



Korea Sets 2035 Target to Cut Greenhouse Gas Emissions by 53% to 61% from 2018 Levels

- Fifth plenary meeting of the 2050 Presidential Commission on Carbon Neutrality and Green Growth chaired by Prime Minister Kim Min-seok
- Deliberation and approval of five major policies for advancing toward a carbon-neutral society, including the 2035 Nationally Determined Contribution (NDC) and the National Emissions Allowance Allocation Plan for the fourth planning period

□ The Presidential Commission on Carbon Neutrality and Green Growth (Commission) held its 5th plenary meeting on Monday, November 10, at the Government Complex Seoul, presided over by Prime Minister Kim Min-seok.

○ The Commission* is a public-private joint deliberative and decision-making body that reviews major policies and plans for national climate crisis response and carbon neutrality implementation, and inspects and evaluates their execution.

* To be renamed to the “National Climate Crisis Response Commission” from January 1, 2026.

□ The meeting was convened to discuss national strategies and policies for responding to the climate crisis, including the draft 2035 Nationally Determined Contribution (NDC)* and the National Emissions Allowance Allocation Plan for the fourth planning period.

* A national greenhouse gas reduction target that each country independently determines and announces every five years under the 2015 Paris Agreement (submitted to the UN every five years).

- Prime Minister Kim Min-seok noted that this year marks a critical juncture for making a full-fledged leap toward a carbon-neutral society through green transition and renewable energy expansion, as well as for achieving the 2030 NDC.
- He emphasized the importance of establishing a responsible and achievable 2035 NDC and formulating the National Emissions Allowance Allocation Plan for the fourth planning period.
- He stated that beyond setting the 2035 NDC, all ministries will work together to establish funding measures and comprehensive support strategies necessary to achieve the goal, thereby laying the foundation for realizing carbon neutrality by 2050.
- He urged each ministry to thoroughly establish and implement concrete action plans, and asked the Commission to continuously monitor the implementation process and carefully review any areas that may require improvement or supplementation.
- The government presented reports on the following items: the draft 2035 NDC, the draft National Emissions Allowance Allocation Plan for the fourth planning period, the amendment to the National Emissions Allowance Allocation Plan for the third planning period, the draft First Basic Plan for Climate and Climate Change Monitoring and Prediction, and the results of the 2024 policy task implementation review.
- Based on prior reviews conducted through its subcommittees, the Commission held extensive discussions and approved all items as originally proposed.
- The specific details of each agenda item deliberated and approved at the meeting are as follows.

- Under the Paris Agreement, each country is required to establish its own 2035 NDC and submit it to the United Nations (UN) by the end of 2025.
- The Korean government has been working on formulating the 2035 NDC since last year in 2024 and held six public forums from September 19 to October 2 in 2025, followed by a public hearing on November 6.
- At the meeting, the government set the 2035 NDC to reduce national greenhouse gas net emissions by 53% to 61% compared to the 2018 level of 742.3 million tonCO₂ eq.
 - This target was established by comprehensively considering the urgency of responding to the climate crisis, the recommendations of the Intergovernmental Panel on Climate Change (IPCC)*, the intent of the Constitutional Court's August 2024 decision of unconstitutionality, the mitigation burden on future generations, and the circumstances of the industrial sector.
 - * To limit the rise in global temperature to below 1.5°C compared to pre-industrial levels, a global reduction target of 60% from 2019 levels was recommended in 2023.
 - Considering Korea's industrial structure centered on greenhouse gas-intensive manufacturing and the practical feasibility of reduction technologies, the target for the industrial sector has been adjusted to a 24.3% decrease from 2018 levels. However, the government plans to promote structural improvement in the industry by expanding support for the development of reduction technologies and introducing transition finance, among other comprehensive support measures.
 - * [Reduction rate from 2024 to 2035, based on the 53% target] Power generation: -7.9%, transportation: -7.9%, buildings: -5.2%, industry: -1.6%
- Unlike the previous 2030 NDC, which presented a single target, the 2035 NDC was established as a range, taking into account future uncertainties such as technological advancement, aligning with the approach adopted by major countries including the EU, Australia, Brazil, and Canada.

- The lower-end target was set in connection with regulatory measures such as the Emissions Trading Scheme, while the upper-end target was established to reflect the direction Korea should pursue and the expectations of future generations, on the premise of significantly expanded government support, innovative technological development, and structural transformation of industry.

