



# 16th International Greenhouse Gas Conference

## PROGRAM BOOK

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From Ambition to Action:  
Pathways to the 2035 NDC

1 August, 2025 | Orce Hall(5F), EL Tower



Ministry of Environment  
Greenhouse Gas Inventory  
and Research Center



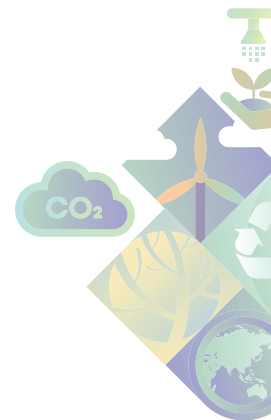


**16th International  
Greenhouse Gas  
Conference**

From Ambition to Action: Pathways to the 2035 NDC



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# Overview



## Title

16th International Greenhouse Gas Conference

## Date & Time

1 August, 2025 10:00 - 16:00

## Venue

Orce Hall(5F), EL Tower

## Subject

From Ambition to Action: Pathways to the 2035 NDC

## Host



Ministry of Environment  
Greenhouse Gas Inventory  
and Research Center

# Program

TIME	PROGRAM
Side Event	Lessons from the First BTR : Sharing Experiences and Building Capacity for Enhanced Transparency in Developing Countries
10:00 - 11:30	<p><b>Country Experience and Panel Discussion</b></p> <p><b>Moderator</b>  <b>PATPA</b> Jost Wagner  Managing Director, The Change Initiative  &amp; Chief Navigator (Executive Director),  Asia-Pacific Futures Network</p> <p><b>Panelist</b>  <b>Rwanda</b> David Ukwishaka  Greenhouse Gas Inventory Officer,  Rwanda Environment Management Authority (REMA)</p> <p><b>Zimbabwe</b> Edwin Nyamugadza  GIS and Remote sensing specialist  /Mapping officer, Forestry Commission</p> <p><b>Philippines</b> Emmanuel Causon  Development Management Officer II,  Climate Change Commission</p> <p><b>Türkiye</b> Hasan Alsancak  Environmental Engineer,  Ministry of Transport and Infrastructure</p> <p><b>Sri Lanka</b> Nithini Gardiye Punchihewa  Development officer, Ministry of Environment</p> <p><b>Argentina</b> Tamara Legnazzi  GHG Inventory and NIR Coordinator,  Directorate of Climate Impact</p>
11:30 - 13:00	Luncheon
Opening Ceremony	
13:00 - 13:25	<p><b>Opening Remarks</b>  Minji Choi  President, Greenhouse Gas Inventory &amp; Research Center of Korea</p> <p><b>Welcoming Remarks</b>  Jong-ryul Kim  Deputy Secretary-General, Presidential Commission  on Carbon Neutrality and Green Growth</p>

TIME	PROGRAM
<b>Main Session</b>	<b>From Ambition to Action: Pathways to the 2035 NDC</b>
13:25 - 14:10	<p><b>Speaker</b></p> <p><b>Developing Countries</b> <b>René Freytag</b> Chief Advisor, GIZ Philippines</p> <p><b>Singapore</b> <b>Kevin Ong</b> First Secretary (Political), Singapore Embassy in Seoul</p> <p><b>Japan</b> <b>Mikiko Kainuma</b> Senior Research Advisor, Institute for Global Environmental Strategies (IGES)</p>
14:10 - 14:20	Coffee Break
14:20 - 15:05	<p><b>UK</b> <b>Jonathan Woodland</b> Head of Climate and Energy, British Embassy Seoul</p> <p><b>EU</b> <b>Jong Han Rhee</b> Policy Officer for Climate and Environment, Delegation of the EU to the Republic of Korea</p> <p><b>ROK</b> <b>Hyungkwan Ryu</b> Deputy Director of Climate Change Strategy Division, Ministry of Environment</p>
<b>Panel Discussion</b>	
15:05 - 15:55	<p><b>Moderator</b></p> <p><b>Seung Jick Yoo</b> Professor, Sookmyung Women's University</p> <p><b>Panelist</b></p> <p><b>Youngjun Cho</b> Executive Director, Sustainable Management Institution at the Korea Chamber of Commerce and Industry (KCCI)</p> <p><b>Sangjae Ryu</b> Co-representative, Korean Youth Climate Change Network, BigWave</p> <p><b>So Won Yoon</b> Senior Researcher of GHG Research Team, Greenhouse Gas Inventory and Research Center of Korea</p>
15:55 - 16:00	<b>Closing</b>

# Main Session



## Speaker

**René Freytag**

Chief Advisor, GIZ Philippines

**Kevin Ong**

First Secretary (Political), Singapore Embassy in Seoul

**Mikiko Kainuma**

Senior Research Advisor, Institute for Global Environmental Strategies (IGES)

**Jonathan Woodland**

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**Jong Han Rhee**

Policy Officer for Climate and Environment, Delegation of the EU to the Republic of Korea

**Hyungkwan Ryu**

Deputy Director of Climate Change Strategy Division, Ministry of Environment



## Speaker

### René Freytag

Chief Advisor  
GIZ Philippines

## Career History

René FREYTAG leads the *IKI Interface Programme* in the Philippines, supporting national partners in implementing the country's Nationally Determined Contribution (NDC). His work focuses on climate finance, just energy transition, low-carbon transport, and fostering whole-of-government and whole-of-society approaches. He works closely with government agencies, civil society, and international partners to advance implementation at both national and subnational levels.

He previously advised the European Commission's flagship G20 Climate Diplomacy Programme: *Strategic Partnerships for the Implementation of the Paris Agreement*, where he led bilateral cooperation with South Africa, Indonesia, China, India, and South Korea - supporting policy development on just transition, renewable energy, sustainable finance, and long-term climate strategies.

He served as a negotiator on the German delegation to the UNFCCC, representing the EU in negotiations on climate technology and capacity building. Earlier in his career, he held advisory roles with UNEP, UNESCO, and the Global Green Growth Institute (GGGI), helping align national priorities with international cooperation frameworks.

René brings a global perspective shaped by work across Asia, Africa, and Europe, with practical experience translating policy into action.

## From Ambition to Action: Pathways to 2035 NDC

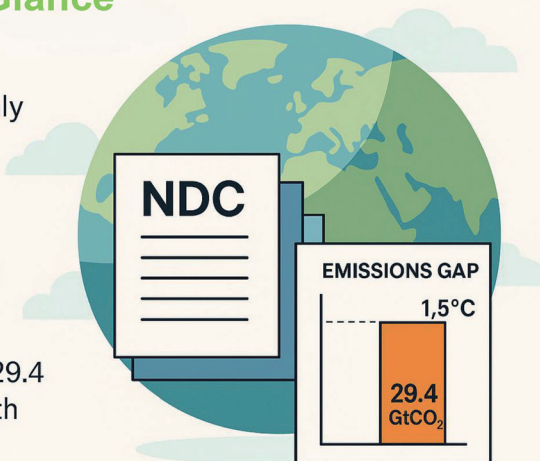
### *Lessons from GIZ's NDC Engagement*

01 August 2025 | 16th International Greenhouse Gas Conference, Seoul

**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

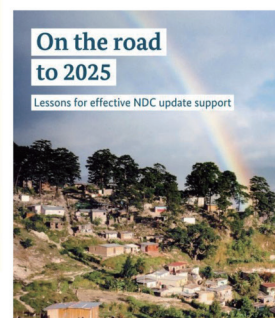
### NDC 3.0 at a Glance

- As of July 2025, only 27 countries have submitted NDCs
- 21% of global emissions covered by new NDCs
- Remaining gap of 29.4 GtCO<sub>2</sub>e to align with 1,5°C target



## GIZ's Global NDC Engagement

- 400+ GIZ climate projects in ~120 countries
- 60 directly supporting NDC 3.0 submissions
- Cross-cutting support across 10+ thematic areas
- Climate focus: 89% mitigation, 63% adaptation, 42% biodiversity
- ~60% of projects address all three areas







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## How to Accelerate Implementation

### GIZ's Four-Pillar Support

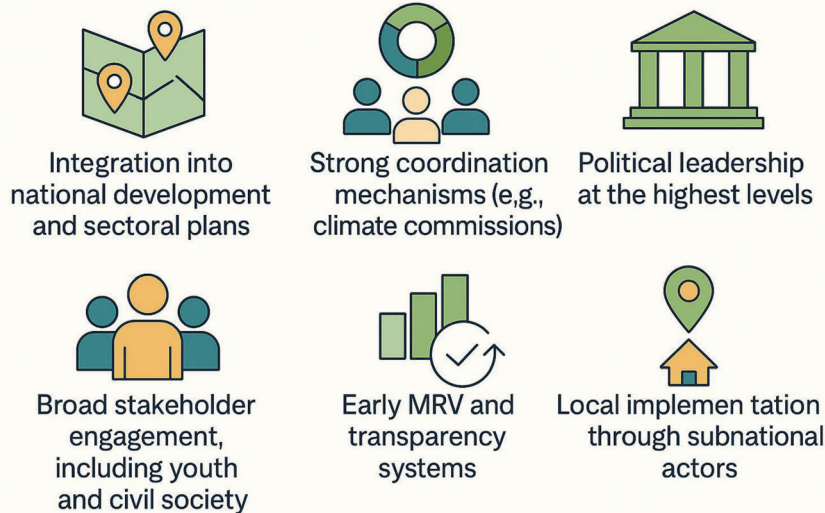
Policy	Technical	Financial	Capacity
			
Laws, fiscal reform, carbon pricing	MRV, baselines, co-benefit tools	Project pipeline, climate tagging	Bankable projects, investor readiness

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## What Enables NDC Implementation?



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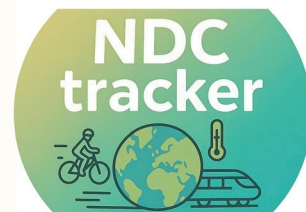
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## Country Example: Philippines

GIZ co-leads the Transport NDC update with DOTr

- Active member of the ADB-led Development Partners Coordination Group
- Supports vertical alignment via the Climate Change Commission (CCC) and NEDA
- Focus on MRV, investment planning, and local implementation
- Aims to embed transport in NDC 3.0 and link it to National Development Plans



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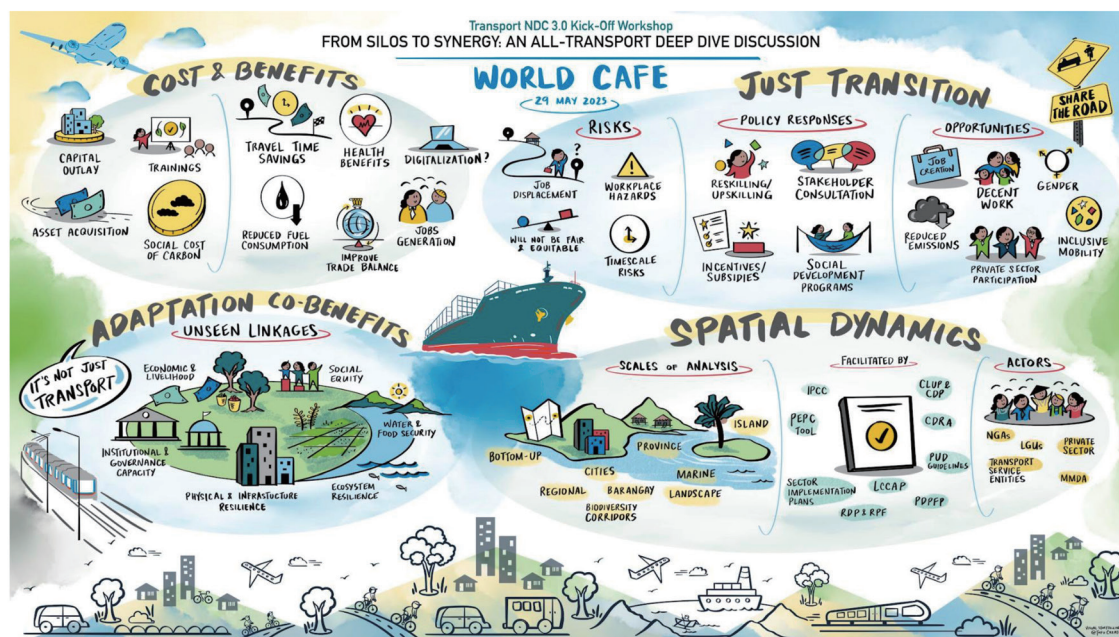
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## Key Messages



Bridge ambition and action with integrated, country-owned support systems

Political leadership and sectoral buy-in are critical to unlock delivery

Alignment behind national processes strengthens credibility and impact

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**Thank you for your attention**





## Speaker

### Kevin Ong

First Secretary (Political)  
Singapore Embassy in Seoul

## Career History

Mr. Kevin Ong is the First Secretary (Political) at the Singapore Embassy in Seoul. Besides bilateral relations, his current portfolio includes a coverage of internal and external politics, regional developments, climate issues, and related economic and security issues. He also leads matters related to public diplomacy at the Embassy. As the Embassy of the Republic of Singapore in Seoul is concurrently accredited to Mongolia, he also covers similar issues relating to Mongolia, from Seoul. This is his second year in Seoul after taking up post in 2023.

