TACKLING 60% OF THE EU'S CLIMATE PROBLEM

MEMBER STATES PROGRESS IN IMPLEMENTING THE EFFORT SHARING DECISION

Carbon Market Watch Report
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ABOUT THIS PAPER

Although non-ETS sectors are responsible for nearly 60% of the EU's emissions there has been little focus on how Member States are tackling these emissions and how successfully the Effort Sharing Decision (ESD) – the piece of legislation that regulates emissions reductions in non-ETS sectors – is implemented.

This paper gives an overview on emissions and sectors covered by the ESD and takes stock of the emissions trends in the most important non-ETS sectors. It provides an overview on the progress of Member States in meeting their 2020 ESD targets, and analyses which Member States have already achieved their targets either with existing or planned measures and which Member States still need to put in place additional measures.

Given the importance of the mitigation targets and contributions from non-ETS sectors in a 2030 climate and energy framework, the papers also aims to inform the policy discussion on the role a new ESD may play under the 2030 climate and energy framework. The legislative framework including the compliance cycle and the various trading flexibilities are discussed in "Tackling 60% of the EU's Climate Problem: The Legislative Framework of the Effort Sharing Decision".

INTRODUCTION

In 2009, the EU decided to take a double approach to tackle emissions. The EU Emissions Trading System Directive (EU ETS) includes the biggest emitters and is organized at the European level. Emission permits are allocated to economic entities and not to Member States.

The Effort Sharing Decision (ESD) sets emissions reductions targets for the sectors not covered under the EU ETS. The emissions targets for these non-ETS sectors are set for each Member State. Emission permits are allocated to Member States who are responsible for implementing national actions. The overall EU 2020 reduction target under the ESD is 10% below 2005 emissions.

ESD emission reduction targets were set individually for each Member State based on its wealth, measured by its GDP per capita. The wealthiest Member States need to reduce their emissions by 20% below 2005 levels by 2020 and the poorest is allowed to increase emissions by 20% by 2020. The Member State targets add up to an overall EU ESD reduction of 10% below 2005 emissions levels by 2020. The EU's ESD target, together with the EU ETS reduction target add up to the overall EU reduction target of 20% compared to 1990 levels by 2020. The individual Member States' targets under the ESD are presented in figure 1 below.

The ESD remains quiet on where, how and with what policies Member States should reduce emissions. The choice of reduction measures are the responsibility of the Member States. The ESD and ancillary legislation create a framework for reporting the greenhouse gas emissions and ESD compliance status and regulates the use of flexibilities such as the use of offsets. For more details on the ESD legislative framework see "Tackling 60% of the EU's Climate Problem: The Legislative Framework of the Effort Sharing Decision".

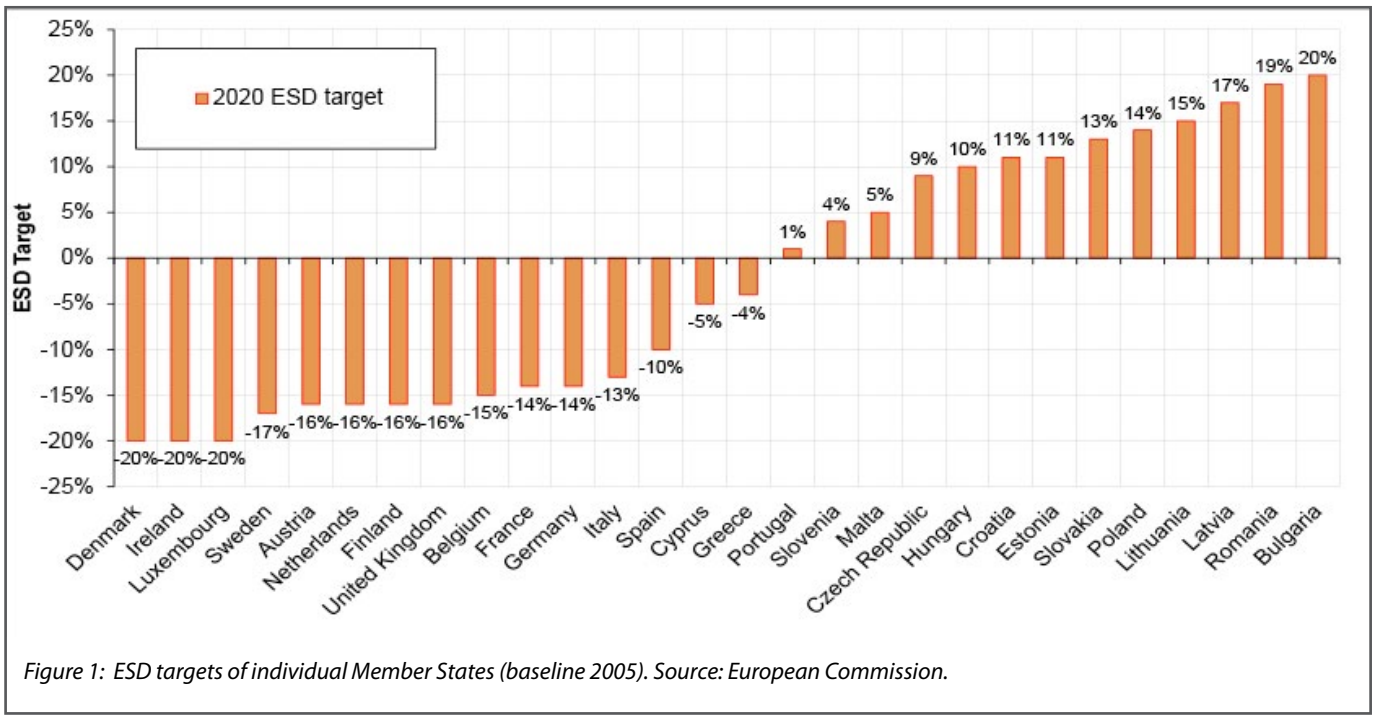


Figure 1: ESD targets of individual Member States (baseline 2005). Source: European Commission.

