EU Emissions Trading System (EU ETS)

General Information

Summary	**Status:** ETS in force **Jurisdictions:** Member states: 28 EU Member States and three European Economic Area-European Free Trade Association (EEA-EFTA) states: Iceland, Liechtenstein and Norway The European Union Emissions Trading System (EU ETS) is the world's first GHG ETS and represents the central pillar of the European Union's (EU) climate change policy. After more than two years of negotiations on the legislative proposal to revise the EU ETS for Phase four (2021-2030), on 27 February 2018 the Council of the European Union formally approved the reform of the EU ETS for the period after 2020. The revisions include a faster annual decrease of the cap (2.2%, compared to 1.74% currently), in order to contribute to the EU's 2030 target to reduce GHG emissions by at least 40% domestically by 2030. Furthermore, the agreed changes will further strengthen the EU ETS, by doubling the pace at which surplus allowances are removed from the market and placed in the Market Stability Reserve (MSR) until 2023; provide free allowances to industries at risk of carbon leakage under robust rules; and strongly support low-carbon innovation, as well as modernization of the energy sector in lower-income EU countries. Alongside the Phase four negotiations, the EU ETS Directive has also been amended to maintain limitations to the geographic scope of aviation coverage to flights within the European Economic Area (EEA) until 2023, while the rules for a global deal on mitigation from the aviation sector are drafted under the International Civil Aviation Organization (ICAO). A new review should take place in the light of the international developments, with a view to implement the global scheme in Union Law. Furthermore amendments were made to the EU ETS Registry Regulatio to ensure the stability of the EU ETS, should the United Kingdom exit the EU without an agreement (so-called "Hard Brexit"). In late 2017, the EU and Switzerland came closer to linking their carbon markets. In November, an agreement was signed between the EU and Switzerland. The link will be operational once the linking agreement has been ratified by both sides, and all criteria of the linking agreement have been met. This is likely to be by 1 January 2020. European Commission Website on the EU ETS Official EU ETS Fact Sheet 2013 Consolidated version of the EU ETS Directive Information on the EU ETS in the previous phases (2005-2012)
Overall GHG emissions (excluding LULUCF)	**Emissions:** 4,367 $MtC0_2e$ (2015) Aggregation of data from the National Inventory Reports (NIRs) 2013 submitted to the UNFCCC and accessed via the EEA Greenhouse Gas Data Viewer: 27 EU Member States (4,550 MtCo2e), Croatia (28.256 MtCO2e), Iceland (4.413 MtCO2e), Lichtenstein (0.22 MtCO2e) and Norway (53.4 MtCO2e). Data bases mostly on 1996 IPCC guidelines and on the

	IPCC Good Practice Guidances. Please refer to the respective NIRs for detailed information on methodologies used for emissions reporting.
Overall GHG emissions by sector	Sector Name / MtCO2e Energy 3399.4 Industrial Processes 384.4 Agriculture 441.9 Waste 140.8
Overall GHG reduction target	**By 2020:** -20% below 1990 GHG levels **By 2030:** at least -40% below 1990 GHG levels **By 2050:** EU leaders have committed to reducing emissions by 80-95% below 1990 GHG levels
Type of ETS	Mandatory
Cap and trajectory	**Type of Cap:** Absolute **Phases one and two (2005-2012):**Decentralized cap-setting, the EU cap resulted from the aggregation of the National Allocation Plans of each Member State. **Phase three (2013-2020):**Single EU-wide cap for stationary sources: 2,084 MtCO2e in 2013, which will be annually reduced by a constant linear reduction factor (currently 1.74% of the midpoint of the cap in phase 2 or around 38.3 million tons). Aviation sector cap: 210 MtCO2e/year for 2013-2020 (not decreasing). However, following the temporary derogation of obligations related to flights to and from third countries until the end of 2016, the issuance of allowances has been adjusted accordingly. **Phase four (2021-2030):**A Linear Reduction Factor of 2.2% annually for both stationary sources and the aviation sector. The linear reduction factor does not have a sunset clause and as such the cap will continue to decline beyond 2030.
Carbon Price	*Current Allowance Price (per t/CO2e):* EUR 9.68 (approx. USD 11.92) (clearing price at aution as of 23 February 2018)