# Developing Singapore's 2035 NDC: Singapore's Approach to Climate Action

**16<sup>th</sup> International Greenhouse Gas Conference**  
**1 Aug 2025**

Presented by:

**Kevin Ong**

First Secretary (Political), Singapore Embassy in Seoul

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## Climate change poses an asymmetrical challenge to Singapore



### **Global Problem**

No single country can solve it  
on its own



### **National Circumstances**

Scarcity of natural resources  
e.g. access to renewable  
energy



### **Inherent Vulnerability**

Low-lying island city state;  
~30% of Singapore less than  
5m above SG Height Datum

**While Singapore only contributes 0.1% of global emissions,  
the impact of climate change on us is disproportionately large**

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## We are alternative energy disadvantaged, with solar power as our only viable renewable energy



Average wind speed in SG is 2m/s, well below the 4.5m/s needed for commercial wind turbines



Narrow tidal range, no river system with fast flowing water, and no geothermal energy sources



Small size constrains safe deployment of nuclear energy and limits domestic biomass growth



*Our technical potential for solar deployment by 2050 is no more than 10% of electricity demand*

*but it is also the least land efficient*

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## In determining our climate action, we see two scenarios that will co-exist in a disorderly transition

### Low-Carbon World



### Climate-Impaired World

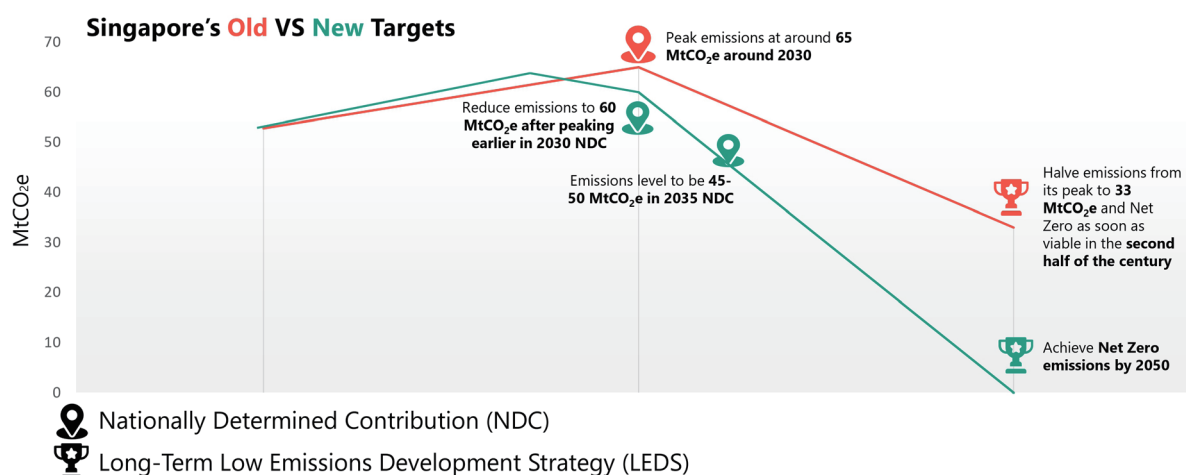


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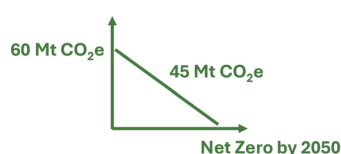
## We raised our 2030 climate ambition in 2022 and were among 13 countries who submitted the 2035 NDC on time.

Singapore submitted its 2035 Nationally Determined Contribution (NDC) in Feb 2025 in line with the UNFCCC deadline



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## Our 2035 NDC is an ambitious commitment and signals our resolve to help our economy stay competitive



45 MtCO<sub>2</sub>e keeps on a straight-line trajectory from 2030 NDC of 60 MtCO<sub>2</sub>e



Ambitious target to generate demand for new green investment and spur low-carbon solutions



Upper bound reflects the practical reality that pace of decarbonisation depends on tech development and international collaboration



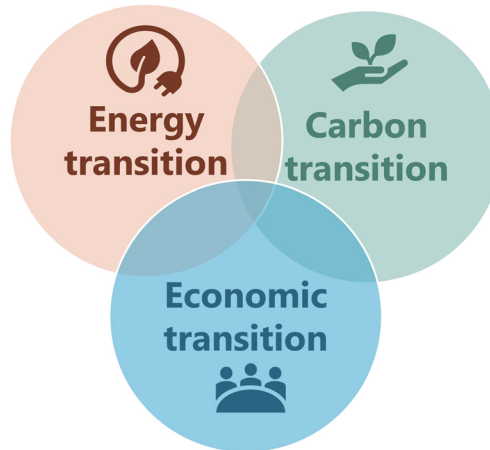
Recognises flexibility to manage impact on households and businesses, while keeping in pace with global transition

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## Our overall approach to climate transition: Triple Transition

Chart a pathway to a net zero grid while ensuring energy resilience

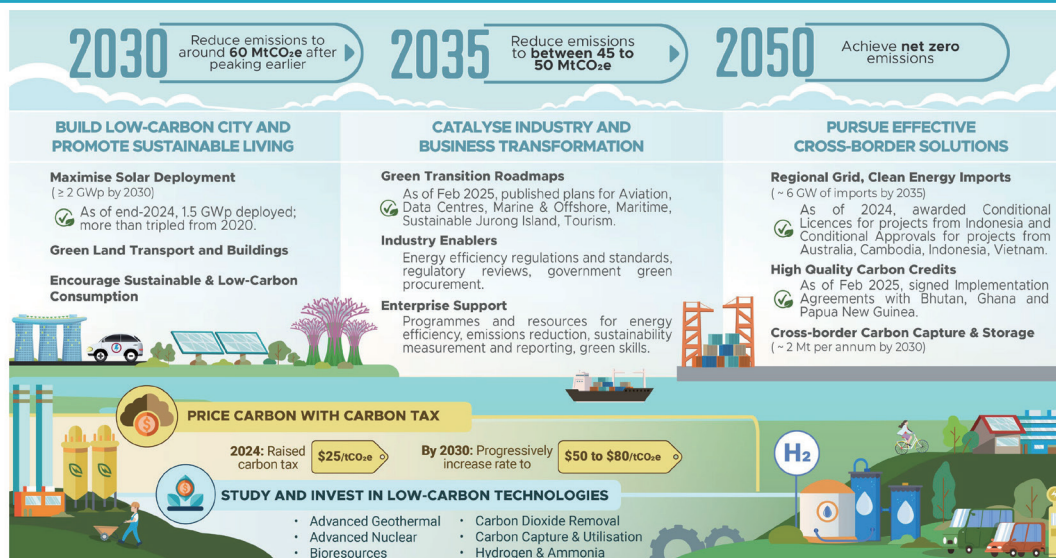


Reduce primary emissions to net zero across all sectors

Capture new growth opportunities and ensure that our economy remains competitive in a low-carbon future

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## Our Roadmap to Net Zero by 2050



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## We have a comprehensive suite of policies across all sectors to reduce emissions



### Industry

- Energy Efficiency Grants
- 2.5 Mt of CCUS by 2030



### Power

- Solar – 2GWp by 2030
- Electricity imports – up to 6GW by 2035



### Transport

- No more new ICE vehicles from 2030 onwards
- 60,000 EV chargers by 2030



### Buildings

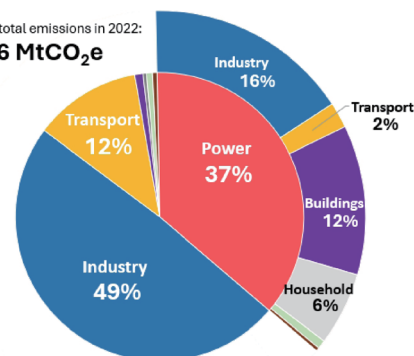
- Green Building Masterplan – 80% green buildings by 2030



### Households

- Climate-Friendly Households Programme

Singapore's total emissions in 2022:  
**58.6 MtCO<sub>2</sub>e**



Key contributors to emissions in Singapore are Industry, Power and Transport

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## Energy transition to reduce secondary emissions and increase green competitiveness

### Natural Gas



Further enhance efficiency using cleanest fossil fuel

### Solar



Maximise deployment, but limited due to land-intensive and intermittent nature

### Regional Power Grids



More technologically ready, but high deployment levels pose reliability concerns

### Low-Carbon Alternatives



Strategic investments to build capabilities but will take time to become commercially viable

**Increasing demand from businesses to tap low-carbon electricity to reduce emissions**

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## The carbon tax supports our NDCs by incentivising emissions reductions across the economy.

### Key Objectives of Carbon Tax

Single price to reflect the externality of carbon, to support our climate ambition and shape responsibility of individuals and businesses



**Individuals and households** will have greater incentive to adopt more sustainable lifestyles, e.g. conserving energy

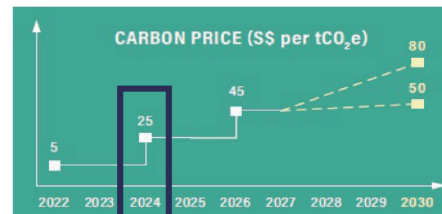


**Businesses** will be incentivised to adopt carbon-/ energy-efficient investments, ensuring their long-term viability in a carbon-constrained world

### Generate revenue to fund mitigation package



Support for **businesses** in their decarbonisation efforts and to develop sustainability capabilities



- First country in Southeast Asia to introduce carbon price in 2019 at S\$5 (~US\$3.70)/tCO<sub>2</sub>e.
- Currently at **S\$25(US\$18)/tCO<sub>2</sub>e**, and will be raised to:
  - **S\$45(US\$32.30)/t** in 2026 and 2027
  - With a view to reaching **S\$50-80 (US\$35.90-57.50)/t** by 2030
- Currently reviewing post-2027 carbon tax trajectory

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## We are pursuing a wide range of international cooperation on climate, to support our NDC and catalyse global action.



