

# Opportunities for Low-Carbon Economy in Estonia

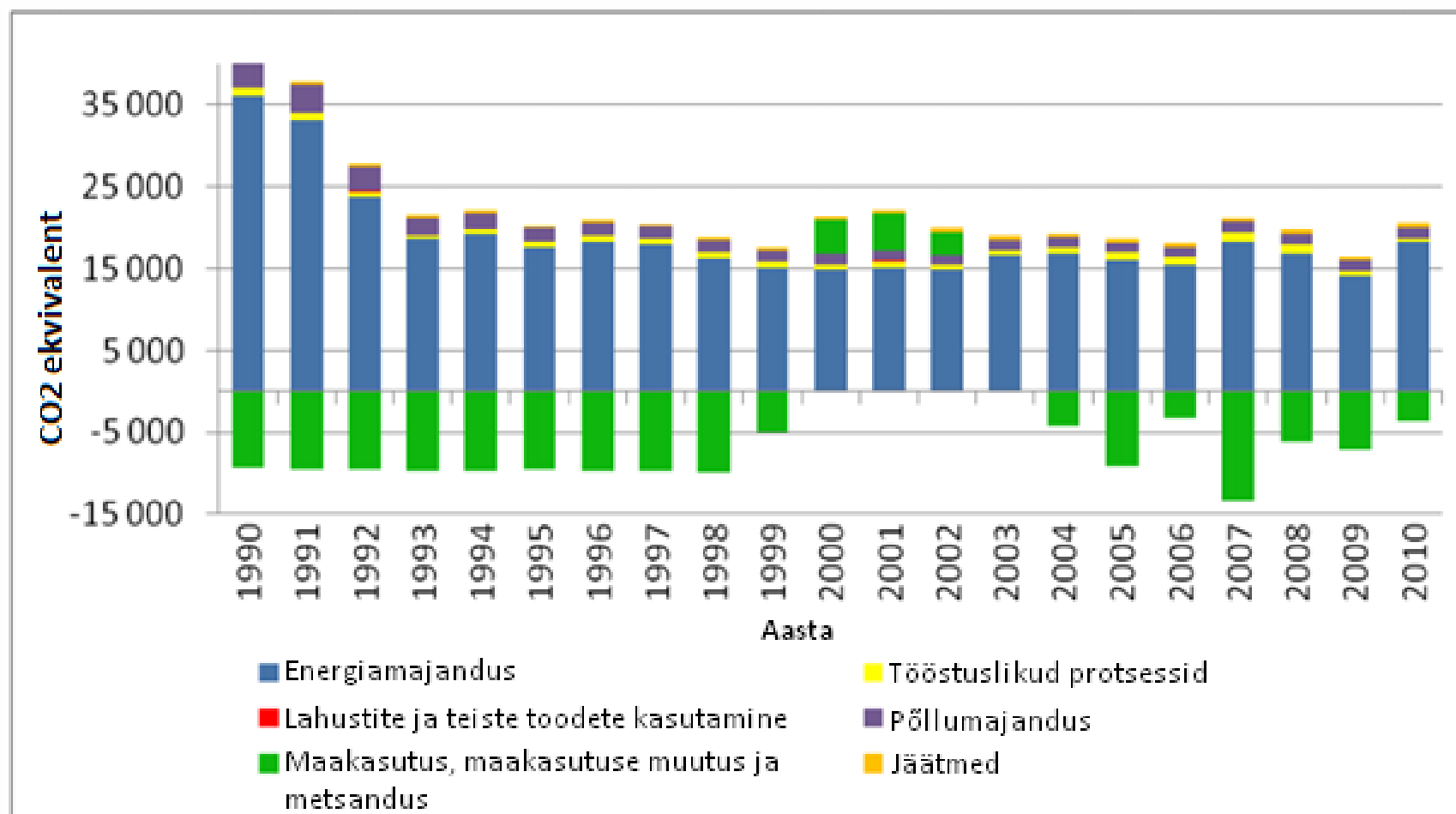
Valdur Lahtvee

Director, Climate and Energy Program

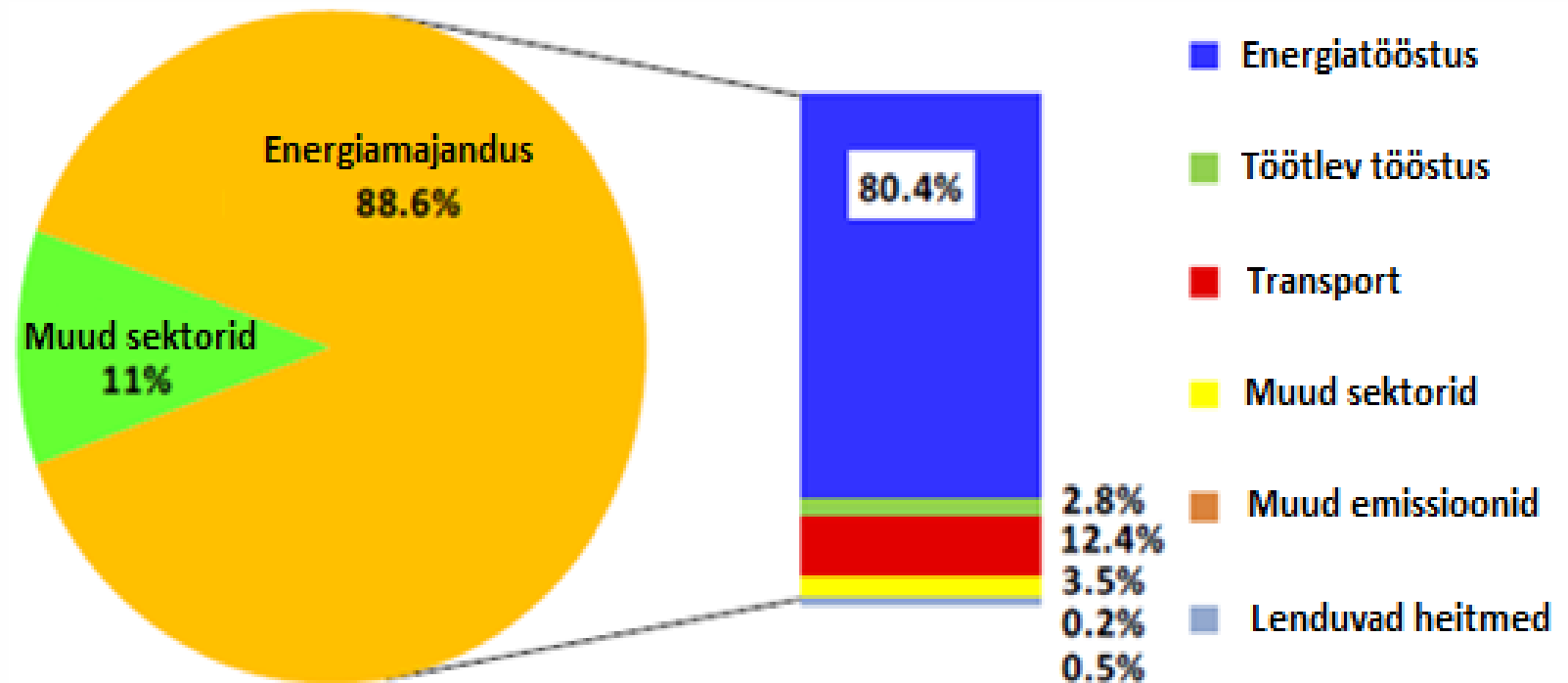
Stockholm Environment Institute Tallinn Centre

[valdur.lahtvee@seit.ee](mailto:valdur.lahtvee@seit.ee) , [www.sei-international.org](http://www.sei-international.org)

# Estonia's GHG emissions 1990-2011



# CO2 emissions by sector, 2010



# Study on Low-Carbon Roadmap

## 2050 for Estonia



TARTU ÜLIKOOL  
RAKE



SÄÄSTVA EESTI INSTITUUT  
STOCKHOLMI KESKKONNAINSTITUUDI  
TALLINNA KESKUS

- Ordered by the Ministry of Environment
- Commenced September 2012-June 2013
- Carried out by: RAKE- Applied Research Centre of Tartu University (coordination, industry, agriculture); Stockholm Environment Institute Tallinn Centre (energy, transport, waste management) and Estonian Fund for Nature (LULUCF)
- 3 cross-sectoral scenarios, up to 6 scenarios to each sector
- LEAP and WAMPS models used for comparison of scenarios