ETS Size

Emissions covered by the ETS	0.45
GHG covered	CO2, N2O, PFCs
Sectors covered and thresholds	**Phase one (2005-2007):**Power stations and other combustion installations with >20MW thermal rated input (except hazardous or municipal waste installations), industry (various thresholds) including oil refineries, coke ovens, iron and steel plants and production of cement, glass, lime, bricks, ceramics, pulp, paper and board. **Phase two (2008-2012):**In addition to Phase one sectors, aviation was introduced in 2012 (>10,000 t CO2/year for commercial aviation; >1,000 t CO2/year for non -commercial aviation since 2013) (see below). **Phase three (2013-2020):** In addition to Phase two sectors, CCS installations, production of petrochemicals, ammonia, non-ferrous and ferrous metals, gypsum, aluminum, nitric, adipic and glyoxylic acid (various thresholds) were included – see Annex I of the EU ETS Directive. **Phase four (2021-30):**No changes to the scope are envisaged for Phase four compared to Phase three. **International Aviation:** Emissions from international aviation have been included in the EU ETS since 2012. In November 2012, the EU temporarily suspended enforcement of the EU ETS requirements for extra-EU flights operating from or to non-European countries (so-called “stop the clock”), while continuing to apply the legislation to flights within and

	between countries in the EEA. Exemptions for operators with low emissions have also been introduced. In light of the progress made under ICAO towards a global measure to reduce emissions from the aviation sector (the Carbon Offsetting and Reduction Scheme (CORSIA)), the EU has maintained the intra-EEA scope for the ETS Aviation until 31 December 2023. A further review and assessment will be carried out once there is clarity surrounding the content and nature of CORSIA as well as the extent of participation by Europe's international partners.
Number of liable entities	More than 11,000 power plants and manufacturing installations. Aircraft operators are covered for all flights. However, a temporary exemption applies to flights between the EEA and a third country. In the EU ETS, liable entities are defined at the installation level. Installation is defined in the EU ETS Directive as: "a stationary technical unit where one or more activities listed in Annex I are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution". (Article 3 (e)) In addition, liable entities in the aviation sector are defined at the level of aircraft operator as: "person who operates an aircraft at the time it performs an aviation activity listed in Annex I or, where that person is not known or is not identified by the owner of the aircraft, the owner of the aircraft" (Article 3 (o))
Point of regulation	Downstream

Phases & Allocation

Compliance period	From 1 January until 30 April the following year (16 months)
Trading period	**Phase one:** Three years (2005-2007) **Phase two:** Five years (2008-2012) **Phase three:** Eight years (2013-2020) **Phase four:** Ten years (2021-2030)
Allocation	**Phase one (2005-2007):** Nearly 100% free allocation through grandfathering. Some Member States used auctioning and some used benchmarking. **Phase two (2008-2012):** Similar to Phase one with some benchmarking for free allocation and some auctioning in eight EU Member States (about 3% of total allowances). **Phase three (2013-2020):** Over the entire trading period (2013-2020), 57% of allowances will be auctioned, while the remaining allowances are available for free allocation. **Electricity sector:** 100% auctioning with optional derogation for the modernization of the electricity sector in certain Member States. In line with the 2030 framework for climate and energy, Member States with a GDP per capita in 2013 below 60% of the EU average may continue to make use of this optional free allocation in Phase four. **Manufacturing sector:** Free allocation is based on benchmarks. Sub-sectors deemed at risk of carbon leakage will receive free allocations at 100% of the pre-determined benchmarks. Sub-sectors deemed not at risk of carbon leakage will have free allocation phased out gradually from 80% of the benchmarks in 2013 to 30% by 2020. **Aviation sector:** In 2012, 85% of allowances were allocated for free based on benchmarks. For Phase three: 15% of allowances are auctioned and 82% allocated for free based on benchmarks. The remaining 3% constitutes a special reserve for new entrants and fast growing airlines. As a consequence of the temporary derogation applying to flights with third countries, the allocation is adjusted to the intra-EEA scope. **Back-loading:** Taken as a short term measure to address a growing surplus in the EU ETS, it was agreed to postpone the auctioning of 900 million allowances until 2019-2020. Auction

volumes were reduced by 400 million allowances in 2014, 300 million in 2015, and by 200 million in 2016. In line with the decision to create an MSR, the back-loaded allowances will not be auctioned but be placed directly in the MSR.

New Entrants Reserve:5% of the total allowances are set aside to assist new installations coming into the EU ETS or covered installations whose capacity has significantly increased since their free allocation was determined.

Phase four (2021-2030): One of the central components of the Phase four revision package is to ensure the declining number of free allowances is distributed in the most effective and efficient way. To this end, in Phase four:

· Benchmark values will be updated twice during the phase to reflect technological progress in the different sectors.

· Free allocation may be updated annually to mirror sustained changes in production (if the change is more than 15% compared to the initial level, on the basis of a two-year rolling average).