### Global Carbon Markets

- Article 6 bilateral Implementation Agreements
- Transition Credits Coalition (TRACTION)
- Climate Action Data Trust initiative, Article 6 Playbook to enhance transparency and integrity of carbon markets



### Green and Transition Finance

- Financing Asia's Transition Partnerships (FAST-P)



### Energy

- ASEAN power grid
- Electricity Import trials (e.g., LTMS-PIP)
- International Energy Agency Regional Cooperation Centre in Singapore



### International Transport

- Maritime Decarbonisation Blueprint (2022)
- Sustainable Airhub Blueprint (2024)
- Sustainable Aviation Fuel levy (from 2026)



### Capabilities and Technical Asst

- Singapore Cooperation Programme
- Sustainability Action Package
- Small Island Developing States (SIDS) for Change
- Share V3 study data with region and international organisations

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## Climate action requires whole-of-society shift; citizens' buy-in is critical



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# Thank you

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## Speaker

### Mikiko Kainuma

Senior Research Advisor  
Institute for Global Environmental Strategies (IGES)

## Career History

Dr. Mikiko Kainuma is Senior Research Advisor to IGES, Secretary General of the International Research Network for Leveraging a Climate-neutral Society (LCS-RNet) and Honorary Researcher at the National Institute for Environmental Studies.

Since 1990, she has developed the Asia-Pacific Integrated Model (AIM) with researchers in Asia. She is a lead author of the IPCC Fourth and Fifth Assessment Reports and the Special Report on Global Warming of 1.5°C. Her awards include the Nikkei Global Environmental Technology Award (1994), the Lifetime Achievement Award from the Integrated Assessment Modelling Consortium (IAMC) (2022) and the Earth Hall of Fame KYOTO (2024). She received her Ph.D. in engineering from Kyoto University.



# Pathways and Challenges to Achieving Japan's NDC Targets for 2035 and 2040

Mikiko Kainuma\*, Go Hibino\*\*, Toshihiko Masui\*\*, Tomoko Ishikawa\*

\*Institute for Global Environmental Strategies

\*\* National Institute for Environmental Studies

16<sup>th</sup> International Greenhouse Gas Conference (IGC)

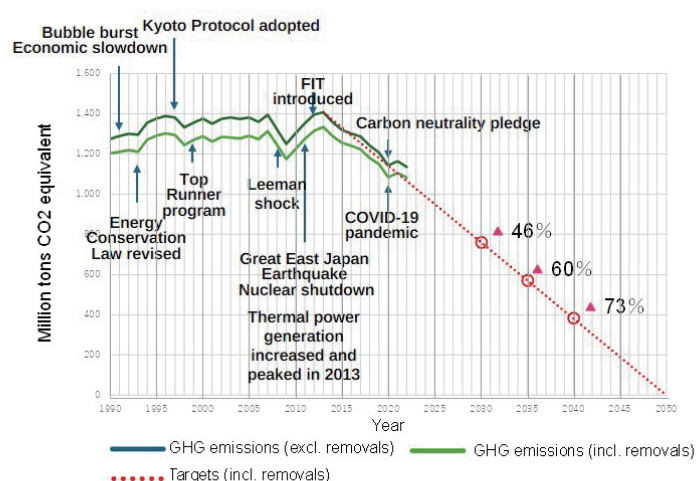
EL Tower, Seoul, Republic of Korea

**AIM** Asia-Pacific Integrated Model  
<http://www-iam.nies.go.jp/aim/index.html>

1 August 2025

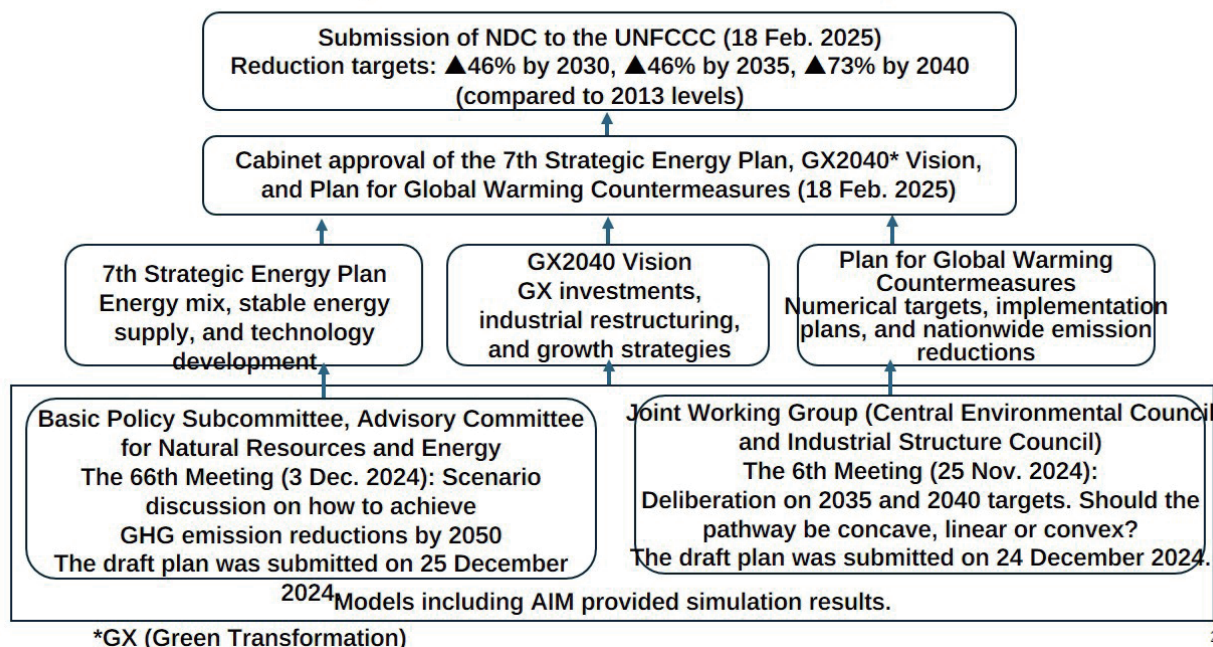
**LCS-R Net** LoCARNet

## Japan's GHG Emissions Trends and Future Targets



Source: Created by the authors based on the Japan Greenhouse Gas Inventory Report 2024 (NIES)  
<https://cger.nies.go.jp/publications/report/i171/>

## Japan's Post-2030 NDC Planning



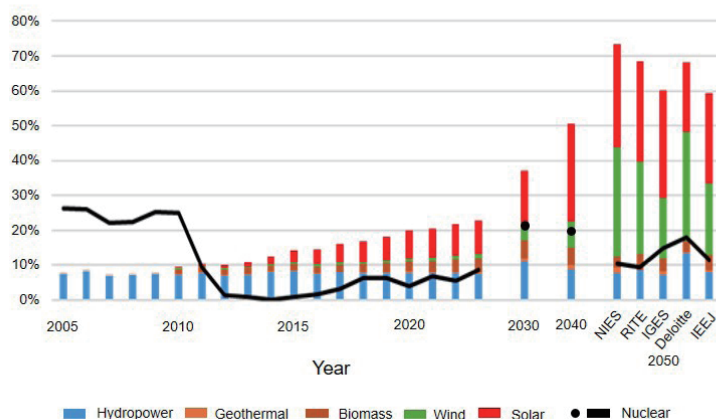
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## Role Sharing among the Strategic Energy Plan, GX2040 Vision, and Climate Change Action Plan

Item	7th Strategic Energy Plan (2025)	GX2040 (Green Transformation) Vision	Plan for Global Warming Countermeasures (2025)
Purpose / Perspective	Balancing energy security, decarbonization, and economic growth	Decarbonization as a growth strategy, enhancing industrial competitiveness	Achieving Japan's GHG reduction targets (NDC)
Lead Ministry	Led by METI	Cabinet-led (GX Promotion Office)	Led by MOEJ
Key Focus Areas	Energy mix (renewables, nuclear, fossil fuels), stable supply, supply-demand optimization	Industrial transformation, green innovation, GX investment, regulatory reform	Sectoral targets (industry, transport, household), adaptation, local measures
Specific Measures	<ul style="list-style-type: none"> <li>- 36–38% renewable target</li> <li>- Continued nuclear use, approval of new plants</li> <li>- Hydrogen, ammonia, CCUS promotion</li> <li>- Energy efficiency and demand-side reform</li> </ul>	<ul style="list-style-type: none"> <li>- ¥20 trillion GX economic transition bonds over 10 years</li> <li>- Growth-oriented carbon pricing</li> <li>- GX Promotion Law</li> <li>- Balancing energy security and decarbonization</li> </ul>	<ul style="list-style-type: none"> <li>- Mandatory local action plans by prefectures</li> <li>- Emission reduction plans required from businesses</li> <li>- Strengthened adaptation and regional resilience</li> </ul>
Relation to Industrial	Focuses on energy infrastructure while aiding	Focuses on industrial GX transformation, esp. power,	Allocates sectoral targets; emphasizes coordination with

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## Renewable and Nuclear Energy in Japan: Historical Trends, Government Targets, and Modelled Futures

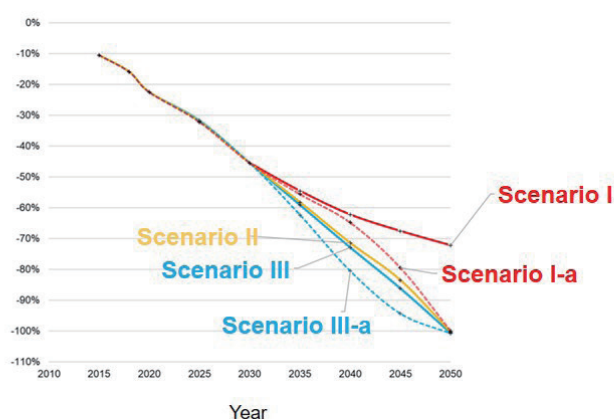


2005-2023: Trend; 2030 and 2040: NDC targets; 2050: Projection by 5 models presented at the at the Basic Policy Subcommittee of the Advisory Committee for Natural Resources and Energy (66th meeting).

Sources: For 2005-2009, "EDMC Energy and Economic Statistics Handbook" ; for 2010-2023, "General Energy Statistics" ; for 2030, "Energy Supply and Demand Outlook for FY2030 (related materials)" Agency for Natural Resources and Energy (ANRE) (p. 73 ) (September 2021); for 2040, "Energy Supply and Demand Outlook for 2040 (related materials)" ANRE (p.23, p.29) (January 2025); for 2050, scenarios at the Basic Policy Subcommittee of the Advisory Committee for Natural Resources and Energy (66th meeting).