The ESD targets are translated into an annual emission budget for each Member State. The budget, the so-called Annual Emission Allocation (AEA), corresponds to the absolute amount of emissions allowed to that Member State. The Annual Emission Allocation units (AEAus), corresponding to one ton of CO2eq, can only be held by Member States and the European Commission. Member States are allowed to make use of different trading and banking flexibilities:

- Surplus AEAus accumulated in a year can be carried forward or transferred to another member State.
- In addition Member States can transfer up to 5% of their AEA to other Member States.
- A Member State can use Kyoto offsets (Clean Development Mechanism and Joint Implementation) up to the equivalent of 3% of its 2005 non-ETS emissions. Member States that do not use their 3% limit in any specific year can transfer their unused part for that year to other Member States or bank it for their own use.

TOTAL GREENHOUSE GAS EMISSIONS AND TRENDS OF SECTORS COVERED

The ESD covers emission sources from fuel combustion, fugitive emissions from fuels, industrial processes, solvent and other product use, agriculture and waste except for the emissions from installations covered by the EU ETS. The ESD does not cover emissions from the LULUCF sector. The three non-ETS sectors with the largest emissions are: energy use in road transport (34%), energy use in households (19%) and emissions from agriculture (17%) see figure 2.

A study by AEA concluded that the EU ESD target can be met at no net cost to the European economy. Implementing these cost-effective measures would deliver net benefits to the economy through the efficiency savings. The study also concludes that considerably more emissions reductions would be available at a cost of less than €25/tCO2eq. If these measures where implemented they would lead to an additional 8.5% reduction in the non-ETS sectors (AEA et al 2012b). Figure 3 shows emissions trends until 2030. It includes emissions covered both by the EU-ETS and the ESD.

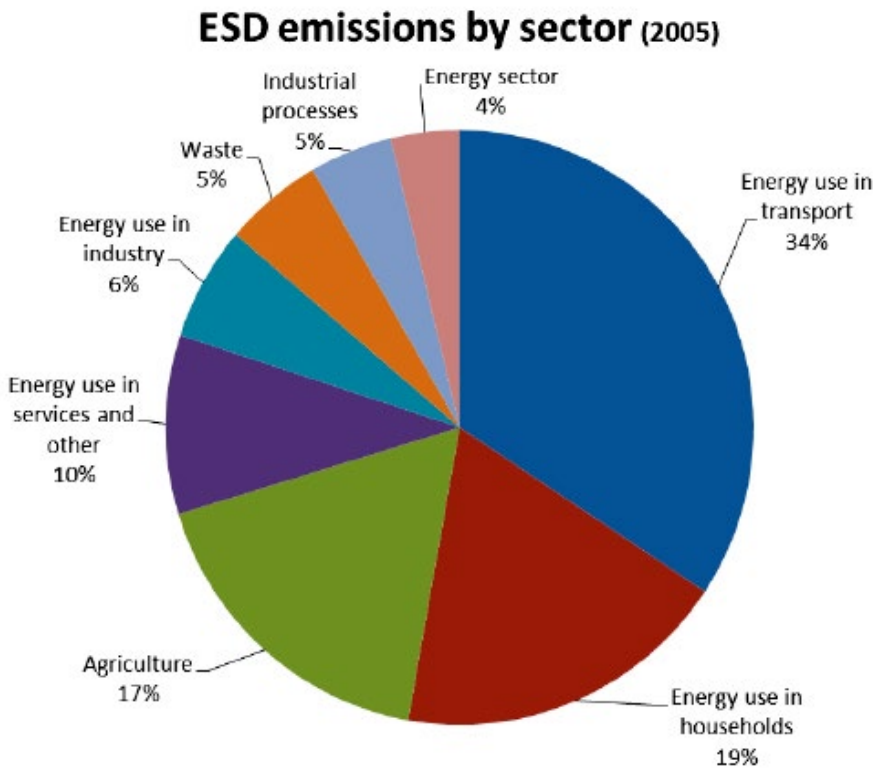
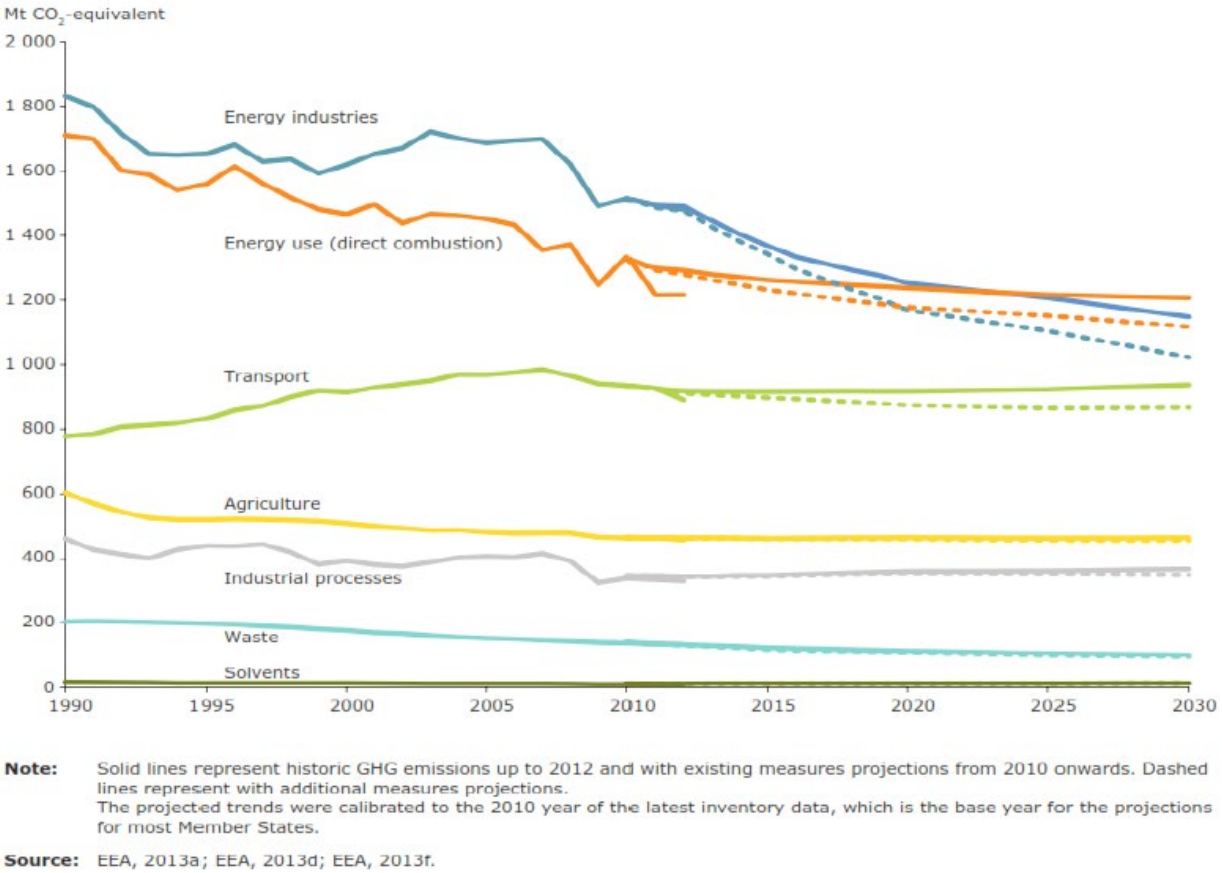