· Carbon leakage rules will be more robust, as the number of sectors classified at risk of carbon leakage will be reduced, and the free allocation for other sectors will be discontinued by 2030 (except district heating).

· As an additional safeguard for industry, the agreement foresees a "free allocation buffer" of over 450 million allowances initially earmarked for auctioning, to be made available if the initial free allocation is fully absorbed (thereby avoiding or reducing a correction factor).

In addition, two new multi-billion Euro funds will be established to help the industry and the power sectors meet the innovation and investment challenges of the transition to a low-carbon economy.

The Innovation Fund: For the demonstration of innovative technologies to breakthrough innovation in industry, as well as carbon capture and storage/use and renewable energy.

The Modernization Fund: Facilitating investments in modernizing the energy systems and supporting energy efficiency in ten lower-income Member States, including investments to support a socially just transition to a low-carbon economy (such as retraining for affected workers).

Flexibility

Banking and borrowing	Unlimited banking is allowed since 2008. Borrowing is not allowed.
Offsets and credits	**Phase one (2005-2007):** Unlimited use of Clean Development Mechanism (CDM) credits and Joint Implementation Credits (JI) was provided for in the Directive. In practice, no credits were used in Phase One. **Phases two (2008-2012) and three (2013-2020):** **Qualitative limit:** Most categories of CDM/JI credits are allowed (restrictions vary across different EU Member States), no credits from the land use, land-use change and forestry (LULUCF) and nuclear power sectors. Strict requirements apply for large hydro projects exceeding 20 MW. Since the start of Phase three (1 January 2013), additional restrictions apply for CDM: newly generated (post-2012) international credits may only come from projects in Least Developed Countries (LDCs). Projects from industrial gas credits (projects involving the destruction of HFC-23 and N2O) are excluded regardless of the host country. Credits issued for emission reductions that occurred in the first commitment period of the Kyoto Protocol are no longer accepted as of 31 March 2015.ommitment period of the Kyoto Protocol are no longer accepted as of 31 March 2015.

	Quantitative limit: In Phase two (2008-2012), operators were allowed to use JI and CDM credits up to a certain percentage limit determined in the respective country's National Allocation Plans. Unused entitlements were transferred to Phase three (2013-2020). The total use of credits for Phase two and three may amount up to 50% of the overall reduction under the EU ETS in that period (approximately 1.6 billion tons CO2e). **Phase four (2021-2030):** Currently no international offsets are envisaged.
Provisions for price management	The EU ETS Directive provides for measures in the event of excessive price fluctuations. In 2015, a decision to create a MSR was adopted, a structural measure addressing the large accumulated allowance surplus, which depressed the allowance price in recent years. The MSR, which will start operating in January 2019, aims to neutralize the negative impacts of the existing allowance surplus and to improve the system's resilience to future shocks. Allowances will be added to the reserve if the total number of allowances in circulation is higher than 833 million allowances and re-injected to the market if the number of allowances in circulation falls below 400 million. As part of the decision, the 900 million back-loaded allowances, which were withdrawn from auctions from 2014-2016, and for the time being an unknown amount of unallocated allowances, will be placed directly into the reserve. Revisions to the MSR have also been agreed as part of the Phase four reform. Specifically, the feeding rate will increase from 12% to 24% for the first five years of operation. Additionally, the number of allowances that can accrue in the MSR will be limited to the previous year's auction volume from 2023 onwards.

Compliance

Monitoring, Reporting, Verification (MRV)	**Reporting frequency:**Annual self-reporting based on harmonized electronic templates prepared by the European Commission. **Verification:** Verification by independent accredited verifiers is required before 31 March each year. **Framework:** For Phase three onwards, European Commission Regulations have been published for monitoring and reporting, and for verification and accreditation of verifiers. A monitoring plan is required for every installation and aircraft operator (approved by competent authority).
Enforcement	Entities must pay an 'excess emissions penalty' of EUR 100/tCO2 emitted for which no allowance has been surrendered in due time. The name of the non-compliant operator is also published. Different penalties exist at the national level for other forms of non-compliances.

Other Information

Institutions involved	The European Commission and the relevant authorities of the 28 Member States, Iceland, Liechtenstein, and Norway.
Linkage with other schemes	The European Commission has concluded negotiations with Switzerland on linking the EU ETS with the Swiss ETS. In November 2017, the European Union and Switzerland signed the Agreement to link their ETS. The link will become operational on 1 January of the year following ratification and completion of all requirements under the linking agreement.

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