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## Greenhouse gas emissions pathways analyzed by the AIM model



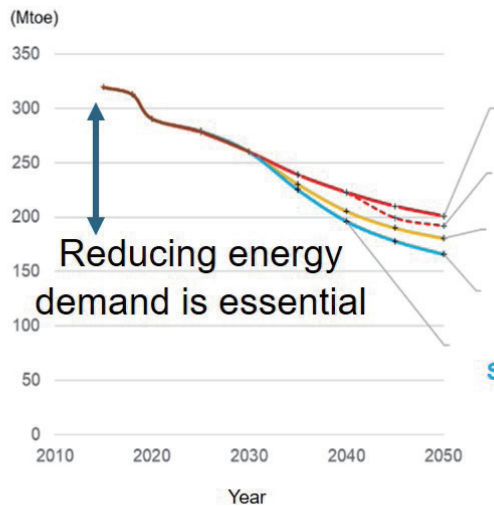
- Scenario I: Technological Advancement Scenario
- Scenario I-a: Technology Advancement Scenario + Late Deployment of Innovative Technologies after 2040
- Scenario II: Innovative Technology Scenario
- Scenario III Innovative Technology + Societal Transformation Scenario
- Scenario III-a Innovative Technology + Societal Transformation scenario + Early Deployment of innovative technology

Source: Hibino G, Ashina S, Masui T (2025) 2nd additional analysis of GHG emission pathways realizing a decarbonized society in 2050 in Japan. Discussion Paper Series, Social Systems Division, NIES. <https://www.nies.go.jp/social/publications/dp/pdf/2025-01.pdf>

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## Final energy consumption analyzed by the AIM model



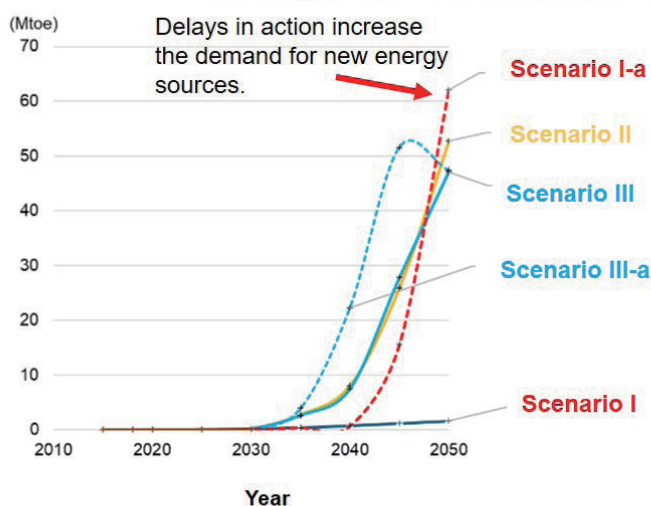
Scenario I  
Scenario I-a  
Scenario II  
Scenario III  
Scenario III-a

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Source: Hibino et al. (2025)

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## Low carbon fuel demands in the final energy consumption sector analyzed by the AIM model



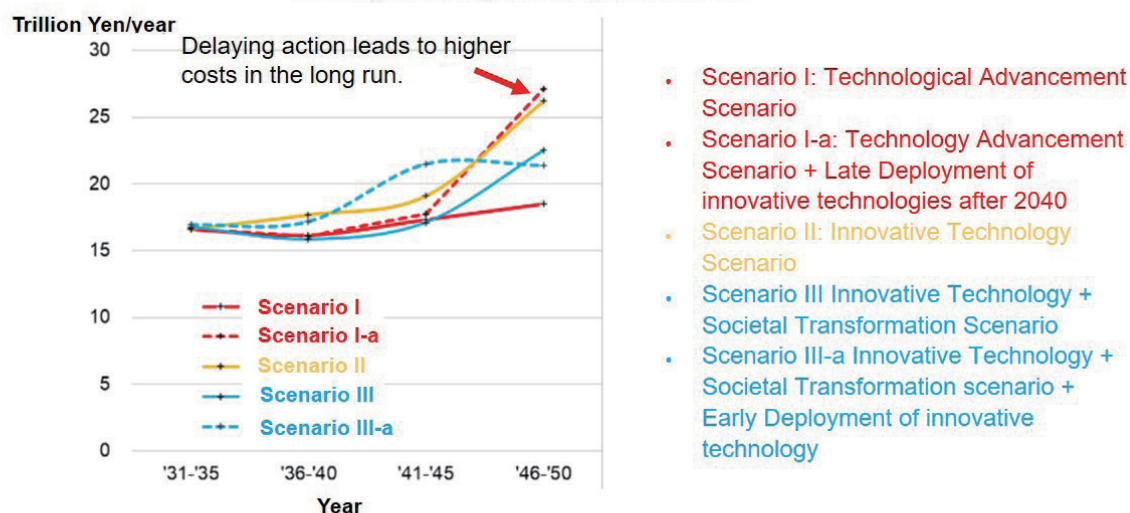
Scenario I-a  
Scenario II  
Scenario III  
Scenario III-a  
Scenario I

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Source: Hibino et al. (2025)

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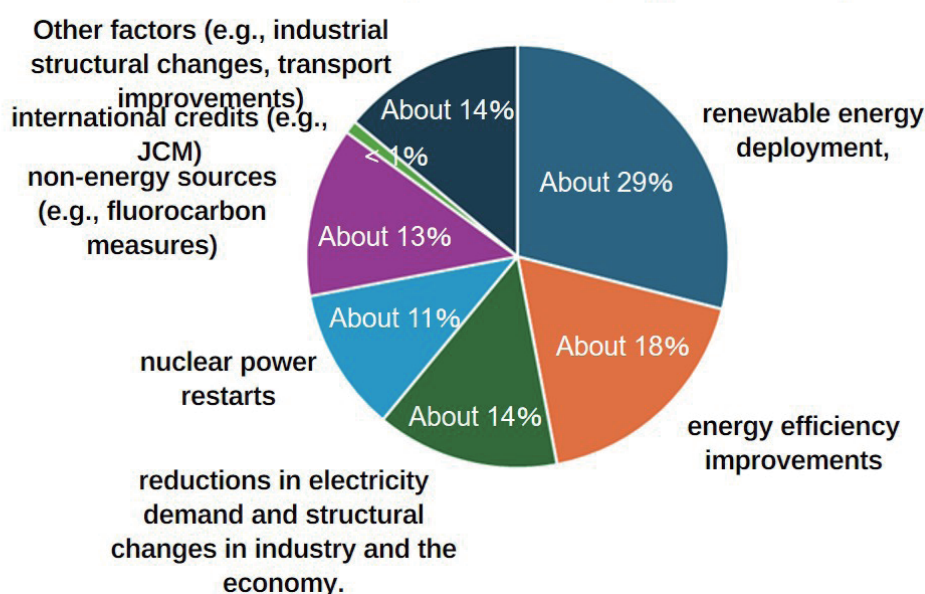
## Costs of installing and operating energy equipment analyzed by the AIM model



Source: Hibino et al. (2025)

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## Estimated Contribution Factors to GHG Emission Reductions (2013–2023, Approximate)



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## Key Drivers of GHG Emissions Reduction in Japan and Associated Challenges

Reduction Driver	Main Policies / Measures	Challenges
Expansion of Renewable Energy	Feed-in Tariff (FIT); Renewable Energy Special Measures Act; FIP scheme; Grid connection rule revisions	Output suppression due to grid constraints; Delays in grid reinforcement; Lack of appropriate market evaluation; Regional disparity
Promotion of Energy Efficiency	Energy Conservation Act; Top Runner Program; ZEH*/ZEB subsidies; ESCO** support; Household energy-saving appliance subsidies; Mortgage reductions	Many measures already implemented; Limited additional reduction potential; Growing reliance on behavioral change; High upfront costs; difficulty retrofitting existing homes
Changes in Industrial Structure	Downsizing of energy-intensive heavy industries, Shift to service-based economy	Domestic emissions reduction may be offset by overseas transfers; challenge of consumption-based emissions
Nuclear Power Restart (Limited)	Screening and restart approvals by the Nuclear Regulation Authority, Coordination with local governments	Social and political uncertainty over restarts; Aging facilities; Challenges with new construction; Nuclear waste disposal
Non-energy Emissions (e.g. F-gases)	Fluorocarbon Emissions Control Act, Kigali Amendment compliance, Mandatory refrigerant recovery	Difficulties reducing agricultural emissions; Challenges in refrigerant management; Technology dissemination
Use of International Credits	JCM (Joint Crediting Mechanism), References in NDCs, Financial cooperation	Concerns over use as substitute for domestic action; Need for transparency and credibility assurance

\*Net Zero Energy House; \*\*Energy Service Company

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## High-Potential Sectors Not Yet Fully Addressed and Their Challenges

Sector / Area	Reasons for High Reduction Potential	Key Challenges
Retrofit insulation of existing homes	Many of Japan's 40 million existing homes have low insulation. Full retrofitting could reduce up to 60 million tCO <sub>2</sub> /year.	<ul style="list-style-type: none"> <li>• High upfront costs</li> <li>• Lack of awareness or interest among residents</li> <li>• Shortage of skilled labor and contractors</li> </ul>
Local thermal energy use (district heating, biomass, etc.)	Large untapped potential for local renewable heat sources. Up to 30% reduction possible compared to fossil-fuel-based heat supply systems.	<ul style="list-style-type: none"> <li>• Lack of local project developers</li> <li>• Unclear returns on investment</li> <li>• Underdeveloped systems and infrastructure</li> </ul>
Modal shift in freight transport	Shift to rail and ship is far more energy-efficient than truck freight, leading to large CO <sub>2</sub> reductions	<ul style="list-style-type: none"> <li>• Car-centric infrastructure and policy bias</li> <li>• Entrenched logistics practices and cost structures</li> <li>• Lack of economic incentives</li> </ul>
Lifestyle transformation (consumption, food, mobility)	Behavioral shifts (e.g., reducing food loss, avoiding carbon-intensive consumption) could yield significant but hard-to-quantify reductions	<ul style="list-style-type: none"> <li>• Difficulty in changing individual behavior</li> <li>• Lack of policy support and public information</li> <li>• Cultural and social resistance</li> </ul>
Industrial electrification and hydrogen	Electrification and hydrogen use in high-temperature processes can reduce several tens of million	<ul style="list-style-type: none"> <li>• High costs and early-stage technologies</li> <li>• Underdeveloped hydrogen supply infrastructure</li> <li>• Balancing decarbonization with international</li> </ul>

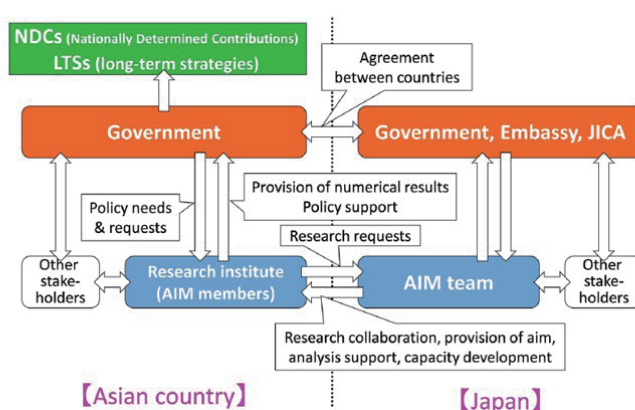
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## Efforts and Challenges for Japan's Decarbonization

Stakeholders	Current Progress / Initiatives	Remaining Challenges / Improvements
Local governments	600+ Zero Carbon declarations MOEJ-led "Decarbonization Leading Areas" Local renewable/energy-saving efforts	Securing finance/personnel Expanding to small municipalities Strengthening local consensus building
Corporates	Leading TCFD adoption More SBT-certified firms Progress in Climate-related financial disclosure	Greenwashing concerns Limited uptake among SMEs Need for more investment
Science	Targets based on IPCC reports Impact assessments Use of AIM models for scenario analysis	Limited policy uptake Need to establish an independent scientific advisory system
Public engagement	GHG/policy info disclosure Env. education & materials	Limited public participation in policy making Voices of youth/workers missing
International cooperation	JCM (Joint Crediting Mechanism) deployment AZEC (Asia Zero Emissions Community) cooperation Tech support (RE/efficiency)	JCM scale small Limited transition impact Balance with domestic cuts

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## International Cooperation: Scheme for supporting scenario analysis of long-term strategies in Japan and partners Countries using AIM



Source: Hibino G, Masui T (2023) Development of AIM (Asia-Pacific Integrated Model) and its contribution to policy-making for the realization of decarbonized societies in Asia. Sustainability Science, Special Feature, Accelerating Actions for Leveraging a Climate-Neutral.  
<https://doi.org/10.1007/s11625-023-01393-2>

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Thank you for your  
attention



**AIM** Asia-Pacific Integrated Model  
<http://www-iam.nies.go.jp/aim/index.html>

**LCS-R Net** LoCARNet.5





## Speaker

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### **Jonathan Woodland**

Head of Climate and Energy  
British Embassy Seoul

## Career History

Jonathan Woodland is the Head of Climate and Energy at the British Embassy Seoul.

A career government official, he has held roles within the UK Ministry of Justice, Ministry of Defence and the Foreign, Commonwealth and Development Office.

He is a graduate of the University of York (BA History), King's College London (MA History) and the London School of Economics (PG Dip Finance).