Figure 2: ESD emissions by sector. Based on numbers provided by AEA et al (2012a)



Note: Solid lines represent historic GHG emissions up to 2012 and with existing measures projections from 2010 onwards. Dashed lines represent with additional measures projections.
The projected trends were calibrated to the 2010 year of the latest inventory data, which is the base year for the projections for most Member States.

Source: EEA, 2013a; EEA, 2013d; EEA, 2013f.

Figure 3: Sectoral trends and projections of EU greenhouse gas emissions. Source: EEA (2013) Trends and projections in Europe 2013

ROAD TRANSPORT SECTOR

The road transport sector accounts for 34% of non-ETS emissions, and about a quarter of total EU greenhouse gas emissions. It is after the power sector the second largest source of greenhouse gas emissions. While emissions from other sectors are generally falling, those from transport have increased by 36% since 1990. EU-wide transport emissions in 2020 are projected to decrease by less than 1% from 2005 emissions levels. Existing EU and Member State policies are expected to only slow the increase in emissions.

A large proportion of the abatement potential in the transport sector requires investment of more than 25 EUR per tonne of mitigation. Significant reductions in this sector are required if the EU is to achieve its long-term goals of 80-95% reduction in greenhouse gas emissions. (AEA 2012b).

BUILDING SECTOR

The building sector accounts for 19% of total non-ETS emissions. These emissions include only direct fuel consumption, as electricity consumption is mostly covered by the EU-ETS. Emissions have been slowly declining over the last years, mostly due to energy retrofits in existing buildings. Emissions are expected to decline by 9% from 2005 to 2020.
The building sector could deliver substantial emissions reductions. The estimated abatement potential in the building sector could reduce emissions by 33% below 2005 levels by 2020. These could be achieved by deep retrofits and energy-efficient new buildings. Strict and well enforced building codes are essential for achieving reductions in this sector. 75% of this remaining abatement potential would be cost-effective at a carbon price of less than €25/tCOeq (AEA et al 2012b).

AGRICULTURAL SECTOR

The agricultural sector accounts for 9% of total EU greenhouse gas emissions and about 17% of the non-ETS greenhouse gas emissions. The main sources for greenhouse gas emission from agriculture are livestock (methane emissions) and fertilizer use (N2O emissions). They are difficult to predict and depend on global markets and bioenergy policies. Emissions reductions can be achieved by lowering N2O emissions through improving efficiency of nitrogen fertilizer use and lower nitrogen input, lowering methane emissions through improved feed in cattle and through prevention of emissions from manure storage and application.

Most agricultural policies that are in place do not primarily aim to reduce greenhouse gas emissions. Those reductions are a side effect, for example the Nitrates Directive reduces nitrogen inputs to protect watersheds and also reduces N2O emissions. Because the reduction of greenhouse gas emission is a side-effect in most of the agricultural policies, information on those emissions reductions is limited and often highly aggregated.

The available mitigation potentials reported by Member States for additional policies and measures is less than 1% of the total emissions from agriculture. On the other hand, the projected technical mitigation potentials in agriculture could lower emissions by as much as 26% by 2020. But this may be an overestimate as the technical potential may not reflect what is feasible in practice. For example, the estimate assumes a large potential from application of nitrification inhibitors which decrease the N2O emissions after fertilizer application but these have not been used widely in Europe and perform very differently on different soils (AEA et al 2012b).

INDUSTRY SECTOR

About 30-40% of industrial emissions are covered by the ESD and account for about 11% of non-ETS emissions. Industry sector emissions covered under the ESD include energy-related emissions (such as fuel use for heating and cooling) and industry process related emissions.

Estimates indicate that emissions in this sector may increase by 16% by 2020. Nevertheless this sector has a large cost effective abatement potential especially through energy-efficiency measures. Some measures in industries not covered by the EU-ETS would reduce electricity consumption and therefore have both an impact on non-ETS and EU-ETS emissions. Many of these cost effective measures face non-economic barriers. An EU-ETS carbon price will therefore not suffice to lower these emissions. Instead specific policies are necessary to unlock this mitigation potential (AEA et al 2012b).

WASTE SECTOR

The waste sector is responsible for 5% of non-ETS emissions, largely from methane emissions. These emissions are generated through the decay of organic material in landfills and from sewage. Emissions from the waste sector have reduced significantly since 2005. They are projected to continue to decline, although the rate of decline will be smaller than in the last 10 years. The EU Landfill Directive[1] and its controls on the disposal of biodegradable waste has led to a significant reduction of methane emissions.

1. See http://europa.eu/legislation_summaries/environment/waste_management/l21208_en.htm and http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1999:182:0001:0001:EN:PDF

Increased landfill gas capture has also reduced emissions substantially. But some countries still lack proper enforcement of the directive. Assuming that the policy is effectively implemented and enforced at a national level, the Landfill Directive will continue to help reduce emissions in the future.

The existing policies cover most of the estimated technical abatement potential, except for wastewater treatment where further improvements can still be made. On the whole, the abatement potential remaining in the waste sector is much more limited than in other sectors (AEA et al 2012b).