SEI

STOCKHOLM  
ENVIRONMENT  
INSTITUTE

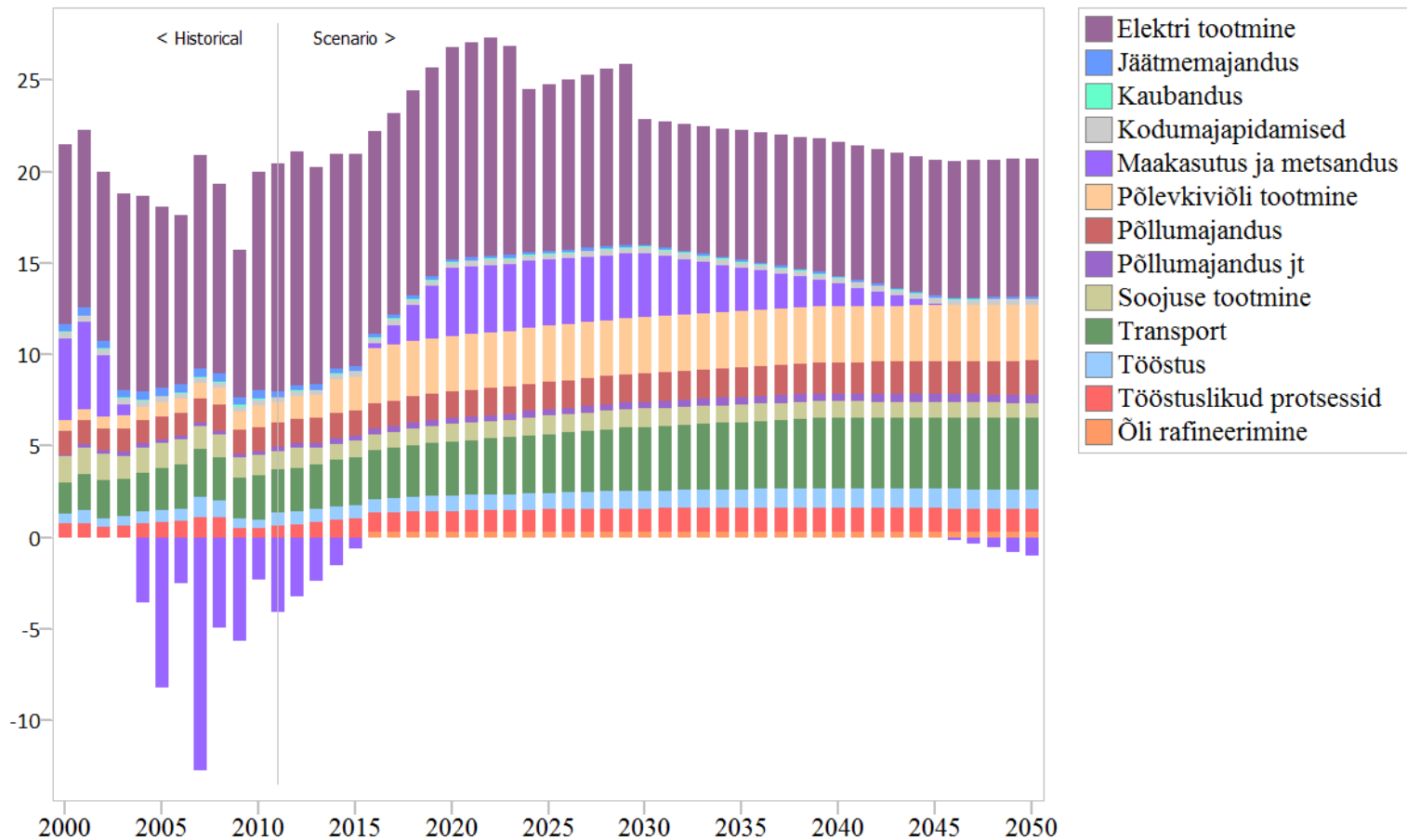
# Prognosis of GHG emissions (without LULUCF), Mt