British Embassy  
Seoul

## UK's 2035 Nationally Determined Contribution

Jonathan Woodland  
Head of Climate and Energy  
British Embassy Seoul



## The UK's 2035 NDC

**At least 81% reductions on 1990 levels  
by 2035**

- Headline target announced at COP29, submission to the UNFCCC 30 Jan 2025
- Single economy-wide target, covering all GHGs and sectors (excluding IAS)
- 1.5°C aligned and highest possible ambition
- Increase in ambition (2030 NDC: at least 68% by 2030)

2



## UK 2035 NDC Considerations



### Target level

- 1.5°C
- Carbon budgets / Net Zero
- Climate Change Committee guidance



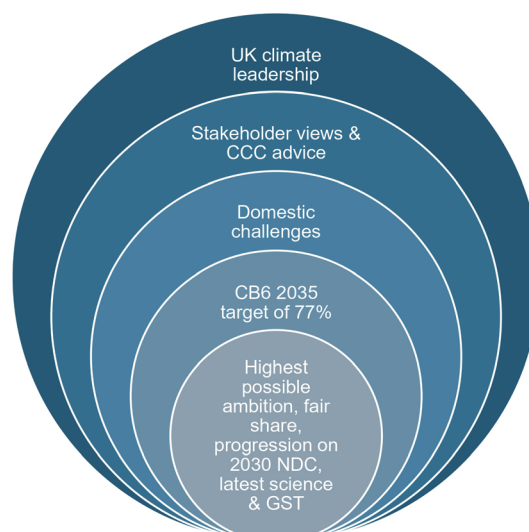
### Scope - ICTU

- Actionable Global Stock Take outcomes
- Nature & adaptation
- Economy wide exc. IAS



### Engagement

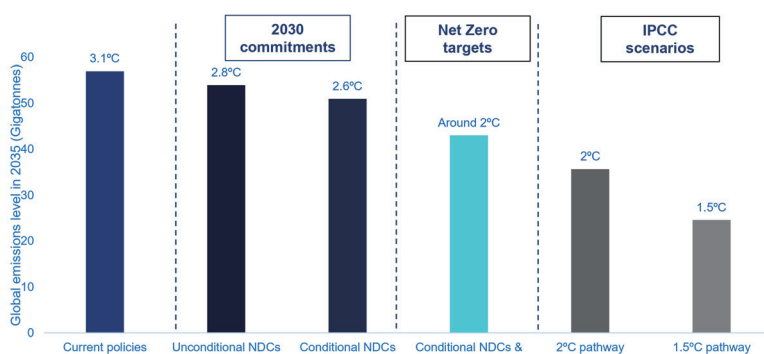
- Independent experts, civil society and businesses
- Crown Dependencies and Overseas Territories; Devolved Administrations
- Other countries



3

## NDC Implementation

Globally, under current policies we are far from 1.5°C. The most optimistic scenario gets the world close to 2°C.



Source: UNEP Emissions Gap Report (2024)

4

### UK NDC Implementation:

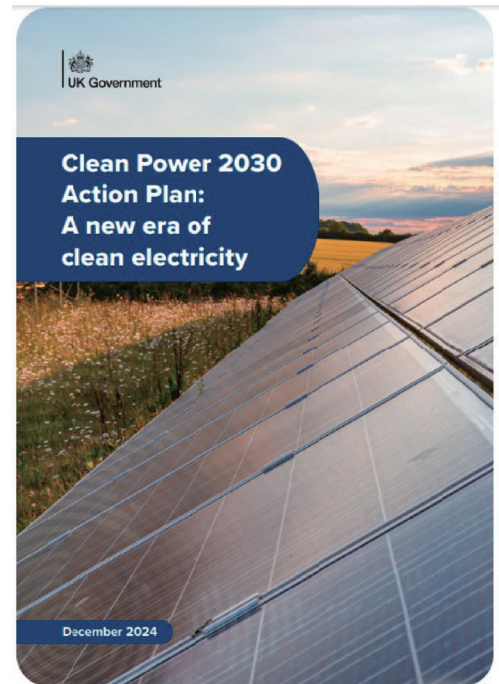
- Will deliver an updated cross-economy plan, out to the end of CB6 in 2037, later this year.
- This will outline the policies and proposals needed to deliver carbon budgets 4-6 and the 2030 and 2035 NDCs on a pathway to net zero (as per para 171)



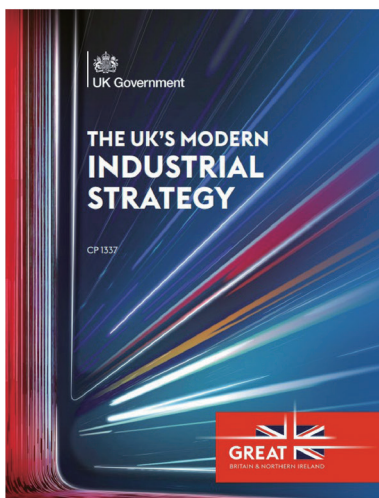
## 2030 Clean Power Plan

- Ambition to secure 95% of electricity from clean power by 2030.
- Doubling/tripling of offshore and onshore wind + solar.
- Record breaking renewables auction in 2024.
- Ended coal-power in 2024.
- Establishment of GB Energy
- Nuclear build programme e.g. Sizewell C, and Rolls Royce SMR.
- £22bn for CCUS.

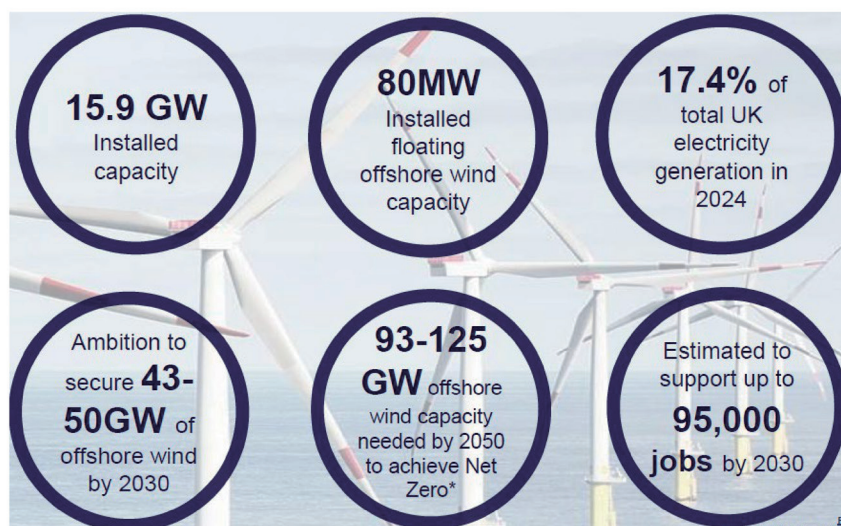
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## Clean Power Mission's centrality to UK Government policy

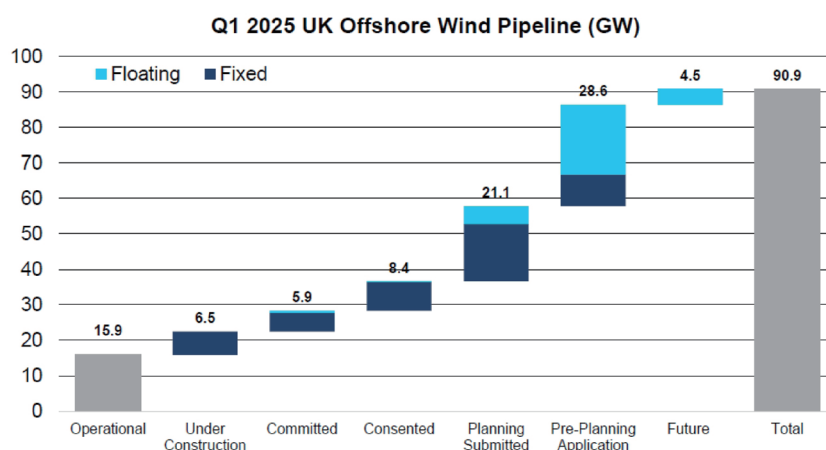


## UK Offshore Wind



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## UK Offshore Wind Pipeline

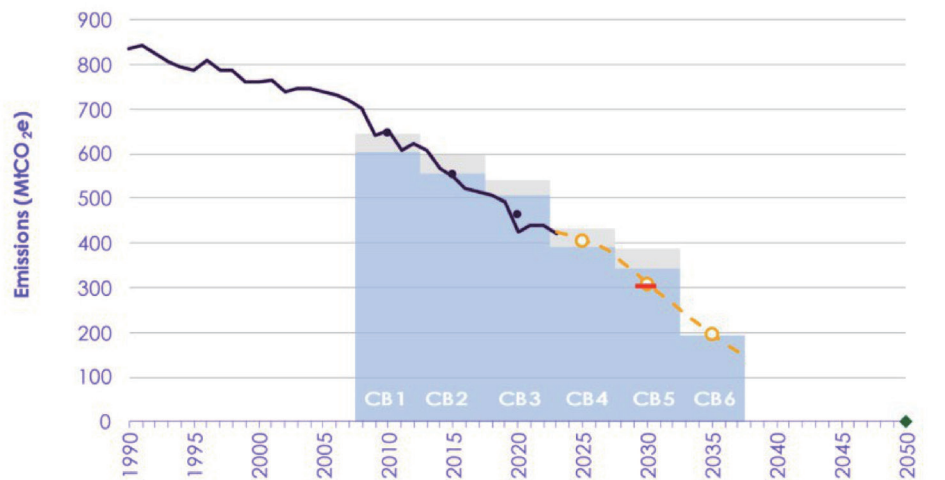


Floating wind projects account for ~30GW in the pipeline at the planning submitted, pre-planning application and future stages.

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## Future Carbon Budgets

Figure 1.1 UK historical emissions, the Government's pathway and the UK's targets

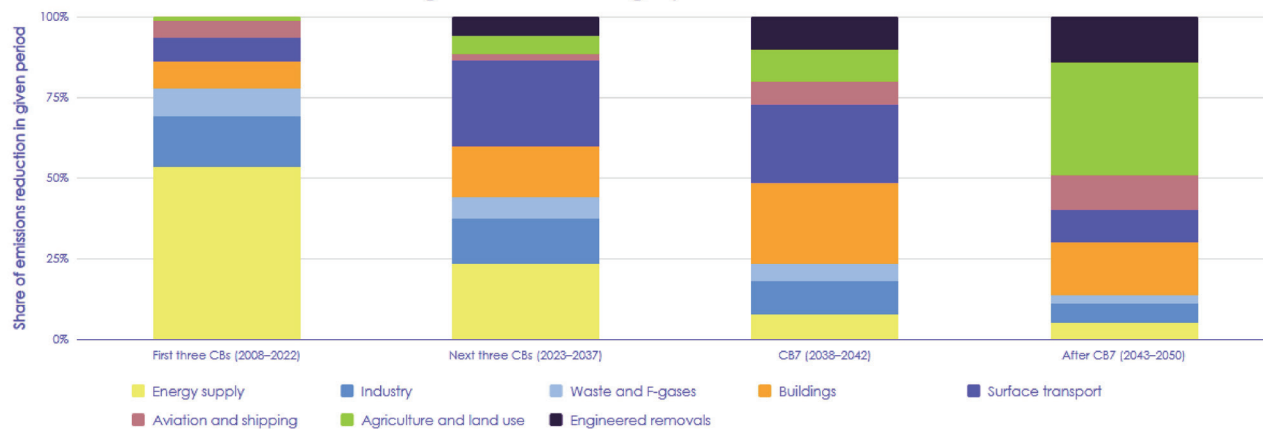


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## Future of UK Decarbonisation

Figure 2

Distribution of emissions reductions during each carbon budget period



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## Advice of the Climate Change Committee that by 2040:

- Offshore wind – 15 GW of capacity in 2023 to 88 GW. Onshore wind to 32 GW. Solar capacity increases to 82 GW.
- Nuclear, low-carbon dispatchable generation (either gas CCS or hydrogen), batteries, interconnection to neighbouring markets, ensure a reliable supply of electricity.
- Rapid expansion of the transmission grid, upgrading the distribution network, and speeding up the grid connection process.
- By 2040 3/4 of cars & vans and 2/3 of HGVs are EVs.
- Half of homes using a heat pump (up from 1% in 2023).
- Electricity meets 61% of industrial energy demand, up from around 26% in 2023.
- 16% of the UK covered by woodland up from 13% today.
- UK peatlands in natural or rewetted conditions 55% up from 26% today.

