International Carbon Action Partnership
ETS Detailed Information

Korea Emissions Trading Scheme

General Information

Summary	**Status:** ETS in force **Jurisdictions:** Republic of Korea The Korean Emissions Trading System (KETS) was launched on 1 January 2015, becoming East Asia's first nationwide mandatory ETS and the second-largest carbon market after the EU ETS. The ETS covers 591 of the country's largest emitters, which account for ~68% of national GHG emissions. It covers direct emissions of six Kyoto gases, as well as indirect emissions from electricity consumption. The KETS was designed to play an essential role in meeting Korea's 2030 NDC target of 37% below BAU emissions. The KETS is backed up by solid legal bases. The first and highest legal base for green growth and implementation of KETS is the 'Framework Act on Low Carbon, Green Growth' (2010). The 'Act on Allocation and Trading of Greenhouse Gas Emissions Allowances' (the 'Emissions Trading Act') and its Enforcement Decree were passed in 2012; it stipulates government actions, institutions, and timelines for KETS. Further details of the KETS were outlined in 2014 in a Master Plan (a ten-year plan for 2015-2024) and Allocation Plan. A mandatory GHG and Energy Target Management System (TMS) launched in 2012 (following a two-year pilot phase started in 2010), which enabled the collection of verified emissions data and training in the MRV process of TMS entities.
Year in Review	Key changes for the second phase in 2018 include: (i) an expansion of benchmark-based allocation; (ii) the introduction of 3% auctioning (for non-EITE entities); (iii) new banking rules; and (iv) the permitted restricted use of international credits. Although auctioning was originally set to begin in 2018, this was delayed to 2019. The first regular auction of allowances took place in January 2019. Auction rules were outlined in a guidance document released in March 2018. In addition, entities can now use international offset credits that have been developed by Korean companies to meet up to 5% of their compliance obligation. Measures were taken to address liquidity concerns and increase trade activity. On 1 June 2018, 30 days before the 2017 compliance deadline, the Korean government auctioned an additional 5.5 million allowances from the market stability reserve. The Export-Import Bank, the Korea Development Bank, and the Industrial Bank of Korea are also now in consultation to participate as market makers in the KETS.
Overall GHG emissions (excluding LULUCF)	**Emissions:** 694.1 $MtC0_2e$ (2016)
Overall GHG emissions by sector	Sector Name — MtCO2e Fuel combustion (excl. Transport) — 502.2 Transport — 98.7 Fugitive emissions — 3.9 Industrial processes — 51.5

	Sector Name — MtCO2e Agriculture — 21.2 Waste — 16.5
Overall GHG reduction target	**BY 2020:** 30% below BAU (Copenhagen Accord target) **By 2030:** 37% below BAU (536 MtCO2e), which represents a 22% reduction below 2012 GHG levels (NDC); 38 million international credits* may be used towards achieving this goal (2030 GHG mitigation roadmap) *This includes international credits through the KETS, as well as alternative options, including LULUCF and other international credits (i.e. Article 6 under the Paris Agreement).
Carbon Price	*Current Allowance Price (per t/CO2e):* KRW 22,692 (USD 20.62) (average secondary market price in 2018; updated prices available here)

ETS Size

Emissions covered by the ETS	0.7
GHG covered	CO2, CH4, N2O, PFCs, HFCs, SF6
Sectors covered and thresholds	**PHASE ONE (2015-2017):** 23 subsectors from the following six sectors: power, industry (e.g., iron and steel, petrochemical, cement, oil refinery, nonferrous metals, paper, textile, machinery, mining, glass and ceramics, etc.), building, public, waste, and transportation (i.e., aviation). **PHASE TWO (2018-2020):** According to the Allocation Plan, the public and waste sectors are disaggregated such that the KETS covers the following six sectors: heat and power, industry, building, transportation, waste sector, and public. These sectors are disaggregated into 64 subsectors. **INCLUSION THRESHOLDS:** company >125,000 tCO2/year, facility >25,000 tCO2/year
Point of regulation	Downstream Both direct and indirect emissions are covered under the KETS.
Number of liable entities	610 (2019) No information available yet.
Cap	**PHASE ONE (2015-2017):** 1,686 MtCO2e, including a reserve of 89 MtCO2e for market stabilization measures, early action, and new entrants. 84.5% of reserve (76MtCO2e) are used. 2015: 540 MtCO2e; 2016: 560 MtCO2e; 2017: 567 (including early reduction and additional allowances) MtCO2e. **PHASE TWO (2018-2020):** 1,796 MtCO2e, including 14 million allowances for market stabilization, five million for market markers, and 134 million for new entrants and other purposes.* 2018: 548 MtCO2e; 2019: 548 MtCO2e; 2020: 548 MtCO2e. *The competent authority expects the actual cap to be 1,777 MtCO2e, considering that not all the reserves would be used.