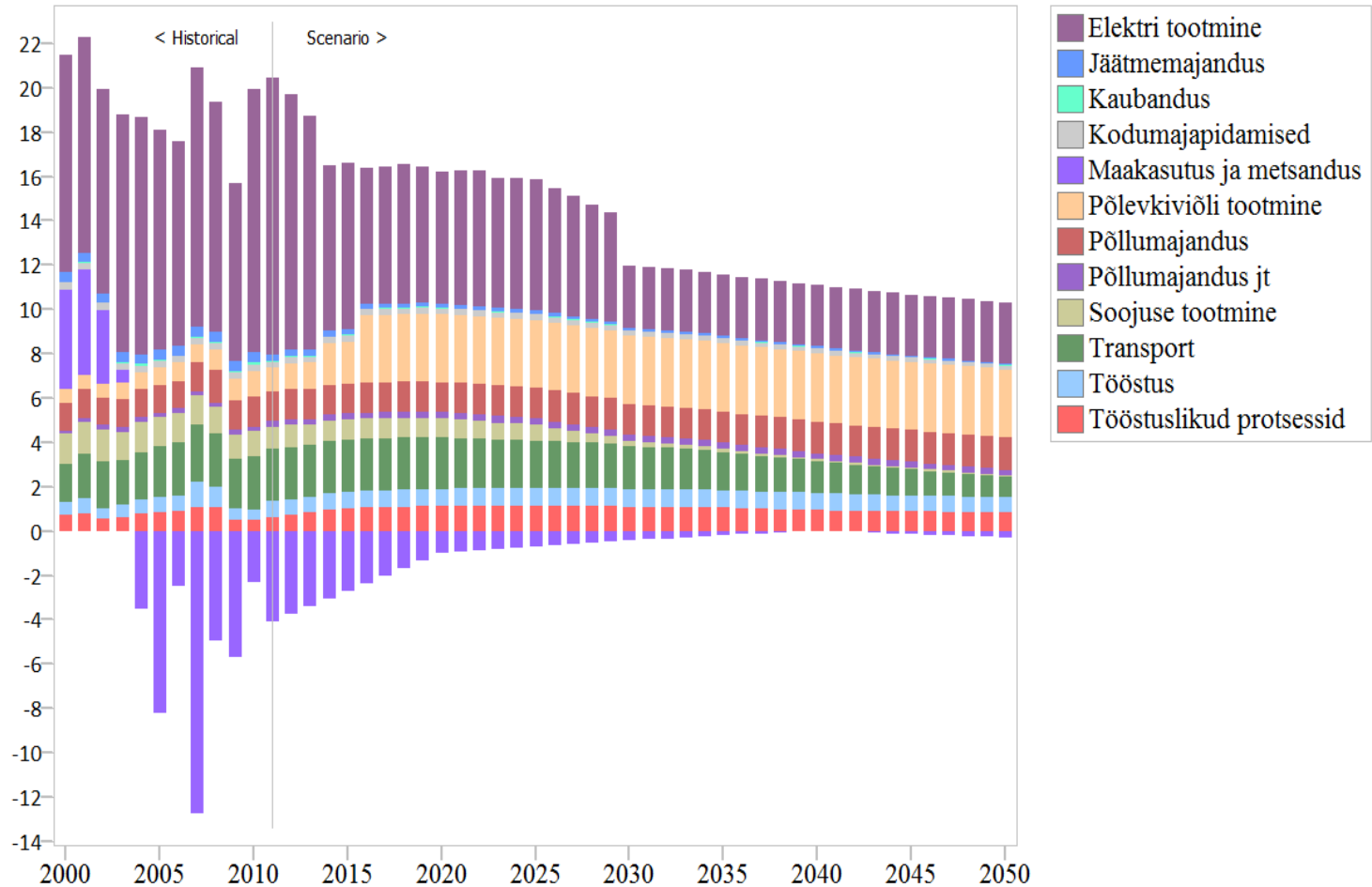
# Prognosis of GHG emissions (without LULUCF), Mt

	1990*	2000*	2010*	2020	2030	2040	2050
BAU	40,86	17,22	20,52	23,09	19,38	20,37	20,73
Optimum				16,21	11,97	11,06	10,31
LowC				11,15	8,92	7,63	5,35
Reduction of GHG Emissions compared to 1990, %							
BAU	0%	-58%	-50%	-43%	-53%	-50%	-49%
Optimum				-60%	-71%	-73%	-75%
LowC				-73%	-78%	-81%	-87%