- Meanwhile, in response to opinions that past targets appeared higher because baseline-year emissions were calculated as total emissions while target-year emissions were calculated as net emissions (total emissions minus carbon absorption), the 2035 NDC has standardized both baseline-year and target-year emissions as net emissions, applying the latest statistical standard (2006 IPCC Guidelines).

< Change in Method of Calculating Targets >

2030 NDC	Previous statistical standard (1996 IPCC Guidelines)		Reduction rate 40%	⇒	2035 NDC	New statistical standard (2006 IPCC Guidelines)		Reduction rate 53%-61%
Baseline year (2018)	Total emissions	727.6			Baseline year (2018)	Total emissions	783.9	
	Net emissions	686.3				Net emissions	742.3	
Target year (2030)	Net emissions	436.6			Target year (2035)	Net emissions	348.9 289.5	

- The main sector-specific targets for achieving the 2035 NDC are as follows.

- In the power sector, the government will expand renewable energy supply by strengthening the power grid through initiatives such as building an “energy superhighway” and gradually reducing coal and other fossil fuel-based power generation, targeting a reduction of 68.8% (59.6%) to 75.3% (67.9%) compared to 2018 (2024) levels.
- In the industrial sector, based on intensive innovation support, the government aims to achieve decarbonization of fuels and raw materials, electrification of processes, and expansion of low-carbon product manufacturing, targeting a reduction of 24.3% (16.7%) to 31.0% (24.0%) compared to 2018 (2024) levels.

- In the building sector, the government aims to reduce emissions by 53.6% (44.5%) to 56.2% (47.7%) compared to 2018 (2024) levels through the expansion of zero-energy buildings, green remodeling, and the electrification of heat supply.
 - In the transportation sector, emissions will be reduced by 60.2% (59.7%) to 62.8% (62.3%) compared to 2018 (2024) levels through the expansion of electric and hydrogen vehicle adoption, improvements in internal combustion engine fuel efficiency, and the promotion of public transportation.
 - In addition, the government plans to strengthen greenhouse gas reduction and carbon absorption by expanding energy recovery facilities for improved livestock manure treatment, minimizing waste generation and expanding recycling, increasing hydrogen production through water electrolysis, promoting eco-friendly forest management and the use of domestic timber, and advancing the development and commercialization of carbon capture, utilization, and storage (CCUS) technologies.
- The government plans to finalize the draft 2035 NDC after deliberation and approval at the Cabinet meeting on November 11, and to officially announce it at the 30th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP30), to be held in Belém, Brazil, from November 10 to 21. The finalized 2035 NDC will then be formally submitted to the UN within the year.
- In addition, as a follow-up to the establishment of the 2035 NDC, the government announced that it will, in cooperation with relevant ministries and the industrial sector, develop by the first half of next year the Korea Green Transformation (K-GX) plan, which will include detailed implementation tasks for fostering green industries such as solar power, wind power, power grids, energy storage systems (ESS), electric vehicles, batteries, and heat pumps.

Draft National Emissions Allowance Allocation Plan for the Fourth Planning Period

- The second agenda item was the Draft National Emissions Allowance Allocation Plan for the Fourth Planning Period (2026–2030), which outlines specific details such as the total emission allowance and the proportion of paid allocations to be applied to the Emissions Trading Scheme (ETS) during the fourth planning period (“Phase 4”), beginning next year.

* A system that allows each company to emit greenhouse gases within the quantity of emission allowances allocated by the government, while enabling them to buy or sell surplus or insufficient allowances in the market.

- In December 2024, the government established the Basic Plan for the Fourth Emissions Trading Scheme, which set forth the overall direction. This year in 2025, following consultations with relevant ministries and the collection of public opinions, the government prepared the draft allocation plan for Phase 4. It will be finalized after deliberation and approval by the Commission on November 10 and by the Cabinet on November 11.

- The current emissions trading market has faced criticism for failing to fulfill its original purpose of encouraging reductions through market mechanisms, as the surplus of emission allowances has reached record highs, leading to record-low allowance prices.

※ ▲ (Surplus allowances) Estimated at 147 million tons as of the end of Phase 3 ▲
(Allowance price) Approximately KRW 10,000 (as of November 2025)

- Accordingly, the government has made every effort to formulate the Phase 4 allocation plan that both promotes the achievement of the 2030 NDC and reflects the reduction conditions and industry-specific characteristics of the industrial sector, by collecting opinions from a wide range of stakeholders, including industry, civil society, and emissions trading

market experts.