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British Embassy  
Seoul

**Thank You**

[jonathan.woodland2@fcdo.gov.uk](mailto:jonathan.woodland2@fcdo.gov.uk)







## Speaker

### Jong Han Rhee

Policy Officer for Climate and Environment  
Delegation of the EU to the Republic of Korea

## Career History

Affiliated to the European External Action Service (EEAS), Jong Han Rhee is serving as a Policy Officer for Climate and Environment at the Delegation of the European Union (EU) to the Republic of Korea, responsible for bilateral cooperation and policy exchange between the EU and the Republic of Korea on climate, environment and energy. Moreover, he is involved in the implementation of the EU-Korea Green Partnership, which was launched in May 2023, as a comprehensive cooperation framework on climate and environment between the EU and Korea. Before joining the EU Delegation, Jong Han Rhee was involved in international cooperation on climate, environment and water, as well as the EU-Korea science and technology cooperation during his years at Korea Water Resources Corporation, Korea-EU Research Cooperation Center and National Research Foundation of Korea. Jong Han Rhee holds a master degree in international studies (European Union studies) from Leiden University in the Netherlands, a bachelor in international relations from Syracuse University, the United States.

## 16<sup>th</sup> International Greenhouse Gas Conference

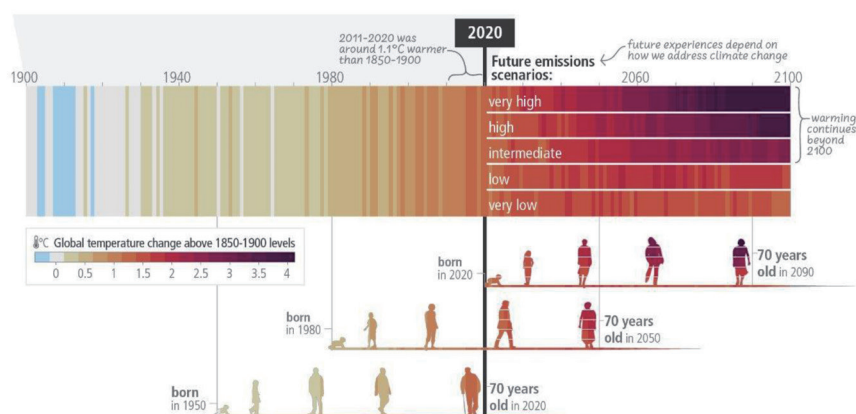


# The European Union's Road to Climate Neutrality: Green Deal & NDC

**Jong Han Rhee**  
**Policy Officer for Environment & Climate**  
**EU Delegation to the Republic of Korea**

**1 August 2025**

## Policies need to get ahead of climate impacts



Impact across generations of observed & projected changes in global surface temperature

Source: IPCC AR6 Synthesis Report

## Without action on climate change...

... (i.e., warming of 3°C above pre-industrial temperature)  
the EU could face the following impacts:



### Heat & drought

90,000 annual deaths due to heatwaves.

### Water scarcity

65 million people living in areas with water resources under stress.

### Flooding

Nearly €50 billion/year in economic losses due to increased flooding frequency & severity.

### Economics

Annual welfare loss in the EU representing 1.4% of GDP (currently €238 billion).

### Wildfires

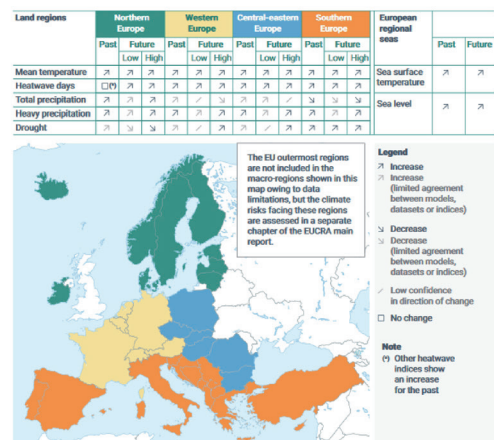
24% increase of number of people exposed to high-to-extreme fire danger levels.

## European Climate Risk Assessment (2024)



### 1<sup>st</sup> ever European Climate Risk Assessment (Mar 2024)

- Europe is heating at twice the global rate
- Europe will have to learn to live with 3 degrees warmer, even the Paris Agreement 1.5 degrees target is met



## EU citizens' attitudes towards climate change

Almost 8 in 10 Europeans think climate change is a very serious problem,\* and 79% also think achieving climate neutrality will come with benefits like new jobs.

### Takeaways:

People are still concerned with climate change and support for climate action is still high

\* Source: Eurobarometer 2023

Achieving climate neutrality target will...



**81%** contribute to the **fight against climate change and the protection of the environment**



**79%** **create new jobs** and attract investments for the clean energy sectors



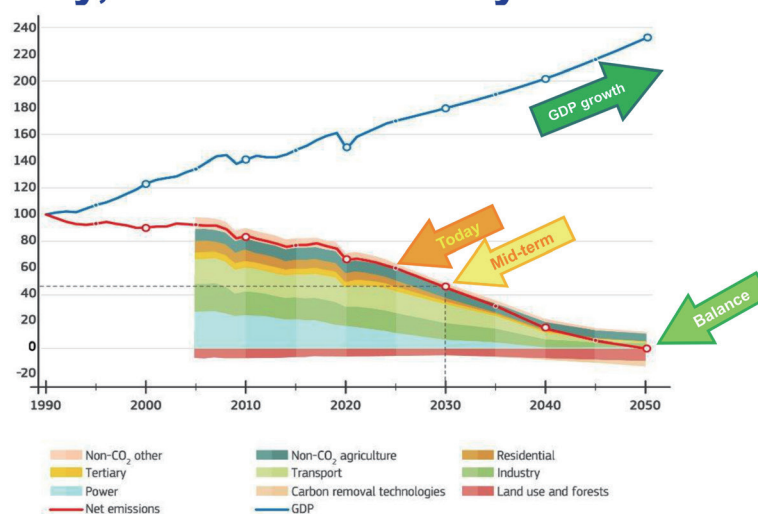
**79%** allow communities and businesses to **be part of the clean energy transition**



**76%** **reduce energy dependence**

Source: Eurobarometer 2024

## The EU is progressing on a pathway to prosperity, climate neutrality and resilience





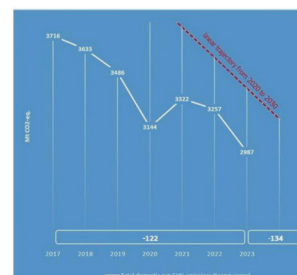
## Continuous delivery & predictability

Climate policy is aligned with shifting geostrategic priorities and realities

According to the latest **Annual EU Greenhouse Gas Inventory**, total greenhouse gas emissions in the EU decreased by almost 9% in 2023 compared to 2022.

- This marks the largest annual drop in decades, with emissions now 37% below 1990 levels.
- Compared to 2022, emissions from electricity and heating decreased by 24%, driven by growth in wind and solar energy and the transition away from coal.
- However, emissions reductions need to accelerate to stay on track towards our targets

In 2024, emissions under the EU ETS were reduced by 5% compared to 2023 levels. ETS emissions are now around 50% below 2005 levels and on track to achieve the 2030 target of -62%. The power sector was again the most important driver of the decarbonisation progress.



Source: Annual EU Greenhouse Gas Inventory

## What is the EU doing to achieve climate neutrality?

The European Climate Law sets binding targets for the EU to reduce net GHG emissions by at least 55% by 2030 compared to 1990 levels and reach net zero emissions by 2050.

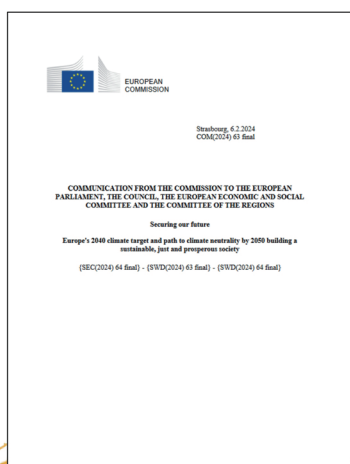
So far, the EU has achieved steady decreases in emissions since 1990, reaching -37% by 2023.



## The EU's legal-binding reduction target: European Climate Law

- ▶ The [European Climate Law Regulation](#) of 30 June 2021
- ▶ Union-wide climate-neutrality objective 2050 (Article 2)
- ▶ **Interim targets** (Article 4)
  - 2030 target of at least 55% net greenhouse gas emissions reduction (Article 4)
  - Commission to propose a **2040 climate target**, taking into account an indicative greenhouse gas budget for 2030-2050 to be published by the European Commission (Article 4)

## European Commission Communication On Europe's 2040 Climate Target



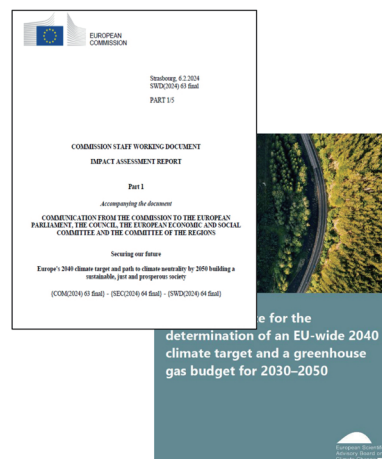
- ▶ February 2024, the Commission presented its recommends a **2040 climate target for the EU**
- ▶ **Key aspects**
  - **Basis for new 2035 NDC** to be submitted in 2025
  - Fit for 55 framework and other measures agreed for 2030 remain unchanged
  - Legislative proposal for the 2040 target – to be taken by the new Commission

## Europe's 2040 Climate Target: Impact Assessment

► The Commission's communicated based on the detailed **impact assessment**, corresponding to the **advice of the European Scientific Advisory Board on Climate Change (ESABCC)**

► **The 2040 target (recommendation)**

- **90% net GHG reduction** compared to 1990
- Indicative **GHG budget for 2030-2050** ⇒ **16 Gt CO<sub>2</sub>eq**
- To meet this target, the analysis shows that, **in 2040**:
  - Remaining **gross GHG emissions** in the EU should be **less than 850 Mt CO<sub>2</sub>eq**
  - **Carbon removals** (land-based and industrial) should reach **up to 400 Mt CO<sub>2</sub>eq**



## Cost of Inaction for the EU

► **Historical**: 200,000 deaths and €650 billion in economic losses from 1980-2022, of which €170 billion in last 5 years.