# GHG emissions projections 2012-2050, BAU, Mt

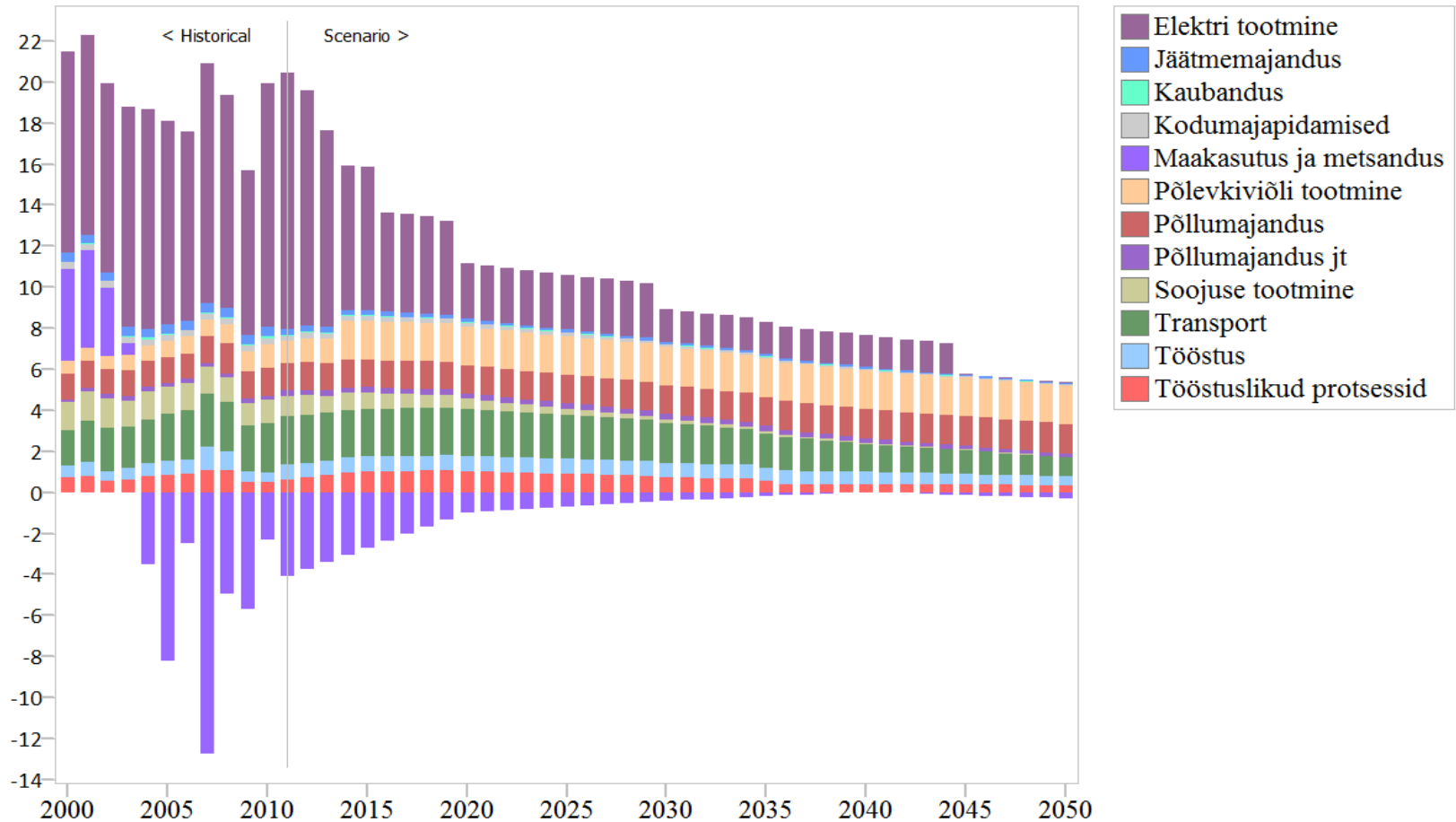


# GHG emissions projections 2012-2050, Optimal, Mt

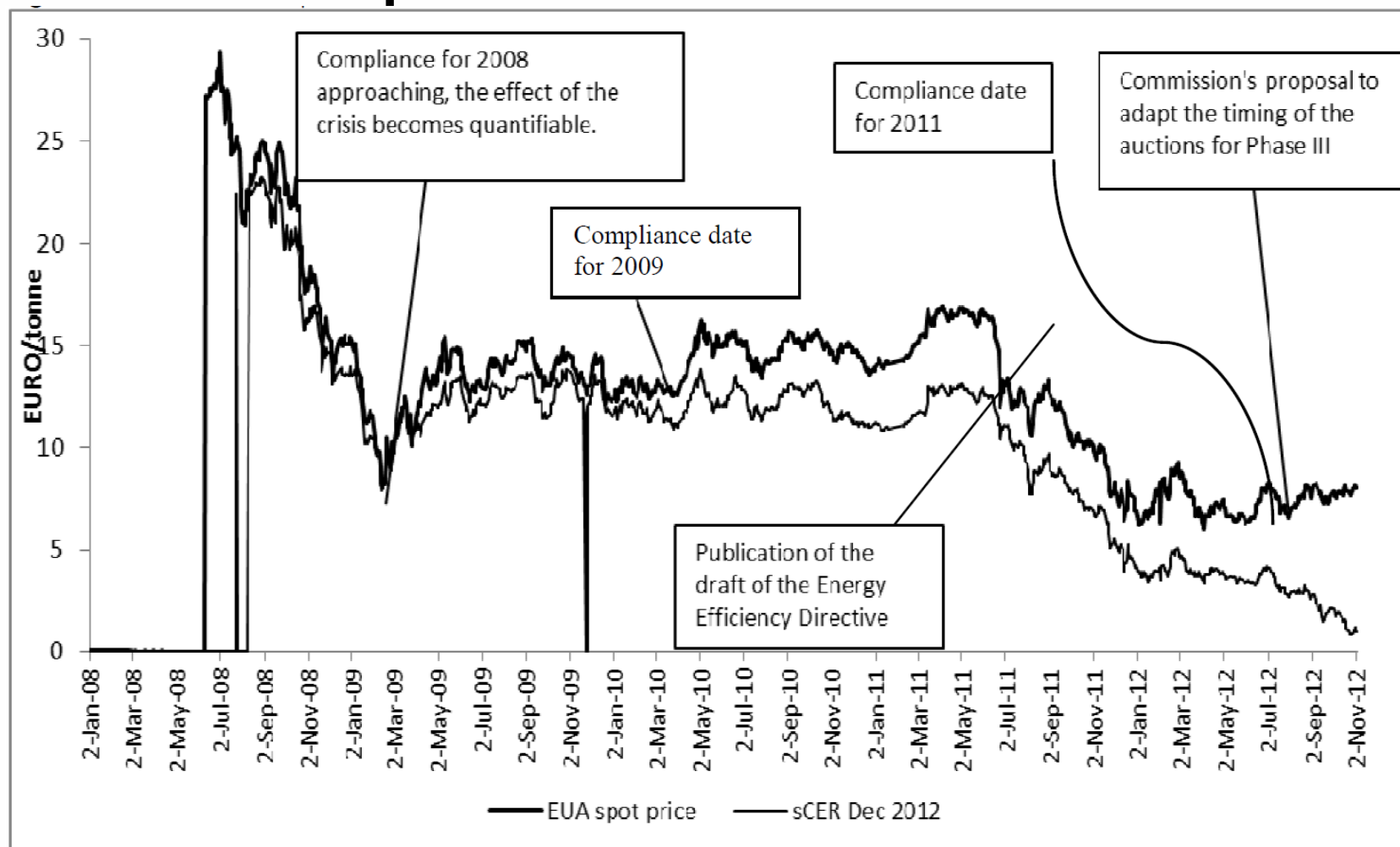




# GHG emissions projections 2012- 2050, LowC, Mt



# EU ETS II prices for EUA and CER



Source: Point Carbon

# Carbon market news, autumn 2013

- LONDON, **Oct 1** (Reuters) - The European Union sold 3.462 million spot EU carbon permits from the third phase (2013-2020) of its emissions trading scheme on EEX at **5.05 euros** (\$6.84) a tonne each on Tuesday, traders said
- LONDON, **Oct 17** (Reuters Point Carbon) The EU sold 3.4615 million spot EU carbon permits on Thursday for **5.27 euros** each on EEX, a trader said.
- LONDON, **Oct 18** (Reuters) - Germany sold 4.02 million spot European Union carbon permits on Friday from the third phase (2013-2020) of the EU's emissions trading scheme on EEX at **5.14 euros** (\$7.02) a tonne each, traders said.

