

South Korea

2050: The Path to Net Zero

Governmental Policy, Legal Framework and Recent Developments

National Policy and Transition towards Carbon Neutrality

As part of his legacy, former President Jae-In Moon declared on October 28, 2020 the commitment by South Korea to achieve carbon neutrality status by 2050. Since the public pledge, the nation has made significant efforts and refined its climate governance requirements. In 2021, South Korea revised its *Nationally Determined Contribution* (“NDC”) to commit to a 40% reduction in greenhouse gas emissions by 2030 using base levels in 2018. In 2018, the country recorded 727.6 MtCO₂e that year and in accordance with the NDC commitments the country will work towards a reduction in greenhouse gas emissions to 436.6 MtCO₂e.

In April 2023, the South Korean government introduced the “First Basic Plan for Carbon Neutrality and Green Growth (2023–2042)” to further strengthen the commitment and implementation the carbon neutrality policy marking the first point in time in modern South Korea to roll-out a comprehensive roadmap for neutrality and sustainability (the “**First Basic Plan**”). The First Basic Plan covers the following key industries including energy; built environment/property; transportation; agriculture, livestock and fisheries; and waste management.

Policy and Legal Framework

Korea–Emissions Trading Scheme

The policy for carbon neutrality is based on the *Act on the Allocation and Trading of Greenhouse Gas Emissions Allowances* enacted in 2012 and the *Carbon Neutrality Framework Act* of 2021 which together provides the authority to operate a nationwide emissions trading scheme. The foregoing embodies what is referred to as the Korea-Emissions Trading Scheme (“K-ETS”).

In 2024 and currently, the K-ETS covers 816 of the largest entities as emitters across energy, industrial manufacturing, commercial and residential buildings, waste management, transportation and logistics, domestic aviation and maritime. The inclusion thresholds remain at $\geq 125,000$ tCO₂ e/year at the corporate level or $\geq 25,000$ tCO₂ e/year at the facilities level.

As part of the energy framework, South Korea also uses standard units of Korean Allowance Units (“KAU”), Korea Credit Units (“KCU”), Korea Offset Credit (“KOC”) as well as international variants for (“iKCU” and “iKOC”) – all of which exist for purposes of accountability, monitoring, trading, eligible offsets for carbon credits in the K-ETS (Korean compliance market)

South Korea operates an MRV system under the K-ETS. Covered entities must monitor and measure annual GHG emissions in accordance with Ministry of Environment (MOE) guidelines, have their emissions statements verified by an accredited third-party verifier, and submit the verified statement

electronically via the National GHG Management System (NGMS) to the Minister of Environment no later than March 31 of the following year. The MOE then reviews and certifies the submitted amounts (through the Emissions Certification Committee).

In addition, the Greenhouse Gas Inventory and Research Center (GIR) develops MRV guidelines, manages Korea's national GHG inventory, and operates the NGMS that houses emissions, verification and allocation data for the K-ETS.

The domestic market continues to develop with the support of banking but there remains limited borrowing, a developing use of offsets within quantitative limits, and auctions (with at least 10% participating in eligible subsectors). Nevertheless, it is expected that an increase in shares are set to rise along with financial intermediaries participating on the exchange of same.

Liquidity and banking rules have been eased (i.e., the carryovers relaxed; longer conversion periods for offsets, etc.) while auction volumes have adjusted dynamically based on bidding results during 2024–2025.

Fourth Basic Plan for the ETS (2026–2035) adopted (Dec 2024): significant auction share increases in high-emitting sectors, expanded benchmarking, market-stabilization mechanism, broader third-party participation, and Carbon Contracts for Difference.

Recent 2025 market reforms (implemented): On February 7, 2025, amendments to the K-ETS Act (Law No. 20229) and Enforcement Decree (Presidential Decree No. 35245) took effect, alongside aligned MOE Notices revising the K-ETS Trading Notice, establishing the broker-dealer regime for allowance intermediaries, and updating Exchange Supervision rules. These measures expand eligible market participants (e.g., compliance entities, market makers, broker-dealers, collective investment business entities, trustees, banks/insurers) and formalize consignment trading.

Consignment trading launch: Government guidance states 2H-2025 (with press guidance indicating November).

Banking (carry-over) limit: From June 2025, the carry-over cap is eased from 3x to 5x net sales; for KAU24, the carry-over application window runs July–August 2025.

Auctions: The MOE revised the 2025 annual auction plan on July 3, 2025 (MOE Notice 2025-456); monthly auction notices and results are posted by MOE and the KRX ETS portal (e.g., Aug-2025 auction result; last trading day for 2024-vintages on Aug 26, 2025).

MRV guidance: The MOE pre-noticed amendments on Jan 17, 2025 (MOE Notice 2025-31); a subsequent April 11, 2025 ministerial notice took effect on related provisions.



Financial Services Industry: Climate Risk Management Guidelines (2024)

Significant efforts have been made to ensure that financial institutions such as banks, securities firms, asset management companies and insurers are committed to the overall carbon neutrality efforts in South Korea with oversight by the Financial Services Commission (“FSC”) with the Financial Supervisory Service (“FSS”) as its supervisory arm, and the Bank of Korea (“BOK”). Over the course of 2024–2025, the foregoing financial authorities advanced climate-risk

supervision through joint climate stress-testing pilots administered by the FSS and the BOK where 14–15 financial institutions participated in the financial supervisory outreach.

Risk identification and assessment measures were implemented where financial institutions are now expected to identify and assess physical and transitional risks, including the conducting of stress tests and scenario analysis for quantitative analysis in relation to climate related operations.