► **Projections (conservative estimate)**: comparing 1.5 degree-compatible and higher warming scenarios:

- Inaction could **lower GDP by about 7% by 2100**
- This could mean a **cumulative cost of €2.4 trillion 2031-2050**

## Delivering the 2030 vision: the **Fit for 55** Package





## The Fit for 55 Package: an overview

### Pricing

Stronger ETS including aviation  
 Extending the ETS to maritime, road transport, and buildings  
 Updated Energy Taxation Directive  
 Carbon Border Adjustment Mechanism

### Targets

Updated Effort Sharing Regulation  
 Updated LULUCF Regulation  
 Updated Renewable Energy Directive  
 Updated Energy Directive

### Rules

Stricter CO<sub>2</sub> performance for cars and vans  
 New infrastructure for alternative fuels  
 ReFuelEU: More sustainable aviation fuels  
 FuelEU: Cleaner maritime fuels

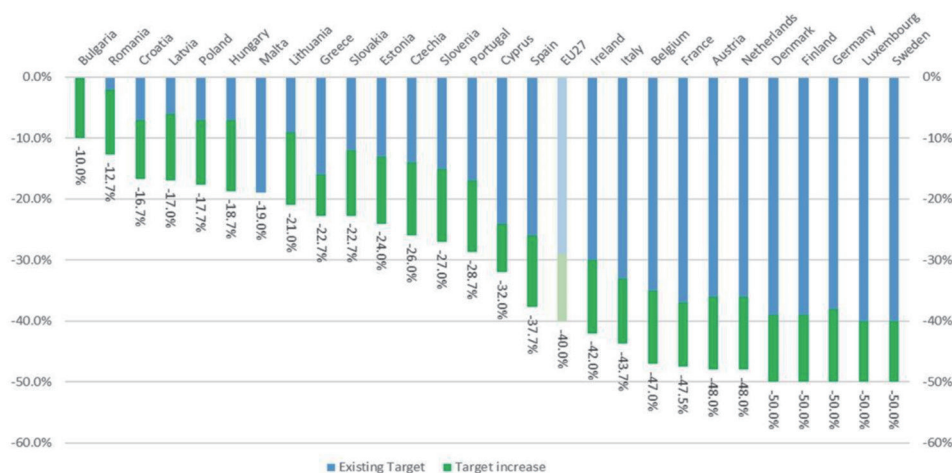
### Support measures

Using revenues and regulations to promote innovation, build solidarity and mitigate impacts for the vulnerable, notably through the new Social Climate Fund and enhanced Modernisation and Innovation Funds

## Working together with Member States: NECPs

- The National Energy and Climate Plans outline how the EU countries intend to address decarbonisation, energy efficiency, energy security, internal energy market, research, innovation and competitiveness.
- Member States submitted draft NECPs (period 2021-2030), which the Commission reviewed and provided recommendations on. The final NECPs were submitted by end-2019, following consultations with citizens, businesses and regional authorities.
- Progress is reported every 2 years, and the Commission will monitor the EU's progress as a whole towards achieving the targets set out in the State of the Energy Union report.

## The Effort Sharing Regulation (ESR)



Increased EU's 2030 ambition & Member States' GHG reduction targets as agreed/adopted in 2023

## EU Emissions Trading System (EU ETS)



- A system where total emissions by certain sectors are capped. Companies can trade emissions permits and buy more if they emit more (cap and trade).
- The cap is reduced every year, so companies are incentivised to reduce emissions.
- In 2023, ETS sectors emissions reductions were - 47% (in comparison to 2005 levels).
- Applies to emissions from the electricity and heat generation, industrial manufacturing and aviation within Europe (36% of EU greenhouse gas emissions), as well as maritime.

## EU ETS expansion

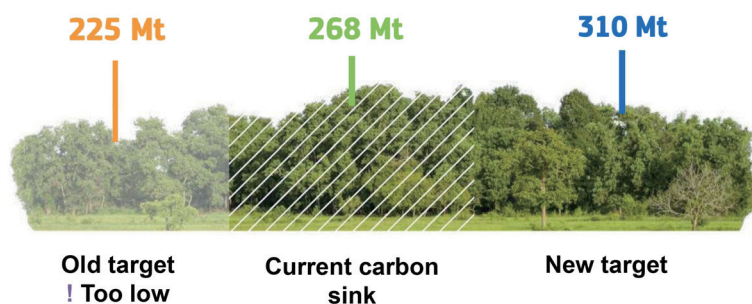
Aviation is part of the EU ETS since 2012, but ETS will end free allocations and incentivise the use of sustainable aviation fuels.

From 2024, the EU ETS will gradually start covering maritime transport, and will end up covering all large ships travelling to, from and within the EU.



## The Land Use, Land Use Change and Forestry (LULUCF) Regulation

New targets to **increase**  
our **natural carbon sink**:



2021-2025: EU target for net carbon removals by natural sinks aligned with current LULUCF ('no-debit').

2026-2030: -310 million tonnes of CO<sub>2</sub> equivalent by 2030.

## Achieving zero emission road transport

The revision of the CO<sub>2</sub> standards for new cars & vans: stricter emission targets in line with the EU's goal of climate neutrality by 2050.

**55%**

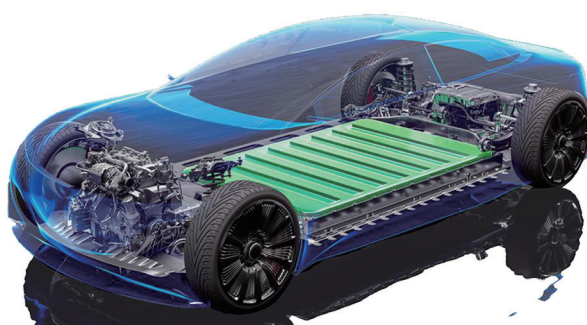
reduction of emissions  
from cars by 2030

**50%**

reduction of emissions  
from vans by 2030

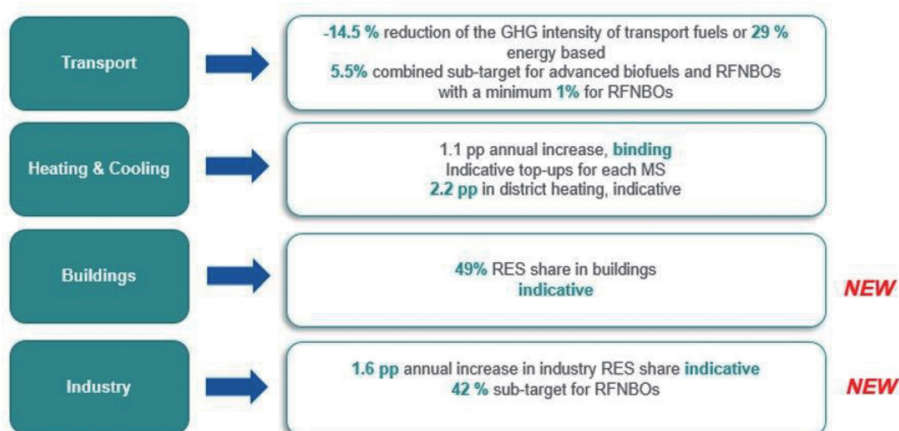
**100%**

new cars & vans by 2035  
to be zero-emission



## Renewable Energy Directive (RED III)

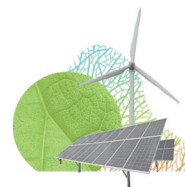
Increases the EU renewables target for 2030 from 32% to 42.5%, with an aspiration to get to 45%, and enables faster permitting for renewables





## Energy Efficiency Directive (EED)

- Increased EU energy efficiency target
- Reinforcement of the Energy Efficiency First Principle
- A more energy efficient public sector



### Savings achieved so far:

21.7% for primary energy consumption & 21.4% for final energy consumption

### New target:

-11.7% for both primary and final energy consumption (based on REF2020 projections)



## Alternative Fuels Infrastructure Regulation (AFIR)

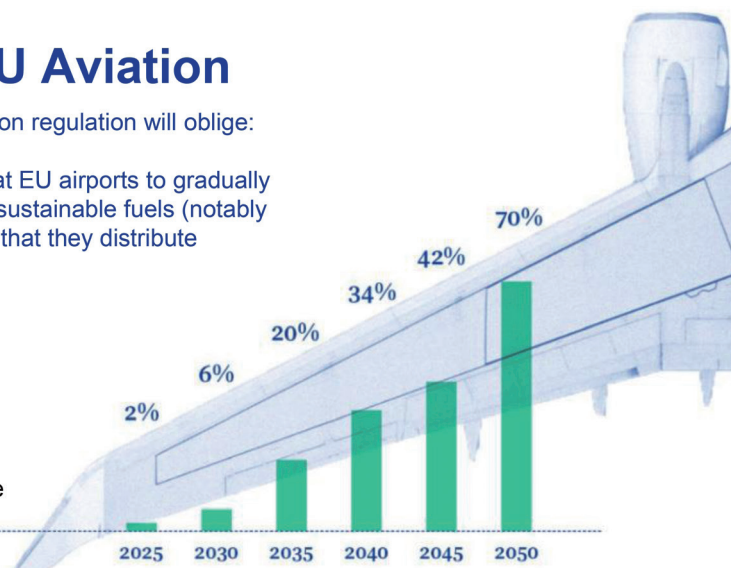
- Recharging points for cars & vans: distance-based target on the TEN-T network + national fleet-based targets.
- Recharging points for heavy duty vehicles (HDVs): distance-based targets along TEN-T network, overnight recharging + urban nodes.
- Hydrogen refuelling points for cars & HDVs: mandatory targets along TEN-T network + urban nodes.
- LNG refuelling points for HDVs: limited until 2025 to fill remaining gaps.
- Further objectives for the development of maritime and air transport infrastructure.

## ReFuelEU Aviation

The ReFuelEU aviation regulation will oblige:

Aircraft fuel suppliers at EU airports to gradually increase the share of sustainable fuels (notably synthetic fuels) that they distribute

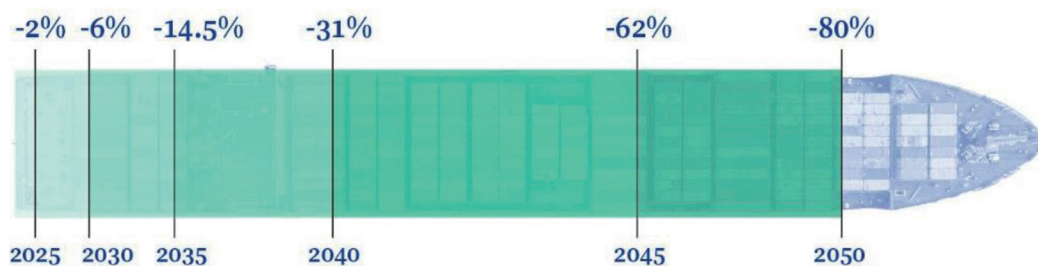
Minimum share of supply of sustainable aviation fuels (in %)



## ReFuelEU Maritime

GHG intensity of the energy used on-board to be gradually reduced

Annual average carbon intensity reduction compared to the average in 2020



Use of onshore power supply for most polluting ships required at berth



## EU ambitions for COP30 | AMAZÔNIA

UNITED NATIONS CLIMATE CHANGE CONFERENCE

COP30 will take place in Belém, Brazil, from 10 - 21 November 2025

What's at stake:

- Submission of new Nationally Determined Contributions (NDCs)
- Biennial Transparency Reports and NDC synthesis reports: collective aspiration vs. Reality
- Follow-up to the Global Stocktake
- Conclusion of the work programme on adaptation indicators

## Ambitious expectations for the next NDCs

It is likely that the collective ambition level of the new NDCs won't keep the 1.5C goal within reach; COP30 must respond to that ambition gap.

Therefore, the EU has been calling all partners to submit NDCs that are:

- Consistent with the IPCC and the global stocktake in line with 1.5°C;
- Absolute, economy-wide reduction targets covering all GHG, sectors, and categories; and
- Aligned with steep and credible emissions reductions toward their respective mid-century net zero goals.

The EU has begun preparations for its new NDC with the publication of the Commission's Communication on Europe's 2040 climate target in the beginning of 2024.

The Commission intends to present a legislative proposal to enshrine a 90% emission reduction target for 2040 in the European Climate Law. This target will inform the submission of the new EU NDC for 2035.