Overall about 75% of the projected reductions are expected to come from energy efficiency measures in the residential and service sectors, with much smaller contributions from the waste and transport, industry sectors. Planned additional measures would mainly deliver reductions in the residential, services and transport sector. (Barkman 2013).

STOCKTAKING BY MEMBER STATE

Member States have to report greenhouse gas projection data until 2020 in two separate scenarios: 'with existing measures', which considers the implementation of already implemented measures only, and 'with additional measures', which considers the implementation of additional measures that are at planning stage. The projections do not include the use of flexibilities, such as purchasing offsets or trading AEAus. In 2013, all Member States (except Croatia) reported updated greenhouse gas emission projections under the biennial requirement set by the Monitoring Mechanism Decision Regulation[2].

MEMBER STATES EXPECTED TO OVER-ACHIEVE THEIR TARGET

The report shows that 15 Member States are expected to over-achieve their ESD targets through policy measures already in place (Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Greece, Hungary, Malta, Poland, Portugal, Romania, Slovakia, Sweden, and the United Kingdom). Figure 4 shows the Member States and their ESD target and in green the countries expected to over-achieve their target. What becomes immediately obvious is that all but four of the 13 Member States that are allowed to increase their emissions under the ESD are projected to meet their target. (EEA 2013).

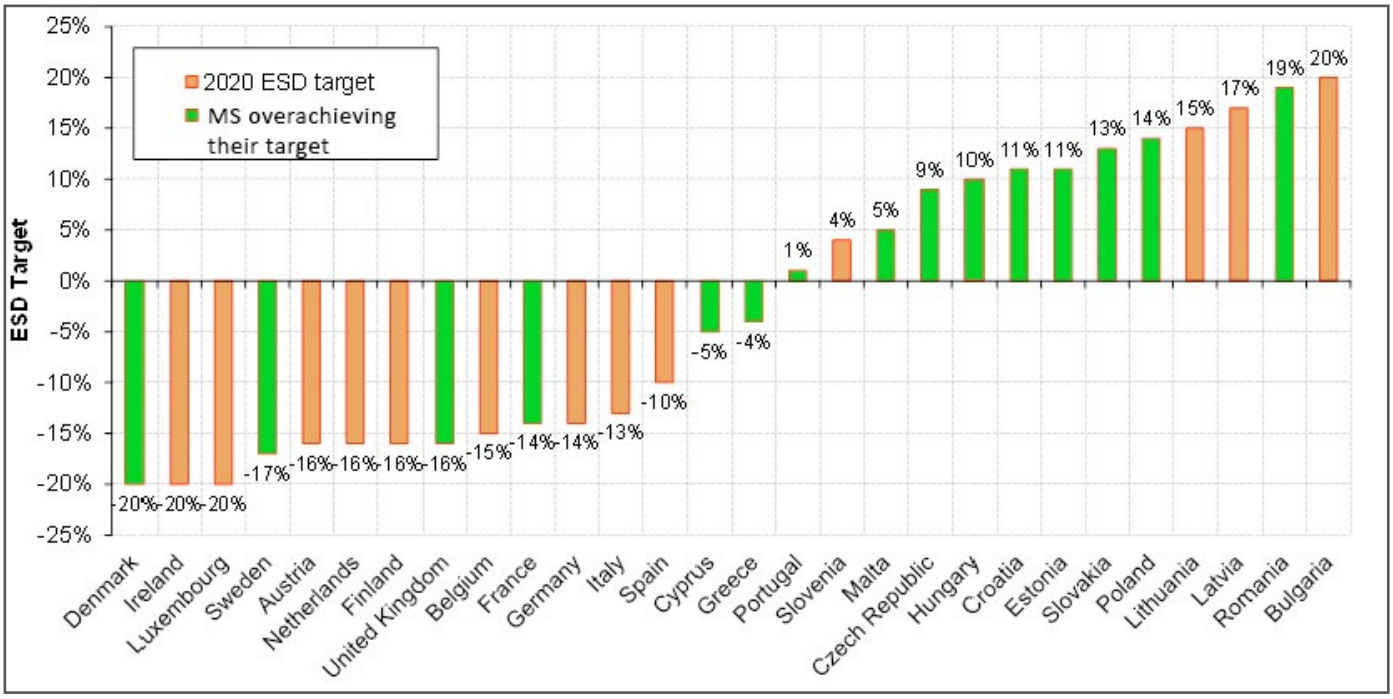


Figure4: Member States expected to overachieve their ESD target.

Table 1 compares the emissions reductions under the different scenarios compared to the countries' ESD targets (ordered by lowest to highest ESD reduction target). It is interesting to note that for most of these countries the difference in impact between planned and additional measures is small. This could indicate that these countries expected to meet their targets and therefore did not plan additional efforts.

2. In 2013, the projections are still done under the predecessor of the Regulation (525/2013) (MMR Regulation), the Monitoring Mechanism Decision (MMD) enacted in 2004.

Country	ESD target (compared to 2005 emissions)	Projected emissions in 2020 with existing measures	Projected emissions in 2020 with additional measures	Difference between existing and planned measures (in percentage points)	Target **over-achieved** with existing measures (in percentage points)	Target **over-achieved** if additional measures are implemented
Romania	19%	7%	4%	**3%**	12%	15%
Poland	14%	0%	0%	**0%**	14%	14%
Slovakia	13%	-24%	-26%	**2%**	**37%**	**39%**
Estonia	11%	6%	2%	4%	5%	9%
Croatia	11%	-6%	-6%	**0%**	17%	17%
Hungary	10%	-16%	-21%	5%	**26%**	**31%**
Czech Republic	9%	-7%	-9%	**2%**	16%	18%
Malta	5%	4%	2%	**2%**	1%	3%
Portugal	1%	-31%	-31%	**0%**	**32%**	**32%**
Greece	-4%	-5%	-8%	**3%**	1%	4%
Cyprus	-5%	-49%	-70%	21%	**44%**	**65%**
France	-14%	-16%	-23%	7%	2%	9%
United Kingdom	-16%	-19%	-19%	**0%**	3%	3%
Sweden	-17%	-19%	-20%	**1%**	2%	3%
Denmark	-20%	-22%	-22%	**0%**	2%	2%