The financial authorities have also promulgated certain climate related disclosures for international alignment where climate exposure drafts for the *Korean Sustainability Disclosure Standards* (“**KSDS**”) were put into effect in May 2024. The disclosure statements are based on those promulgated by the International Sustainability Standards Board (“**ISSB**”) consistent with IFRS S1/S2. Implementation is scheduled to occur in 2027; however, timing remains under review. These efforts build on the pillars under the Task Force on Climate-related Financial Disclosures (“**TCFD**”) – governance, strategy, risk management and metrics/targets.

In relation to governance practices, the frameworks above Climate Risk Management Guidelines and the regulatory oversight over directors and senior officers and executives through the governance pillar and supervisory expectations ensure that the overall management of financial institutions work towards the same goals on climate control and the net-zero policies.

Lastly, the government has engaged in the integration in assessing credit risks with respect to ESG consideration. The stress-testing efforts and emerging disclosure standards push integration of climate risk awareness and programs into core risk models as well as to market ESG analyses reference data such as pursuant to the TCFD/ISSB concepts where degree and pace vary by financial institution.

Green Loan Operational Guidelines

The basis of South Korea’s green classification system (“**K-Taxonomy**”) inception on December 12, 2024 on which date the FSC issued its *Administrative Guidelines on Green Finance* (the “**Green Finance Administrative Guidelines**”) to apply to K Taxonomy classifications in respect of loans and credits issued by financial institutions (including state policy finance institutions such as KDB, Korea Eximbank, IBK, KODIT and KIBO) and the private corporate sector aiming to curb *greenwashing* while ensuring transparency and that the market makes good faith efforts and implements actual policies in furtherance of carbon neutrality measures.

As part of the core requirements, K-Taxonomy defines green use of proceeds, sets internal controls (e.g., a “Green Credit Officer”), conduct conformity assessments against K Taxonomy classifications and standards, and supports public disclosures and issuance of certificates. The financial authorities have also signaled ongoing updates to K Taxonomy as it continues to evolve over time.

By illustration, the renewable energy, electric vehicle infrastructure, waste to energy systems, etc. are examples that are subject to and should be, consistent with K Taxonomy with the appropriate evidence in accordance with the K-Taxonomy pilot green bond issuance program. Annual impact reporting and the setting of KPIs are encouraged to monitor outcomes.

In order to strengthen such activities, third party review and verification are recommended to confirm credibility and reduce greenwashing risks under the Green Finance Administrative Guidelines.



Net Zero Strategies by Sector

Agriculture, Waste Management and Energy

South Korea adopted the 2030 Methane Emissions Reduction Roadmap (the “**Methane Emissions Roadmap**”), which sets a national target to reduce methane emissions by 30% by 2030 from 2020 levels—i.e., from 27.4 MtCO₂e (2020) to 19.1 MtCO₂e (2030)—with sectoral targets across waste, agriculture/livestock, and energy.

In particular with respect to livestock, the Methane Emissions Roadmap focuses on and has identified key quantitative levels for bio gasification and nutrient recycling of manure with tighter management to prevent untreated discharge of animal waste.

Food waste landfill bans and other measures have been implemented since 2005 including the requirement to separate the collection and recycling of food waste, landfill gas (methane) recovery, and improved treatment of sludge/leachate. In addition, key efforts have been made to phase out ocean dumping of sewage sludge since 2016. All such efforts are central to cutting waste sector methane.

In accordance with the Methane Emissions Roadmap, the government foresees an expansion in leak detection and repair (“**LDAR**”) systems and implementing cuts in fugitive emissions in gas systems.

Energy and Manufacturing

According to the 10th Basic Plan for Electricity Supply and Demand, South Korea plans to reduce coal-fired generation to ~19.7% and increase renewable energy sources to ~21.6% by 2030 (which includes nuclear energy ~32.4%; LNG ~22–23%; and hydrogen/ammonia ~2.1%). The 11th Basic Plan for Electricity Supply and Demand (completed February 21, 2025) adjusts long-term capacity trajectories to 2038 but does not reverse the 2030 shares.

The steel, petrochemical and cement industries are subject to the deployment of low-carbon technologies, electrification, and carbon capture, utilization and storage efforts (“**CCUS**”) in hard-to-abate processes; clean hydrogen introduction (e.g., Clean Hydrogen Power Bidding Market/Clean Hydrogen Power Systems launched 2024) and circular materials are now assigned as key pillars to carbon neutrality.

Commercial and Residential Buildings; Land Use

Commercial and residential buildings are now required to comply with the *Zero Energy Buildings (ZEB): Mandatory ZEB* requirements as they are being phased in to the regulatory framework with public buildings at ≥1,000 m² since 2020 (with heightened thresholds thereafter); increased thresholds from 2025, and additional standards to be applied from June 30, 2025 (e.g., ZEB Grade 5 requirements and revised performance/specification options). It is noted that large private developments are now also brought into scope on a phased basis.

Smart Green City initiatives have been rolled out with the aim to integrate climate-smart planning and expand urban carbon sinks. The *Creation and Management of Urban Forest Act* (2020) provides the legal basis for urban forests and related governance for the promotion through plants, forestry, etc.

Urban and regional planning alignment under the *Framework Act on Carbon Neutrality and Green Growth*, the *National Framework Plan for Carbon Neutrality and Green Growth* (2023–2042) are based on a 20-year horizon, (updated every five (5) years) functions as the upper-level plan for the planning scheme. Provincial and city governors must formulate and implement a 10-year plan every five years, taking into account and aligning with the National Framework Plan and regional policies.



Talk to us



Hailey Hye-In Jin
Senior Attorney
D +82 2 2262 6227
hyein.jin@dentons.com



John JungKyum Kim
Senior Foreign Attorney
D +82 2 2262 6400
john.jk.kim@dentons.com

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