases in public electricity and heat production, mainly due to the increased electricity production level by the Twinerg gas turbine, which was on a maintenance stop for several months in 2008.

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 national 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.

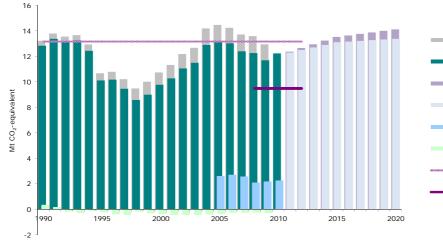
(⁶) All installations included. This includes new entrants and closures. Data from the community independent transaction log (CITL) as of 29 April 2009 for the reporting years 2005 and 2006, 11 May 2009 for the reporting year 2007, 17 May 2010 for the reporting year 2008 and 23 May for the reporting 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.

GHG trends and projections 1990-2020 - total emissions





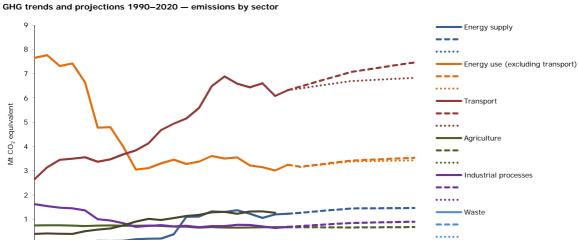
Emissions included in emission trading (EU ETS)

International aviation and maritime transport

CO2 emissions/removals from carbon sinks

Kvoto base vear

Kyoto target



2000

2005

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.

2010

Progress towards Kyoto target

1995

equivalent

Mt CO,

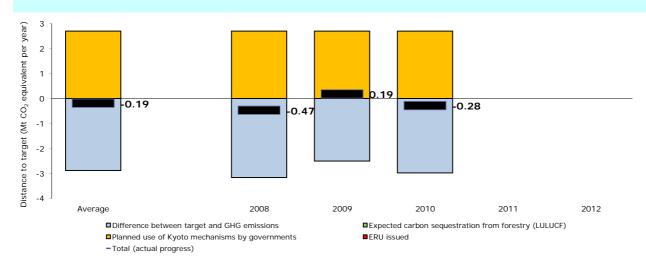
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1990

Average 2008–2010 emissions in Luxembourg were 8.4 % lower than the base-year level, significantly above the burden-sharing target of -28 % for the period 2008–2012. In the sectors not covered by the EU ETS, emissions were significantly higher than their respective target, by an amount equivalent to 21.9 % the country's base-year emissions. Luxembourg intends to use the flexible mechanisms at government level by acquiring an amount of Kyoto units equivalent to 20.5 % 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 Luxembourg were standing above their target level, by a gap representing 1.4 % of the base-year emissions. Luxembourg was therefore not on track towards its burden-sharing target by the end of 2010. This gap can be considered small, however, especially in comparison with the gaps currently observed in other Member States for which emissions are also above their respective target

2015

2020



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