Table 1: Countries projected to meet target with existing measures: Emissions reductions under the different scenarios compared to the countries' ESD targets. (Source: EEA (2013) Trends and projections in Europe 2013, table 7.3)

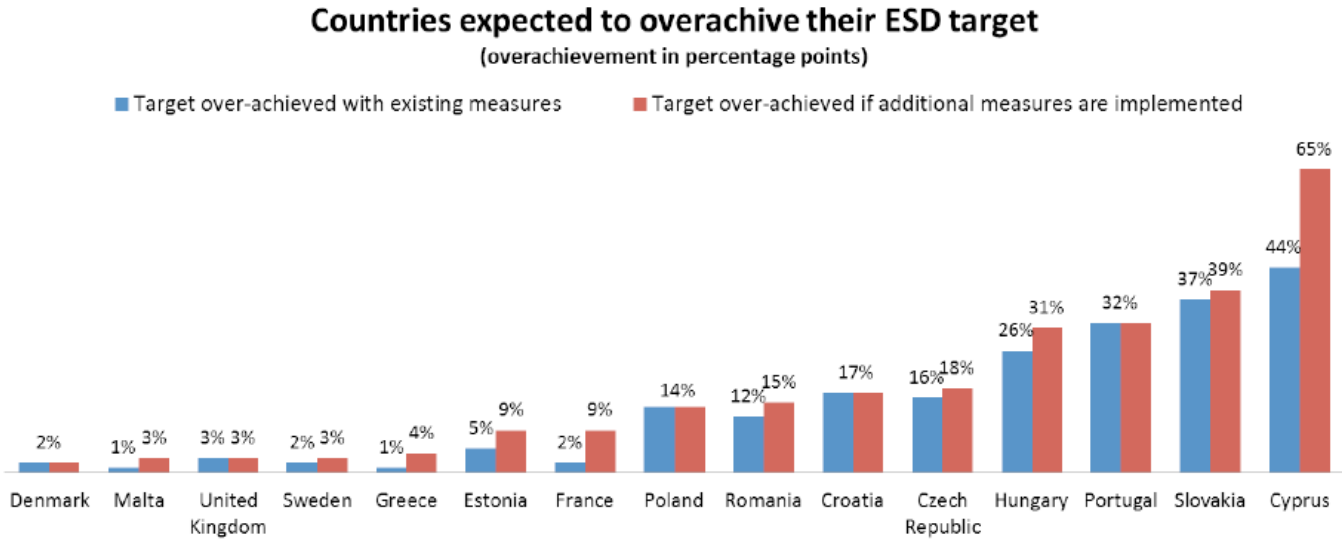


Figure 5: Member States expected to overachieve their ESD target: over achievement in percentage points

MEMBER STATES EXPECTED TO REQUIRE ADDITIONAL PLANNED MEASURES

Figure 6 below shows the seven Member States need to implement additional measures and policies that are currently in the planning stage, or use flexibility mechanisms to achieve their ESD targets by 2020 (Bulgaria, Germany, Italy, Latvia, Lithuania, Netherlands, Slovenia). Especially energy efficiency measures in the building sector will be necessary to deliver further reductions.

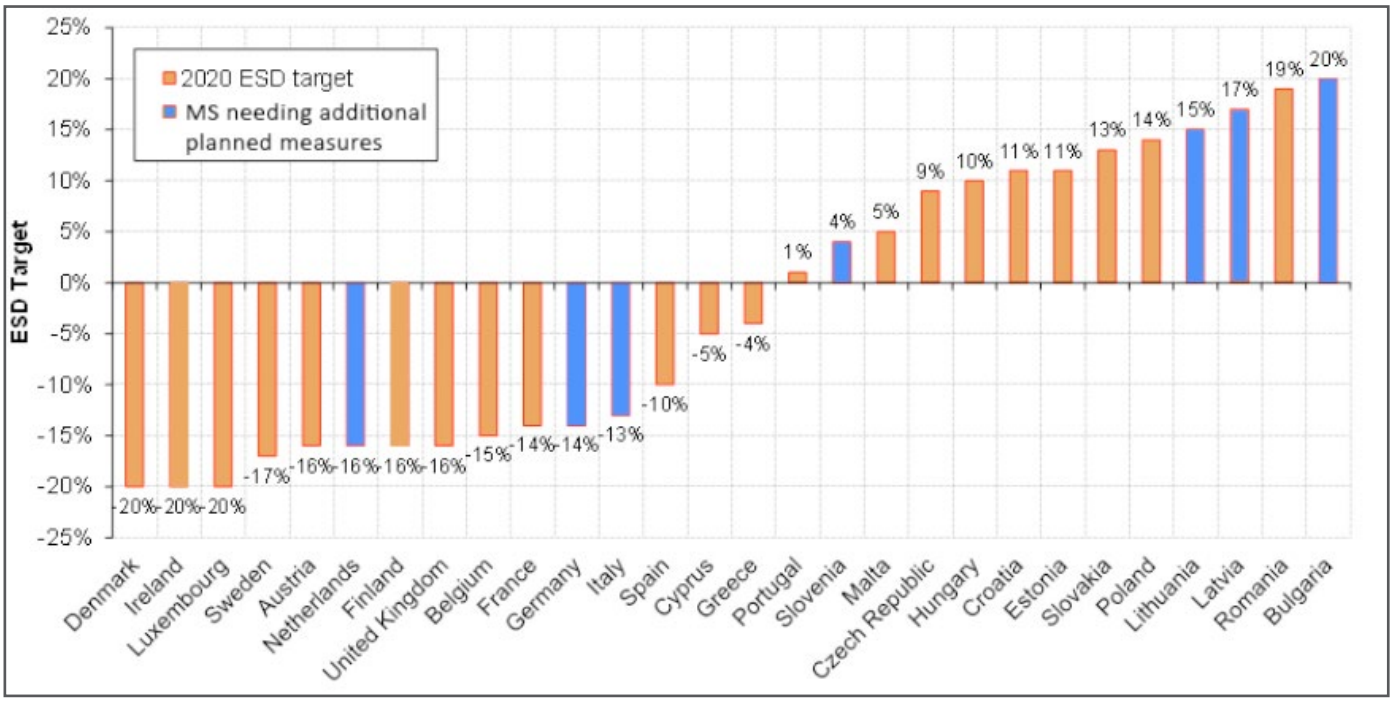


Figure 6: Member States needing to implement additional planed measures to meet their ESD target.