Phases & Allocation

Trading period	**PHASE ONE:** 3 years (2015-2017) **PHASE TWO:** 3 years (2018-2020) **PHASE THREE:** 5 years (2021-2026)
Allocation	**PHASE ONE (2015-2017):** **Free Allocation:** 100% free allocation. Most sectors received free allowances based on the average GHG emissions of the base year (2011-2013). Three sectors (grey clinker, oil refinery, and aviation) were allocated free allowances following benchmarks based on previous activity data from the base year (2011-2013). During Phase One, ~5% of total allowances were retained in a reserve for market stabilization measures (14 MtCO2e), early action (41 MtCO2e), and other purposes including new entrants (33 MtCO2e). In addition, unallocated allowances and withdrawn allowances were transferred to the reserve. **PHASE TWO (2018-2020):** **Free Allocation:** 97% free allowances; in some subsectors entities have an obligation to get 3% of their compliance obligation from auctions. **Auctioning:** <3% auctioned. Auctioning is determined on the sub-sector level, with an obligation acquire 3% of allowances at auctions, with the exception of sub-sectors that have high trade intensity or high additional cost increases, considering international competitiveness and carbon leakage. Sectors that participate in auctions include, among others, entities from the electricity, domestic aviation, wooden product and metal foundry sectors. While auctioning was scheduled to start in 2018, it has been delayed to the beginning of 2019. Participation in auctions is subject to some limitations. Only companies that do not receive all their allowances for free will be eligible to bid, with a list of eligible bidders published by the Ministry of Environment. No one bidder can purchase more than 30% of the allowances of one auction. The auctions will be subject to a minimum price. KETS held its first auction in January 2019. Seven companies participated with the bidding price ranging from KRW 23,100 (USD 20.99) to KRW 27,500 (USD 24.98). Four companies successfully bid for all available allowances (550,000 KAUs) for a settlement price of KRW 25,500 (USD 23.17). A total of 7.95 million tonnes are set to be auctioned on monthly basis this year, with 550,000 offered in the first, third and fourth quarters; a million tonnes per auction will be offered in the second quarter. **PHASE THREE (2021-2025):** **Free Allocation:** less than 90% free allowances. **Auctioning:** more than 10%. Energy-intensive and trade-exposed (EITE) sectors will receive 100% of their allowances for free in all phases. EITE sectors are defined along the following criteria: **(1)** Additional production cost of >5% and trade intensity of >10%; or **(2)** Additional production cost of >30%; or **(3)** Trade intensity of >30%.

Flexibility

Banking and borrowing	Banking is allowed with some restrictions across phases. From Phase One to Phase Two, banking is limited for each installation to 10% of the annual average allocation and 20,000 Korean Allowance Units (KAUs). The amount that exceeds the threshold is deducted from Phase Two allocation. From Phase Two to Phase Three, banking is limited to the higher of two limits: **(1)** the net annual amount of allowances sold in Phase Two; and **(2)** company- and facility-specific limits, of 250,000 KAUs and 5,000 KAUs respectively.

