

Summary

The recent changes to the EU's climate legislation will significantly tighten the Union's climate policies. The reforms are intended to ensure that the goals set out in the Union's new climate law are achieved. This means reaching climate neutrality by 2050 at the latest, achieving net-negative emissions after 2050, and net emissions (emissions minus removals) in 2030 at least 55 percent below those in 1990.

The strengthened legislation primarily targets the large energy and industrial facilities and airlines (whose emissions are covered by the current emissions trading system) and the Member States. The requirements now imposed on Sweden for emissions reductions outside of the emissions trading system and for carbon removals are in line with or even tougher than those resulting from the national climate targets adopted in 2017.

From now on, EU legislation will be at least as demanding for Sweden as the national climate goals, which in their current form are simply on their way to becoming outdated.

Two main factors explain why the new EU legislation can be said to be in line with or even more demanding than the national climate goals:

- The new EU legislation means that Sweden must increase the net carbon storage in the landscape and in wood products. The absence of a target for carbon removals at the national level paradoxically means that the Swedish climate targets can be reached and exceeded while the net emissions in fact are increasing. This might happen if carbon storage decreases more than the gross emissions (which happened 2015–18). The EU legislation in fact adds a carbon removal target to the nationally decided climate goals.

- The national gross emissions reduction targets are linked to individual years (2030, 2040 and 2045). This means that, in theory and at the margin, they can be met with limited efforts or accounting manoeuvres for the year in question. Although the EU legislation assigns Sweden a slightly larger space for gross emissions in 2030 than the national goal, the EU regulation actually consists of an emissions budget for the entire decade 2021–30. This means that, in total, it regulates Swedish gross emissions in line with, or even slightly stricter than, what follows from the Swedish climate goals.

To complicate matters further, the Swedish goals have a partially different technical construction than the EU legislation:

- The overarching national goal of achieving net-zero emissions by 2045 also includes emissions from activities within the existing Emissions Trading System (ETS1). This model contradicts the fundamental idea behind the emissions trading system, which is that emissions within the system – in order to reduce the overall costs of the climate transition – should not be regulated by member states, but only at the EU level.
- The separate, national emission target for the transportation sector has no equivalent within the EU. Managing certain sectors separately can be justified in individual cases. Problems surrounding, for example, agricultural emissions of methane and nitrous oxide are of a special character, as are the non-CO₂ effects of aviation. The risk linked to sectoral targets, is that expensive measures within designated sectors will be prioritized over cheaper measures in other areas, which will drive up costs without additional climate benefits. The Swedish sectoral target for transportation carbon dioxide emissions may have been justified when it was adopted. Currently, it is unclear how the construction promotes climate efforts.

The core of EU climate legislation – three greenhouse gas budget laws

In addition to the climate law, the core of the new EU legislation consists of the three "greenhouse gas budget laws": the Emissions Trading Directive and the Effort Sharing Regulation (which together regulate emissions), plus the LULUCF Regulation (Land-Use, Land-Use Change and Forestry) which regulates carbon sequestration in landscapes and timber products. The three laws are essentially "technology-neutral", meaning that they only prescribe how much emissions must be reduced or how much net carbon that has to be sequestered, but do not specify how this should be done. Together, they create an almost fully comprehensive regulation – essentially no additional union legislation is required to achieve the goals of the climate law.

The Emissions Budget I currently covers the existing Emissions Trading Scheme (ETS1), under which emissions from over 10,000 larger energy and industrial installations as well as aviation within the EEA (EU27 plus Iceland, Liechtenstein, and Norway) are regulated. From 2024, shipping will also be included.

For each ton of carbon dioxide emitted by the affected activities, an emission allowance must be surrendered to the European Commission. The maximum permitted amount of emissions within the system (the emissions budget) is determined by the number of allowances issued, which is regulated in the Emissions Trading Directive. Some of the allowances are allocated for free, primarily to the industry, but most are sold through public auctions. The majority of the auction revenues goes to member states. Member states participate in the administration of the system but are otherwise not involved. The trading takes place in a single, cross-union system.

With the new legislation, the issuance of new emission allowances will be reduced significantly faster than previously. Unless the legislation is changed again, the issuance of new allowances will end in 2039. After that, net greenhouse gas emissions from the activities covered will be essentially prohibited. The remaining emissions space corresponds to 7-8 years of emissions at current levels.

The Emissions Budget II includes emissions that occur outside the ETS1, primarily from road transport and small-scale heating, as

well as agricultural emissions of methane and nitrous oxide. Under the so-called Effort Sharing Regulation (ESR), each member state is allocated an annual emission quota that gradually decreases. The allocation for 2021-2030 constitutes the country's "emissions budget" for that period. The total allocation for all countries in 2030 corresponds to a 40 percent reduction in emissions compared to 2005.

A member state that emits less than its allocation can use the excess as compensation under the Removals Budget (see below), or sell it to a member state that emits more than its allocation. Some member states, including Sweden, can slightly increase their ESR space by transferring emission space under ETS1.

The Swedish ESR allocation for 2030 corresponds to a halving of emissions compared to 2005, which is slightly less demanding than the national climate goal. The difficulties in reducing emissions from agriculture mean that the majority of emissions reductions will have to be achieved in road transport. Sweden's emission budget for 2030 corresponds to a reduction in the use of fossil transport fuels by 40-50 percent compared to 2021.

Just over half of the ESR emissions (in the Union and in Sweden) will from 2027 onwards in parallel be covered by a new, separate emissions trading system, ETS2. Road transport, most small-scale heating, and certain industries are included automatically, but member states can add additional ESR activities. All ETS2 emission allowances will be sold at public auctions, with no free allocation.