Table 2 compares the emissions reductions under the different scenarios compared to the countries' ESD targets (ordered by lowest to highest ESD reduction target). Germany, Latvia, the Netherlands and Slovenia are projected to miss their target only narrowly with existing measures – by 1 percentage point or less. Bulgaria and Italy are projected to miss their target by 3 and 4 percentage points respectively and Lithuania has the largest gap of 8 percentage points. With additional measures, all these countries could overachieve their ESD target significantly by between 2 and 15 percentage points.

Country	ESD target (compared to 2005 emissions)	Projected emissions in 2020 with existing measures	Projected emissions in 2020 with additional measures	Difference between existing and planned measures (in percentage points)	Target **missed** with existing measures (in percentage points)	Target **overachieved** if additional measures are implemented
Bulgaria	+20%	+23%	+9%	14%	**3%**	**11%**
Latvia	+17%	+18%	+15%	3%	**1%**	**2%**
Lithuania	+15%	+23%	+10%	13%	**8%**	**5%**
Slovenia	+4%	+4%	-11%	15%	**<1%**	**15%**
Italy	-13%	-9%	-18%	9%	**4%**	**5%**
Germany	-14%	-13%	-18%	5%	**<1%**	**4%**
Netherlands	-16%	-16%	-19%	3%	**<1%**	**3%**

Table 2: Countries needing additional measures: Emissions reductions under the different scenarios compared to the countries' ESD targets. (Source: EEA (2013) Trends and projections in Europe 2013, table 7.3)

MEMBER STATES EXPECTED TO REQUIRE MORE THAN ADDITIONAL MEASURES

Figure 7 below shows the six Member States that are projected to not meet their ESD targets (Austria, Belgium, Finland, Ireland, Luxembourg and Spain). All of them have reduction targets that do not allow them to increase their emissions. These countries not only need to implement their additional, already planned measures but implement further policies or use offsets or purchase AEAs.

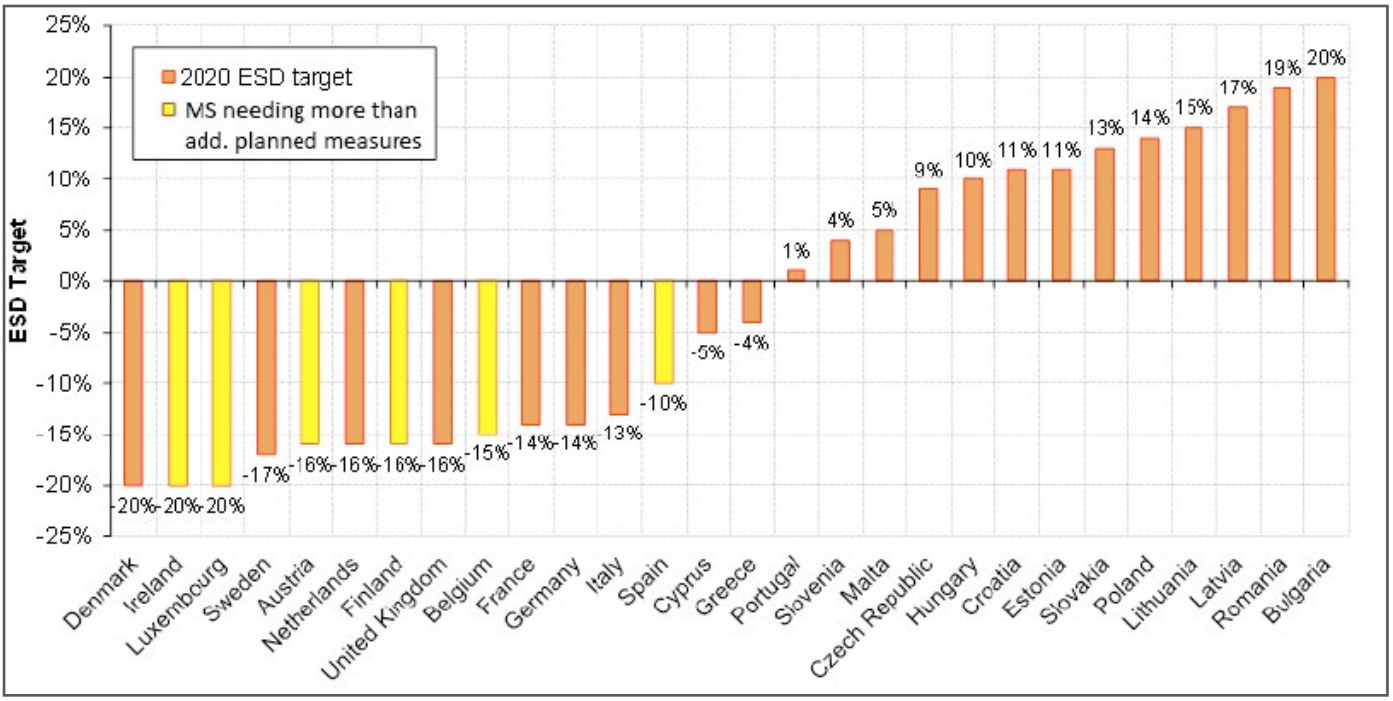


Figure 7: Member States needing to implement more than the additionally planned measures to achieve their ESD target.

Table 3 compares the emissions reductions under the different scenarios compared to the countries' ESD targets (ordered by lowest to highest ESD reduction target). In the following sections we will briefly discuss each of those Member States.

