



Effort Sharing – shared burdens, common endeavours

In 2007, the European Council adopted a package of energy and climate goals for the EU for the first time, including a greenhouse gas emissions reduction target of at least 20% by 2020 compared with the 1990 baseline. The best-known mechanism for achieving this target is the EU Emissions Trading System (EU ETS). Less familiar from the media but no less important, the Effort Sharing Decision (ESD) and its successor, the Effort Sharing Regulation (ESR), were adopted in 2009 and 2018 respectively.

This Effort Sharing legislation covers emissions from the transport, buildings, agriculture, waste and some industrial and energy installations. Around 60% of the EU-28's total domestic emissions and around half of Germany's emissions are covered by Effort Sharing. The member states' common goal is to achieve a 10% reduction in greenhouse gas emission from these sectors by 2020 compared with the 2005 baseline, rising to 30% by 2030.

From reduction target to emissions budget

Unlike emissions trading, where the onus is on companies to obtain emission certificates for the greenhouse gases they produce, under the Effort Sharing legislation the governments of the member states are responsible for achieving the reduction targets. To that end, they receive emission budgets, known as Annual Emission Allowances (AEAs), each equivalent to 1 tonne of CO₂e.

Each country's annual emission allocations for 2013-2020 were defined in 2013 and updated in 2017. For the 2021-2030 period, the EU member states and the European Parliament have agreed national GHG reduction targets to 2030, expressed in percentages, along with a linear path for achieving them. The starting point for calculation of the annual emission allocations (AEAs) is the average annual emissions in the 2016-2018 period, the latest data that will be available in 2020.

Various criteria were applied to set the national reduction targets, the main one being economic performance. Germany has pledged to reduce its greenhouse gas emissions by 14% (compared to 2005) by 2020 and by 38% by 2030. However, without swift and drastic action, it will miss these targets by a large margin.

Germany falls short

The main cause of concern is the transport sector, where emissions are still rising. This sector accounts for approximately 20% of Germany's total CO₂ emissions. In the buildings sector, insulation schemes and heating upgrades are cutting emissions, but further reductions are imperative.

In agriculture, emissions are increasing slightly; very different measures are required to achieve sustainable reductions here. Only the waste sector can point to a substantial percentage decrease in greenhouse gas emissions, but in absolute terms, this is a very small contribution.

Around 10% of emissions from the energy sector and 25% from industry are not covered by European emissions trading, falling instead within the scope of the Effort Sharing legislation. But here too, reduction targets will be missed by a large margin. Indeed, these two sectors show the strongest absolute and percentage increases compared with 2005.

Working paper on effort sharing emissions by sector in Germany

On behalf of the German government and the European Environment Agency (EEA), the Oeko-Institut analyses emission trends in order to track progress on reductions and draw attention to any stalling or, indeed, increase in various sectors. A Working Paper entitled *Entwicklung der Effort Sharing Emissionen nach Sektoren in Deutschland* (Development of Effort Sharing Emissions by Sector in Germany) monitors trends for the years from 2005 to 2030.

For 2017, the provisional inventory data show a reduction of just 1% across all the Effort Sharing sectors. In their study, the researchers present a detailed breakdown of the sectoral contributions as a basis for identifying potential starting points for remedial action.

The study also looks at the strategies adopted by other European countries. It focuses especially on areas where neighbour states have achieved reductions, in order to identify effective mitigation actions. As the EU's largest producer of Effort Sharing emissions, Germany has a particular responsibility to significantly increase its contribution.

[Oeko-Institut Working Paper: Entwicklung der Effort Sharing Emissionen nach Sektoren in Deutschland \(Development of Effort Sharing Emissions by Sector in Germany\)](#)

Brief study on additional purchases of annual emission allowances

With Germany at risk of missing its reduction targets under Effort Sharing legislation, substantial costs are likely to be incurred by its government. In a brief study entitled *Abschätzung des erforderlichen Zukaufs an Annual Emission Allowances bis 2030* (Assessment of the additional purchases of Annual Emission Allowances (AEA) required as a result of the European effort-sharing scheme), the Oeko-Institut traces the future trajectory of the costs incurred through these excess greenhouse gas emissions.

During the first Effort Sharing period (2013-2020), the rules were still fairly flexible. It was – and still is – possible to utilise surplus AEAs from previous years and even borrow against future allocations. Trading between member states is permitted, and in the event of an AEA shortfall, there is the option to purchase and offset credits from Clean Development Mechanism (CDM) projects.

In addition, emission ceilings for the first period are so lacking in ambition that Europe-wide emissions remain well below them. This has resulted in low prices being set for AEAs, although this will change in the second Effort Sharing period.

Lower emissions budgets and higher prices to 2030

In the second period (2021-2030), there will be much less flexibility. Limits will be imposed on the offsetting of past emissions allowances and on future borrowing, and there will no option to utilise international certificates. Above all, targets are expected to be more ambitious, resulting in less availability of surplus AEAs from other member states. This will push up the costs of exceeding emissions budgets.

According to the Oeko-Institut's calculations, Germany may already have to spend around 600 million euros on purchasing emission certificates for around 120 million tonnes of excess greenhouse gases to 2020. For 2021-2030, according to these – optimistic – projections, Germany will have a greenhouse gas emissions gap of around 300 million tonnes of CO₂e unless it takes fast and effective climate action.

As the price of emission certificates is expected to increase, the additional costs will amount to between 5 and 30 billion euros. These sums must be viewed in relation to spending on effective climate action in transport, buildings, agriculture and industry. Investing in climate protection is an investment in the future. By contrast, buying emission certificates does not reduce carbon emissions by a single tonne.

[Brief study: Abschätzung des erforderlichen Zukaufs an Annual Emission Allowances bis 2030](#)
(Assessment of the additional purchases of Annual Emission Allowances (AEA) required as a result of the European effort-sharing scheme)

Further information

[Study: Politikszenerarien für den Klimaschutz \(Policy Scenarios for Climate Protection\), on behalf of the German Federal Environment Agency \(UBA\)](#)

[Study: Analysis of drivers of historic and future ESD emission trends, on behalf of the European Environment Agency](#)

[Study: Emission trends under the Effort Sharing legislation: An analysis of sectoral trends covered by the Effort Sharing legislation, on behalf of the European Environment Agency](#)

[EEA Report: Trends and Projections in Europe 2018, on behalf of the European Environment Agency](#)

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