The Removals Budget is regulated in the LULUCF Regulation, which sets requirements for member states regarding the net storage of carbon in landscapes and in wood products.

From 2021-2025, the net storage in a member state must exceed a reference level. For forest land this is based on the net storage from 2000-2009 and for agricultural land from 2005-2009.

From 2026-2030, the requirements are tightened. Net removals will have to increase in all member states. Countries with net emissions must reduce their net emissions, while countries with net storage (such as Sweden) must increase their net storage. The total net storage within the union must gradually increase so that by 2030, it corresponds to at least 310 million tons of carbon dioxide equivalents, an increase of just over 40 million tons compared to the

average level of 2016-2018. Also in this case, the requirement for member states is designed as a multi-year budget applied 2026-2030.

The total requirement to increase carbon storage is distributed among member states in proportion to their share of the "used land" area within the union. The LULUCF Regulation allows for the transfer of removals between member states.

Sweden's LULUCF requirement means that net storage between 2016-2018 and 2030 must increase by the equivalent of 4 million tons. To achieve this at such short notice, it is likely that the amount of timber harvested from Swedish forests will need to be limited, or at least not increased compared to the current levels.

Recommendations

Revise the national climate goals

The demands put on the Swedish climate policy by the new EU legislation are at least as strict as the national climate goals. Against this background, it is not clear that the national goals serve any purpose anymore.

If new overarching national climate goals are established, they should be designed according to the structure used within the EU. To be meaningful, the goals must lead to greater net emissions reductions (within and/or outside the EU) than what follows from EU legislation.

A goal of increased net carbon storage must be included. The national targets should be based on greenhouse gas budgets that extend over several years.

Alternatively, the national goals should be given a new function and character, for example by focusing on more delimited issues, such as agricultural emissions of methane and nitrous oxide, or on the development and dissemination of new technology, such as for carbon capture and storage.

Emissions Budget I

Since the emissions trading within ETS1 occurs in a single, union-wide system and the size of the total emissions is almost entirely

controlled by the number of emission allowances issued, there are basically no pure climate policy reasons to specifically reduce Swedish ETS1 emissions.

For the long-term competitiveness of industry and for the Swedish economy, however, it is crucial that Swedish net emissions within ETS1 cease as soon as possible. This makes it necessary for both business and the state to invest in innovation and technological renewal that leads to emissions ceasing.

However, in the next few years, reduced ETS1 emissions may lead to slightly lower overall emissions. The complex MSR mechanism, which is linked to ETS1, currently means that a portion of the emission allowances that have been issued but not yet used will automatically be cancelled if emissions fall. This effect is expected to diminish soon, likely within 3-6 years. To further reduce the cumulative emissions from ETS1 beyond what is achieved through the shrinking issuance of emission allowances, allowances must be cancelled before they are used to cover emissions. One possible policy action that could reduce emissions more than EU legislation requires, is to introduce a tax deduction for individuals or companies that actively cancel emission allowances in such a situation.

Emissions Budget II

1. Since road traffic, off-road vehicles, and agricultural methane and nitrous oxide emissions currently account for a total of 85 percent of the ESR emissions (i.e. emissions budget II), and no significant reductions in agricultural emissions are expected in the near future, reduced emissions from road traffic and off-road vehicles are crucial to meet the ESR requirements on Sweden. The ESR emission space allocated to Sweden for 2030, corresponds to a reduction in fossil fuel use in road traffic and off-road vehicles by 40-50 percent compared to 2021. To achieve this, the government needs to urgently investigate and propose how the following measures can best be combined:
 - To slow down the inflow of new vehicles with combustion engines into the Swedish car fleet, the increased, CO₂-related

vehicle tax, which is applied during the first three years after registration, should be gradually increased.

- The expansion of charging infrastructure needs to be accelerated, with priority given to rural areas.
 - The reintroduction of a bonus for the registration of battery-powered cars should be considered. Any bonus should primarily benefit lighter, less power-demanding vehicles.
 - To ensure that the transition to battery vehicles occurs quickly enough, fossil fuels taxes and/or the reduction obligation must be set at a sufficiently high level.
 - To account for different scenarios regarding the electrification of road traffic, the government must be prepared to gradually further adjust fuel taxes and/or the reduction obligation, so that fossil fuel use decreases in the way needed to comply with the EU climate legislation.
2. The government should investigate and propose which additional fossil fuel use under ESR – beyond the mandatory categories – should be covered by the new ETS2 emissions trading system.
 3. Sweden should use the opportunity to transfer emission space from ETS1 to the ESR sector. The transferred space can either be used to reduce the need for measures in the ESR sectors (including the road transport sector and off-road machines) or left unused (in order to reduce EU net emissions more than what follows from Union legislation). The measure would reduce the Swedish revenue from the auctioning of emission allowances.
 4. Sweden should try to purchase ESR space from other member states in advance of 2030. The transferred emission space can either be used to reduce the need for national measures in the ESR sectors (including the road transport sector) or left unused (in order to tighten EU policy). This measure will negatively impact the government’s budget.
 5. Develop a program to limit greenhouse gas emissions from agriculture and livestock farming.

Removals Budget

Implement reforms of the national forest and conservation policies that ensure compliance with the national environmental quality goal “Living Forests”. If successful, considerable climate benefits in the form of growing carbon stocks, will appear without additional costs.

Urgently develop and implement incentives for increasing the carbon stocks in forest land, agricultural land, and wetlands, as well as in timber constructions.