Country	ESD target (compared to 2005 emissions)	Projected emissions in 2020 with existing measures	Projected emissions in 2020 with additional measures	Difference between existing and planned measures (in percentage points)	Target **missed** with existing measures (in percentage points)	Target **missed** if additional measures are implemented
Austria	-16%	-9%	-16%	7%	**7%**	**0.5%**
Belgium	-15%	-4%	-4%	0%	**11%**	**11%**
Finland	-16%	-12%	-15%	3%	**4%**	**1%**
Ireland	-20%	-2%	-9%	7%	**18%**	**11%**
Luxembourg	-20%	3%	-2%	5%	**23%**	**17.7%**
Spain	-10%	-2%	-4%	2%	**8%**	**6%**

Table 3: Countries needing more than additional measures: Emissions reductions under the different scenarios compared to the countries' ESD targets. (Source: EEA (2013) Trends and projections in Europe 2013, table 7.3)

AUSTRIA

Austria has an ESD target of -16 % compared to its 2005 emissions. The largest proportion of emissions comes from energy use and transport. Taking into account existing measures, Austria is expected to reach a reduction in the non-ETS sectors of 9% by 2020. With additional measures it could almost reach its target, only a 0.5% gap would remain (EEA 2013).

The Austrian Climate Protection Act defines the maximum permissible emissions for each of the non-ETS sectors for the 2013–2020 period. The act also defines a procedure to develop measures to ensure compliance with the 2020 ESD target. These measures include increasing energy efficiency, the share of renewable energy, and the energy efficiency of buildings, integrating climate protection into land use planning, mobility management, waste avoidance, protection and expansion of carbon sinks, and economic incentives for climate protection (Austria Federal Chancellery 2013).

If Austria was to implement its additionally planned measures, it would have to purchase much fewer offsets and/or AEAus than if it was to implement only its planned measures.

BELGIUM

Belgium has an ESD target of -15% compared to its 2005 emissions. Projections show that with existing measures Belgium will reduce its non-ETS emissions by 4% in 2020 and therefore miss its target by 11 percentage points. With additional measures it is not expected to achieve more reductions (European Commission2013e). A recent report by the Belgium government reports that in 2011 non-ETS emissions dropped to minus 7% below 2005 levels, almost half of the required reductions (Belgium Government 2013). This is likely due to the mild weather and may not be a continuing trend.

The responsibilities for energy and climate policies are divided between the Federal Authority and Belgium's three regions. Whereas individual authorities have made progress in developing mitigation policy plans, there seems to be a considerable lack of coordination among the various authorities. It remains unclear how initiatives implemented by the different authorities will ensure that Belgium's target is met, or how the regions will contribute to the required emissions reductions. The abolition of almost all federal incentives for energy efficiency, heat pumps and solar panels will likely lead to an increase in emissions. It is not clear whether regional incentives will be able to compensate for the loss of federal funding.

The transport sector offers considerable potential for lowering emissions. Congestion is placing a particularly heavy burden on the Belgian economy and environment, but the implementation of the new traffic tax system in the three regions has been delayed until 2016 and no significant measures have been put forward to improve public transport.

The main problem for Belgium is that a majority of the needed policies are regional responsibilities and no agreement has been found on dividing up the national target into regional targets, amongst others reasons because there is no agreement on the division of the revenues from the auctioning of ETS emission allowances.

Improving coordination and assigning clear tasks and responsibilities to federal and regional authorities in particular from transport and buildings is necessary to enable more progress towards meeting the ESD target (European Commission2013g and h).

FINLAND

Finland has an ESD target of -15% compared to its 2005 emissions. Projections show that with existing measures Finland will reduce its non-ETS emissions by 12% in 2020. With additional measures it is projected to achieve reductions of minus 15%. According to the EEA, Finland may therefore miss its target between 1 and 6 percentage points (EEA 2013). On the other hand, the updated national energy and climate strategy (submitted in March 2013) concludes that Finland will meet its 2020 target with existing measures (European Commission 2013i).

Finland focuses on improving energy efficiency in buildings and road transport and increasing the share of renewables to achieve emissions reductions by 80% by 2050. Finland also aims to reduce its oil consumption by 20% by 2020, mainly from road transport and heating. Additional measures in the waste sector, a raise in the energy tax on peat, and measures to increase the use of renewable energy in the heating sector could help to further reduce emissions. Finland furthermore stated that it is committed to phasing out environmentally harmful subsidies. Nevertheless, the refund system on energy tax payments for industry was extended in 2011. This subsidy could amount to EUR 120 million in 2012.

Finland's energy intensity is high compared to other European states. Industry accounts for almost half of the energy consumption. Within the manufacturing sector, the forestry industry is by far the largest energy consumer, followed by the metal and the chemical industry. Energy efficiency improvements could not only reduce emissions but also enhance the competitiveness of these industries by lowering their energy costs. (European Commission 2013i).

IRELAND

Ireland has an ESD target of - 20% below its 2005 emissions. It is projected to miss its target by a large margin due to a large increase of emissions in transport and in agriculture. With existing measures Ireland's emissions are projected to be 2% below their 2005 levels in 2020. Additional planned measures would bring emissions to below 9% in 2020. Ireland is therefore projected to miss its ESD target by 11 to 18 percentage points. (EEA 2013)[3]

In 2013, Ireland proposed a range of initiatives to reduce emissions under the Low-Carbon Development Bill (European Commission 2013a). But further measures are needed if Ireland is to meet its ESD target, including under their Climate Action and Low-Carbon Development Bill 2013. Government departments have been tasked to prepare 2050 low-carbon roadmaps, but it is unclear how Ireland will integrate these into a viable and coordinated national emission reduction roadmap (European Commission 2013c).

3. See http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/News/MainBody,32466,en.htm

LUXEMBOURG

Luxembourg has an ESD target of -20% compared to its 2005 emissions. With planned measures, Luxembourg's non-ETS emissions are expected to increase by 3%. With additional measures, Luxembourg may reduce its emissions by 2%. It is therefore expected to miss its ESD target by 18-23 percentage points (EEA 2013). The transport sector is responsible for two thirds of Luxembourg's non-ETS emissions. Fuel-pump tourism caused by the low gasoline and diesel taxes is largely responsible for the big gap to meet the ESD targets. Only one quarter of fuel emissions come from fuel use from residents, almost 75% are caused by the sale of fuel to non-residents.

The recommendations by the European Commission note that Luxembourg would have to significantly step up mitigation measures, especially by increasing fuel taxes (European Commission 2013d). But according to the Luxembourg government, it is unlikely that the government will raise fuel taxes to the extent that they would be comparable with neighboring countries. Instead Luxembourg is likely to purchase offsets to meet its target. It established a "Climate and Energy Fund" to purchase offsets and allowances for the deficit of around 12 million tons of CO2-eq for the period 2013-2020 (Luxembourg 2013).