	Borrowing is allowed only within a single trading phase. In 2015, this was limited to 10% of an entity's obligation. This limit increased to 20% in 2016 and 2017. In the first compliance year of Phase Two (2018), borrowing was limited to 15% of an entity's obligation. From 2019, the borrowing limit will be affected by how much an entity has borrowed in the past via the following formula: [Borrowing limit of previous year-("borrowing ratio" in previous year x 50%)]/entity's emission volume.
Offsets and credits	**PHASE ONE (2015-2017)** **QUALITATIVE LIMIT:** Only domestic credits from external reduction activities implemented by non-ETS entities–and that meet international standards–could be used for compliance in this phase. Domestic CDM credits (CERs), and credits from domestically certified projects (Korean Offset Credits) were allowed. These credits had to be converted to Korean Credit Units (KCUs) of a specified vintage before being used for compliance. Eligible activities included those eligible under the CDM and Carbon Capture and Storage. However, only activities implemented after 14 April 2010 were eligible. As of December 2017, 35 domestic and 211 CDM methodologies had been approved for use under the KETS. **QUANTITATIVE LIMIT:** Up to 10% of each entity's compliance obligation. **PHASE TWO (2018-2020)** **QUALITATIVE LIMIT:** In Phase Two, trades of CERs generated after 1 June 2016 from international CDM projects developed by domestic companies are allowed. CDM projects operated by Korean companies will be allowed when: **(1)** at least 20% of the ownership rights, operating rights, or the voting stocks are owned by a Korean company; **(2)** a Korean company sells or distributes more than 20% of the total project cost; or **(3)** the projects are funded by a Korean company with a national or regional government operating in a UN-designated Least Developed Country or a low-income economy as classified by the World Bank. Regulated entities must convert CDM credits (CERs) to KCUs in order to be used for compliance. **QUANTITATIVE LIMIT:** Up to 10% of each entity's compliance obligation (of which up to 5% for international offset credit). **PHASE THREE (2021-2025):** Rules are not yet clear.
Market Stability Provisions	**Auction Reserve Price:** Auctions for market stability will be subject to an auction reserve price that will be set by the following formula: "the average price over the previous three months + the average price of last month + the average price over the previous three days/3." **Allocation Committee:** An Allocation Committee is in place to implement market stabilization measures in particular cases: **(1)** The market allowance price of six consecutive months is at least three times higher than the average price of the two previous years. **(2)** The market allowance price of the last month is at least twice the average price of two previous years and the average trading volume of the last month is at least twice the volume of the same month of the two previous years. **(3)** The average market allowance price of a given month is smaller than 40% of the average price of the two previous years. In 2015 and 2016, the price threshold is KRW 10,000 (USD 9.09). **(4)** When it is difficult to trade allowances due to the imbalance of supply or demand. The stabilization measures may include: **(1)** Additional allocation from the reserve (up to 25%); **(2)** Establishment of an allowance retention limit: minimum (70%) or maximum (150%) of the allowance of the compliance year; **(3)** An increase or decrease of the borrowing limit; **(4)** An increase or decrease of the offsets limit; and **(5)** Temporary set-up of a price ceiling or price floor. In 2016, the Allocation Committee doubled the borrowing limit to 20% and an additional nine million allowances were auctioned at a reserve price of KRW 16,200 (USD 14.72) of which less than a third of allowances were sold. In 2018, the Committee made an additional 5.5 million allowances available from the stability reserve in an attempt to ease the market in the lead-up to the 2017 compliance deadline.

	The Export-Import Bank, the Korea Development Bank, and the Industrial Bank of Korea are also currently in consultation talks to participate as market makers in the KETS.

Compliance

Compliance Period	One year
Monitoring, Reporting, Verification (MRV)	**REPORTING FREQUENCY:** Annual reporting of emissions must be submitted within three months from the end of a given compliance year (by the end of March). **VERIFICATION:** Emissions must be verified by a third-party verifier. **OTHER:** Emissions reports are reviewed and certified by the Certification Committee of the Ministry of Environment (MOE) within five months from the end of a given compliance year (by the end of May). If the liable entity fails to report emissions correctly, the report will be disqualified.
Enforcement	The penalty shall not exceed three times the average market price of allowances of the given compliance year or KRW 100,000 (USD 90.85)/tonne.

Linking

Links with other Systems	Linkage is planned to be considered in Phase Three.

Other Information

Institutions involved	In 2016, overall responsibility for the KETS moved from the MOE to the Ministry of Strategy and Finance (MOST). On 1 January 2018, responsibility was transferred back to the MOE, while the MOST still chairs the Allocation Committee. Korea Exchange (Trading Platform). Greenhouse Gas Inventory and Research Center (Registry and technical support).
Evaluation / ETS review	No standardized evaluation process has been developed to date, but an analysis of the economic impact of the KETS is ongoing for the current phase.* *The method/modelling of the ongoing study is not yet open to the public.
Revenue	**Since beginning of program:** KRW 109.4 billion (USD 99.4 million) from market stability auctions.* In addition, KRW 14.03 billion (USD 12.74 million) from regular allowance auction.** **Collected in 2018:** KRW 104.9 billion (USD 95.31 million) * Auctions were held in 2016 and 2018 for reasons of market stability, rather than allocation. ** The first auction held for the purpose of allocating allowances took place in January 2019. The government has put forward possible options for the use of the revenues—such as supporting mitigation equipment projects, innovation, and technology development of ETS-covered entities. Specific rules on the use of revenues are yet to be decided.
Implementing Legislation	Framework Act on Low Carbon, Green Growth

Enforcement Decree of the Act on the Allocation and Trading of Greenhouse Gas Emissions Allowances

Act on the Allocation and Trading of Greenhouse Gas Emissions Allowances

First Master Plan for 2015-2024

Second Allocation Plan

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