- Accordingly, the government decided to raise the paid allocation ratio for the power generation sector to 50% by 2030, with a gradual increase reflecting implementation conditions. The government also announced plans to reinvest all additional revenue generated from the higher paid allocation ratio into projects supporting corporate decarbonization transitions, thereby expanding overall support.

* (2021–2025, Phase 3) 10% → (2026) 15% → (2027) 20% → (2028) 30% → (2029) 40% → (2030) 50%

- In addition, for most industries with a high export share, such as steel, petrochemicals, cement, oil refining, semiconductors, and displays*, which together account for 95% of the industrial sector, the government will maintain 100% free allocation in consideration of international competitiveness. For the remaining 5% of non-power industries, the paid allocation ratio will be raised modestly from the current 10% to 15%, taking into account the commercialization timeline of reduction technologies. As a result, approximately 89% of the total allowances for the fourth planning period will effectively be allocated free of charge**.

* Carbon leakage–exposed industries (Phase 4): steel, nonferrous metals, petrochemicals, cement, oil refining, semiconductors and displays, secondary batteries, paper manufacturing, glass, rubber and plastic manufacturing, pharmaceuticals, and grain processing.

** (Proportion of free allocations out of total pre-allocated allowances) Phase 3: 96.0% → Phase 4: 89.0%

- Taking into account the 2030 NDC and the surplus of allowances remaining from Phase 3, the total emission cap for the fourth planning period has been set at 2.5373 billion tons. A linear reduction pathway has been applied to reach the 2030 target emission level, ensuring alignment with the 2030 NDC goal.

- In addition, in accordance with the Basic Plan for the Fourth Emissions

Trading Scheme (December 2024), a total of 85.28 million tons has been set aside within the overall emission cap as a Market Stability Reserve (MSR)*. This reserve will be used to operate the newly introduced Korean-style Market Stability Reserve system (K-MSR). Through this mechanism, the government aims to prevent sharp fluctuations in emission allowance prices and maintain market stability, thereby ensuring a stable environment for companies to invest in emission reduction efforts.

* A system that adjusts the supply of emission allowances by releasing reserves in response to increased demand due to economic fluctuations or by reducing the volume of paid allocation auctions to decrease supply.

□ Meanwhile, the Phase 4 allocation plan also reflects corporate feedback regarding the operation of emission allowances. To enhance flexibility, the government has eased the criteria for allowance carryover and expanded borrowing limits*, while maintaining the offset allowance ratio at the Phase 3 level (5% of the total submitted allowances).

* ▲ (Carryover) Companies with surplus allowances may carry over up to 6–10 times their net sales volume per compliance year in Phase 4, compared to 2–5 times in Phase 3.

▲ (Borrowing) The borrowing limit has been increased from 15% in Phase 3 to 30% in Phase 4, based on the first compliance year.

□ To reflect the opinions of stakeholders such as the industrial sector in the formulation of the Phase 4 allocation plan, the government held a total of 16 meetings, including sector-specific consultations, public hearings, and briefing sessions, between April and September of this year. Reasonable proposals related to industry-specific characteristics* that were submitted during this process were actively accepted. Through these efforts, the government aims to enhance the fairness of the system and strengthen companies' capacity to comply with it.

* (Example) ▲ Steel: Incentives will be applied for benchmark (BM) allocation to new low-carbon processes, such as electric furnace facilities for molten iron blending in blast furnaces.

▲ (Semiconductors and displays): The BM (benchmark) allocation method will be differentiated to account for process differences among industries, such as the types and ratios of F-gases and N₂O used.

▲ (Oil refining) The BM coefficient has been updated to reflect the effects of fuel conversion achieved so far. ▲ Power consumption: Updated the emission factor for electricity.

3

Amendment to the National Emissions Allowance Allocation Plan for the Third Planning Period

- As a follow-up measure to the correction* of national greenhouse gas statistics for the power generation sector made in December of last year, the government will partially amend the National Emissions Allowance Allocation Plan for the Third Planning Period (2021–2025) to adjust the excess allocation of 25.2 million tons from the total emission allowance for the transformation (power generation) sector in Phase 3.