SPAIN

Spain has an ESD target of - 10% compared to its 2005 emissions. With planned measures, Spain's non-ETS emissions are expected to decrease by 1%. With additional measures, Spain may reduce its emissions by minus 4%. It is therefore expected to miss its ESD target by 6 to 9 percentage points (EEA 2013 and European Commission 2013b).

Spain has started implementing some small initiatives such as the Climate Project Programme which supports the implementation of national offset projects and purchases emissions reductions from those projects. Another initiative aims to increase the replacement of vehicle fleets with now and more efficient vehicles. According to the Spanish government, additional measures are planned such as a new environmental tax system and a National Framework Waste Plan. Nevertheless it seems that Spain is not sufficiently prepared to take domestic action to meet its ESD target (European Commission 2013b).

CONCLUSION

Overall, the EU is expected to over-achieve its 2020 GHG reduction target by 2020. The findings show that Member States could achieve much higher emissions reductions at low cost but this would require higher targets or other polices to incentivise such action. That higher incentives would have led to more action is indicated by nine of the countries that are expected to overachieve their targets. For Poland, Slovakia, Croatia, Czech Republic, Malta, Portugal, United Kingdom, Sweden, Denmark the difference in emissions reductions between planned and additional measures is less than 2 percentage points, indicating that these countries expected to meet their targets and therefore did not plan additional efforts.

The reasons why six countries are projected to miss their target if they do not implement additional efforts or purchase units vary. Austria and Finland have a very small gap if they implement their planned additional measures and may therefore meet their target. Belgium, Ireland and Spain on the other hand seem to not have spent enough (political) capital to plan and implement mitigation activities in order to achieve their ESD targets. Luxembourg has the largest projected gap which is due to its fuel tourism. There is no political willingness to change to higher fuel taxes and therefore the purchase of units was chosen as the easiest path to meeting their target.

The European Commission proposed country-specific recommendations to 16 Member States. The most frequently made recommendation promotes fiscal frameworks which would help set prices that internalize environmental costs, e.g. the introduction of a carbon price in non-ETS sectors. Commission's assessment of the climate and energy targets identified policy action in six key areas to further progress:

- Planning effective, growth-friendly use of the revenues from auctioning of EU ETS allowances;
- Realising the full potential for increasing energy efficiency, particularly in the buildings sector;
- Providing a stable, coherent and cost-efficient framework for investment in green technologies, renewable energy sources and energy infrastructure
- Exploiting emissions reduction potential in the transport sector;
- Fully exploiting scope for shifting the tax burden away from labour to tax bases less detrimental to growth and jobs, in particular through environmental taxation
- Removing environmentally harmful subsidies. (European Commission 2014c)

It remains to be seen how many of the Member States that are projected to miss their target will implement additional measures and how many will simply choose to take advantage of the many trading flexibilities that the ESD offers. Given that the EU needs to reduce its emissions by 80-95% by 2050 and wants to do that in a cost effective way, Member States will have to start implementing additional measures as soon as possible. Simply purchasing units may prevent Member States from implementing further policies and measures that would lead to a long term decarbonisation of their non-ETS sectors.

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REFERENCES

AEA et al (2012a). Next phase of the European Climate Change Programme: Analysis of Member States actions to implement the Effort Sharing Decision and options for further communitywide measures

AEA et al (2012b). Next phase of the European Climate Change Programme: Analysis of Member States actions to implement the Effort Sharing Decision and options for further communitywide measures Appendix 1: Greenhouse gas emissions projections, emissions limits and abatement potential in ESD sectors

Austria Federal Chancellery (2013). National Reform Programme

Barkman A. (2013). The non-ETS (NETS) sectors. PPT presentation at the Joint Climate Policy Workshop, Dublin 12-13 Sept. European Environment Agency.

Belgium Government (2013). National Reform Programme 2013

European Commission (2009). Towards a comprehensive climate change agreement in Copenhagen. COM(2009) 39 final. Brussels,28.1.2009.

European Commission(2011a). Impact assessment underlying the proposal (of 2011) of the Energy Efficiency Directive.

European Commission (2011b). A Roadmap for moving to a competitive low carbon economy in 2050. COM(2011) 112 final

European Commission(2012). Commission Staff Working Document: Preparing the EU's Quantified Emission Limitation or Reduction Objective (QELRO) based on the EU Climate and Energy Package. COM SWD(2012) 18 final

European Commission(2013a). Report From the Commission To the European Parliament and the Council Progress Towards Achieving the Kyoto And EU 2020 Objectives

European Commission(2013b). Assessment of the 2013 national reform programme and stability programme for SPAIN

European Commission(2013c). Assessment of the 2013 national reform programme and stability programme for IRELAND

European Commission(2013d). Recommendation for a Council Recommendation on Luxembourg's 2013 national reform programme.

European Commission(2013e). Assessment of the 2013 national reform programme and stability programme for AUSTRIA

European Commission(2013f). Country-specific Recommendations 2013

European Commission(2013g). Recommendation for a COUNCIL RECOMMENDATION on Belgium's 2013 national reform programme

European Commission(2013h). Assessment of the 2013 national reform programme and stability programme for BELGIUM

European Commission(2013i). Assessment of the 2013 national reform programme and stability programme for FINLAND

European Commission(2014a). A policy framework for climate and energy in the period from 2020 to 2030

European Commission(2014b). Impact assessment on energy and climate policy up to 2030

European Commission (2014c). Progress towards 2020 targets: the European Semester; Website: last visited 26.3.2014

European Environment Agency (2013). Trends and projections in Europe 2013

Environment Agency Austria (2013). GHG Projections and Assessment of Policies and Measures in Austria. Reporting under Decision 280/2004/EC, 15 March 2013

Hood C. (2013). Managing interactions between carbon pricing and existing energy policies Guidance for Policymaker

Luxembourg (2013). National plan for smart, sustainable and inclusive growth Luxembourg 2020

Spalding-Fecher R. et al (2012). Assessing the Impact of the CDM. Report Commissioned By The High-Level Panel On The CDM Policy Dialogue, July 2012

Spanish Government (2013). National Reform Programme Kingdom of Spain 2013