# National Policy Measures: energy

- Phase out environmentally harmful subsidies
- Increase oil-shale resource use fees
- Reshape RES subsidies scheme
- Increase support to the energy efficiency investments
- Increase Investment support to the RES development and to decentralised electricity production
- Ensure ESI Funds and Rural Development Plan 2014-2020 investment support with energy and resource efficiency criteria at selection of projects

# National Policy Measures: transport

- Improve urban spatial planning in order to reduce commuting and to improve access of suburbs to public transport
- Apply car and road-use taxes
- Increase investments to the public transport infrastructure (mostly rail)
- Redirect ESI Funds 2014-2030 support to sustainable transport
- Apply mandatory biofuels sale in retail market of vehicle fuels
- Continue to support electromobility

# EU/Regional Policy Measures

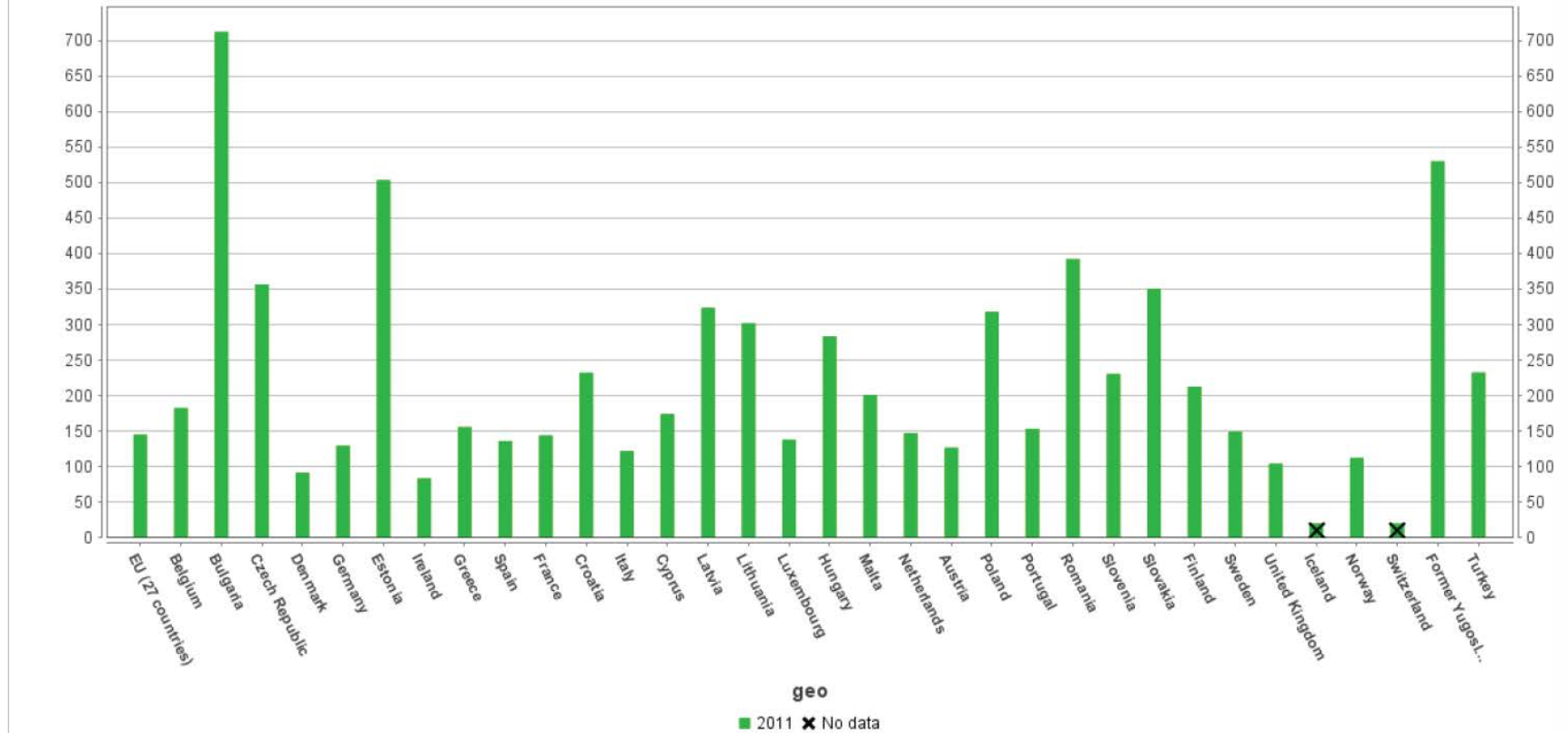
- Investments into increased connectivity of the energy market (power, LNG)
- Co-operation on combining Nordic hydro reserves with wind
- New mandatory GHG reduction targets for EU MS
- Mandatory resource use efficiency targets to MS
- Connecting Europe: priority to the rail and power instead of road infrastructure investments
- Phasing out environmentally harmful subsidies
- Adoption of the New Energy Taxes Directive