* Recalculation of national greenhouse gas emissions for 2016–2022 following energy statistics correction

- However, considering that the excess allocation in Phase 3 was not the fault of the power generation companies, the government plans to proceed with the adjustment process by actively incorporating the opinions of power producers gathered through consultations, public hearings, and other meetings held to date.

4

Establishment of the First Basic Plan for Climate and Climate Change Monitoring and Prediction

- The First Basic Plan for Climate and Climate Change Monitoring and Prediction was jointly developed by relevant ministries* under the Act on the Observation and Prediction of Climate and Climate Change, to support carbon neutrality and climate crisis response policies based on climate science.

* Korea Meteorological Administration (lead agency); Ministry of Science and ICT;

Ministry of Agriculture, Food and Rural Affairs; Ministry of Climate, Energy and Environment; Ministry of Oceans and Fisheries; Rural Development Administration; Korea Forest Service; and Korea Disease Control and Prevention Agency

- Through the established Basic Plan, the government will identify key climate variables suited to its national conditions (around 100 indicators such as atmospheric greenhouse gas concentrations, temperature, and precipitation) and build a three-dimensional observation system utilizing satellites, ships, and aircraft. By strengthening monitoring and observation, the government aims to establish a climate monitoring system that meets international standards.
- In addition, to effectively respond to climate disasters that have become a part of daily life, the government will develop a National Climate Prediction System capable of forecasting up to 10 years ahead (currently providing 1- and 3-month outlooks). It will also produce a National Standard Climate Change Scenario projecting up to 100 years into the future, thereby providing a more comprehensive and consistent climate information service to support coherent climate policy implementation.
 - In particular, the government plans to strengthen support for climate crisis adaptation across various sectors by advancing climate prediction technologies through the use of artificial intelligence (AI).
- In addition, the government will strengthen the monitoring and prediction of climate change impacts closely related to people's lives, such as food security, disease, floods, and droughts, and develop monitoring and forecasting technologies for the yield of major agricultural, fishery, and forestry products, as well as forest disasters such as wildfires and landslides. A shared information utilization system will also be established to facilitate inter-agency collaboration.
 - The government also plans to strengthen the applicability of its policies by building and operating a national integrated management system for climate change monitoring, thereby expanding support for local

governments and public institutions to analyze and provide climate science information.

- Meanwhile, the government will participate in the decision-making processes of international organizations such as the IPCC and World Meteorological Organization (WMO) related to monitoring and prediction, joining the global community's efforts to address the climate crisis. It also aims to broaden public awareness by developing relatable public content and strengthening education programs tailored to future generations.

5

Results of the 2024 Implementation Review of the National Basic Plan

- The Commission conducts annual reviews of progress to ensure the systematic implementation of the First National Carbon Neutrality and Green Growth Basic Plan (April 2023) in accordance with the Framework Act on Carbon Neutrality and Green Growth for Coping with Climate Crisis.
- This year, the government strengthened policy feedback by expanding the pool of experts and evaluation members, and by sharing the implementation review results in advance with ministries through meetings of carbon neutrality implementation officers.

* Evaluation committee members: 73 in 2024 → 189 in 2025

- A comprehensive review of the 2024 implementation results of the National Basic Plan found that carbon neutrality and green growth policies are being gradually implemented across all economic and social sectors.
- Major initiatives implemented include: the announcement of the Offshore Wind Power Competitive Bidding Roadmap (August 2024), the integration of the Zero-Energy Building Certification System (August 2024), the introduction of the K-Pass system (public transportation fare reimbursement support) (May 2024), and the establishment of carbon neutrality and green growth basic plans by all 17 metropolitan and provincial governments nationwide (April 2024).

- However, the review indicated that achieving the 2030 NDC will require further expansion of renewable energy deployment and acceleration of energy transition policies.
- In 2024, Korea's renewable energy share in power generation stood at 9%, still far below the OECD average of 34.4%, underscoring the urgent need to expand renewable energy sources such as solar and wind power.
- In 2024, the supply of zero-emission vehicles reached 750,000 units, or 72.8% of the cumulative target of 1.03 million units, indicating the need for improved policies to accelerate deployment.
- The Commission plans to convey the improvement and supplementary measures identified through the implementation review to the relevant agencies, ensuring that policies are refined accordingly, and will continuously monitor and verify the outcomes.