# Energy intensity, 2011

kg toe/ 1000 EUR

## Energy intensity of the economy

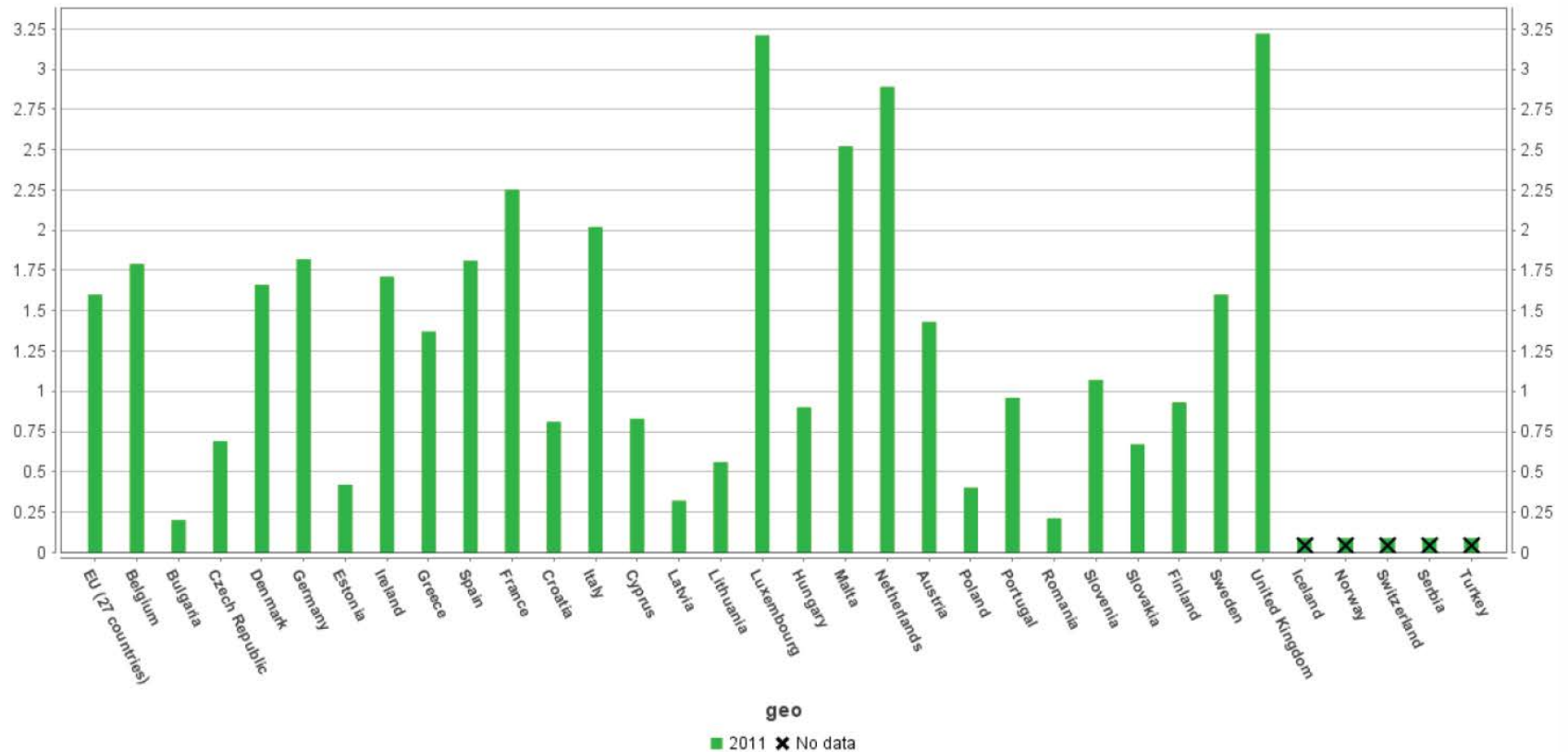
Gross inland consumption of energy divided by GDP (kg of oil equivalent per 1 000 EUR)



Source of Data: Eurostat

# Ressource productivity, 2011 EUR/kg

Resource productivity  
EUR per kg



Source of Data: Eurostat



# One Planet



Thank You!

[valdur.lahtvee@seit.ee](mailto:valdur.lahtvee@seit.ee) [www.sei-international.org](http://www.sei-international.org)