## EU Green Diplomacy

- The EU is well aware of **global scale of challenge**:
- The EU will always be **import-dependent**



*Approach:*

- **International leadership** in multilateral fora (COP, OECD, WTO etc.)
- **EU global financing and technical support programs**
- **Free Trade Agreements** (TSD chapters)
- **Bilateral Green Partnerships**

## The EU-RoK Green Partnership



*"The EU and the Republic of Korea **share the ambition of a climate-neutral future**. The launch of our Green Partnership will help us towards that goal. We will now work on the **convergence in key areas**, and deepen cooperation on strategic, clean energy projects. Because it is **good for our supply chains, good for our competitiveness and good for the planet**."*

- Implementation of Paris agreement
- Renewables and Energy Efficiency
- Clean and Just Transition
- Biodiversity & Forest
- Circular Economy and Pollution
- Joint Cooperation in third countries

► **Green Partnership is supported by a dedicated EU project (4 yrs)**

### Budget / Duration

4 million euros  
2024 - 2028

### Target

Outreach KR Stakeholders  
(youth, CSO, academia,  
business, cities)

### Objectives

- Strong Partnership
- Green Transition
- Public Diplomacy







**Thank you**

**DELEGATION OF THE EU  
TO THE REPUBLIC OF KOREA**



## Speaker

### Hyungkwan Ryu

Deputy Director of Climate Change Strategy Division  
Ministry of Environment

## Career History

- 2050 Carbon Neutrality Committee (2021 ~ 2022)
- Climate Change Strategy Division, Ministry of Environment (2024 ~ )

# **NDC, Present and Future Ministry of Environment, Republic of Korea**

2025. 8. 1.

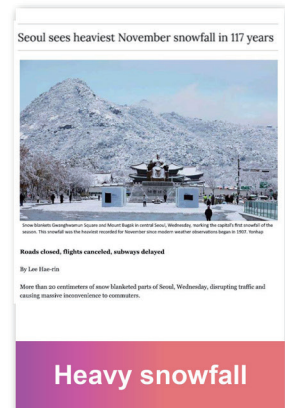
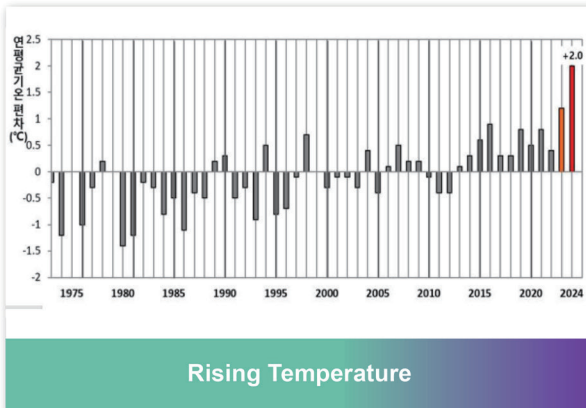


Ministry of Environment

## **Contents**

- I. Climate Change in Korea**
- II. Current Status of GHG emissions**
- III. 2030 NDC Roadmap**
- IV. Preparation for 2035 NDC**

## I . Climate Change in Korea



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## II . Current Status of GHG emissions

**Tentative GHGs emission of 2023 shows that 11.5% reduction compared to 2018  
3.4% reduction compared to 2022**



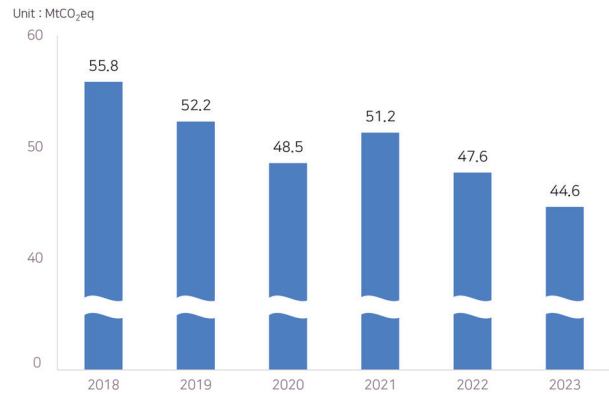
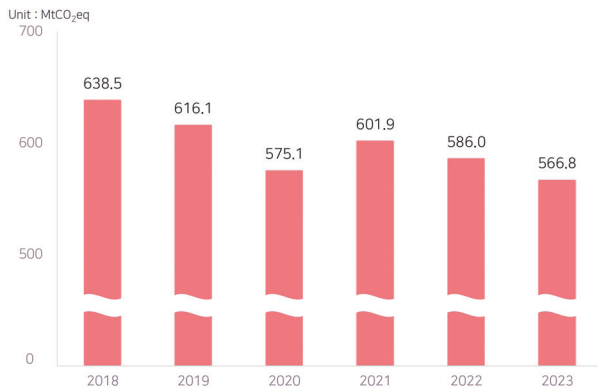
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## II . Current Status of GHG emissions

◇ Energy : ('18) 638.5 → ('23) 566.8 (△11.2%)

◇ Industry : ('18) 55.8 → ('23) 44.6 (△20.1%)



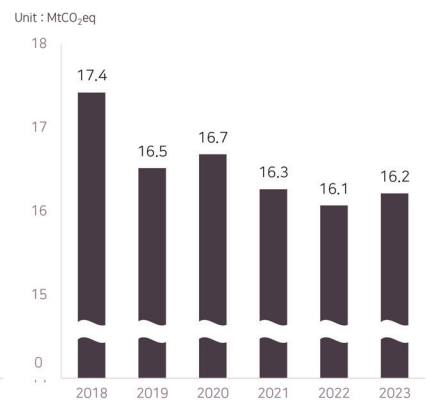
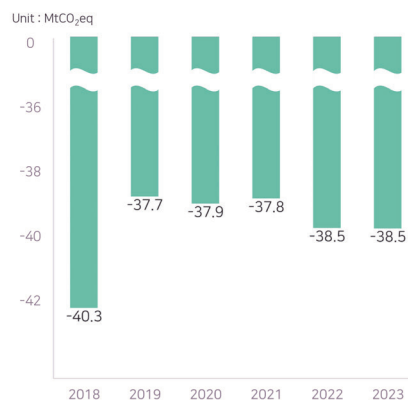
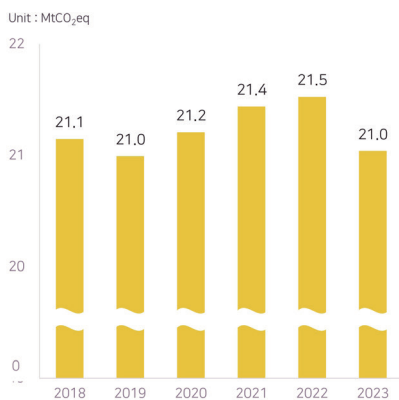
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## II . Current Status of GHG emissions

◇ Agriculture : ('18) 21.1 → ('23) 21.0 (△0.5%)

◇ LULUCF : ('18) △40.3 → ('23) △38.5 (△4.5%)

◇ Waste : ('18) 17.4 → ('23) 16.2 (△6.9%)

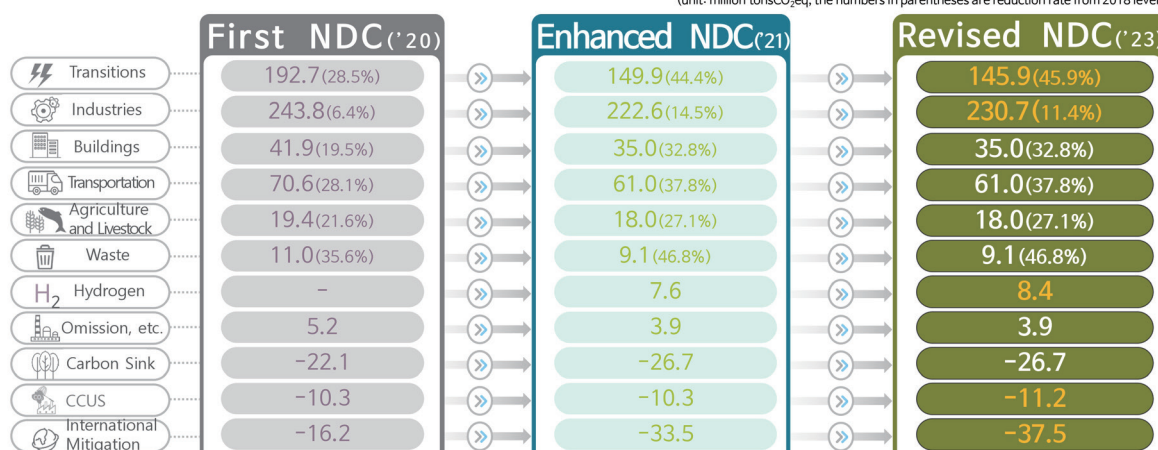


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### III. 2030 NDC Roadmap

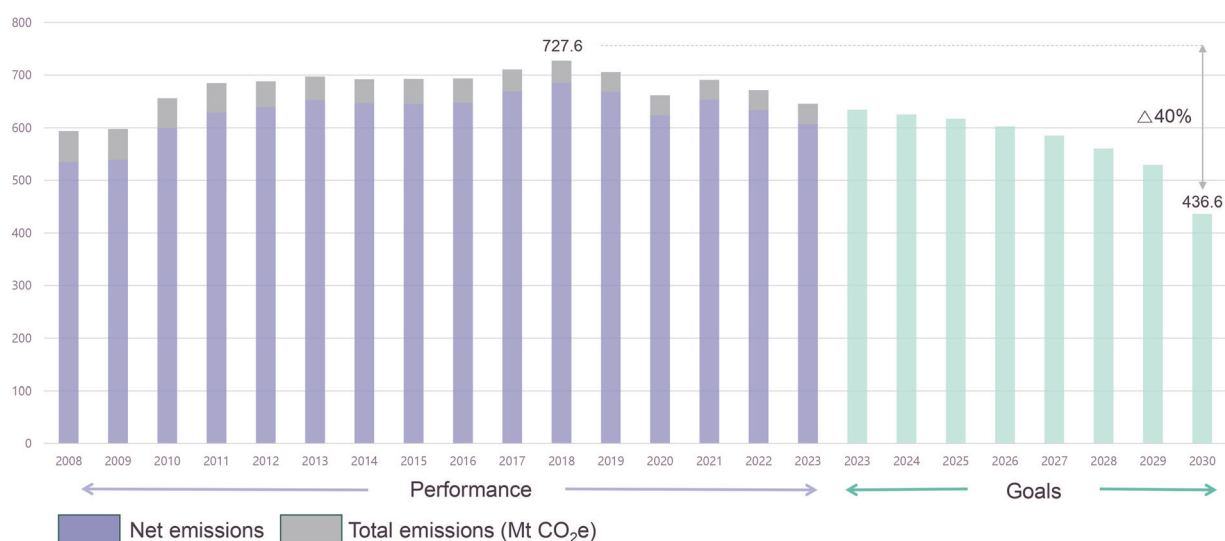
Reducing 40% of GHG emissions from 2018 level by 2030 (727.6 → 436.6 million tonsCO<sub>2</sub>eq)

(unit: million tonsCO<sub>2</sub>eq, the numbers in parentheses are reduction rate from 2018 level)



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### III. 2030 NDC Roadmap

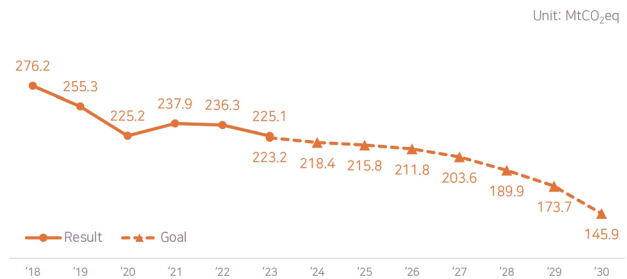


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### III. 2030 NDC Roadmap

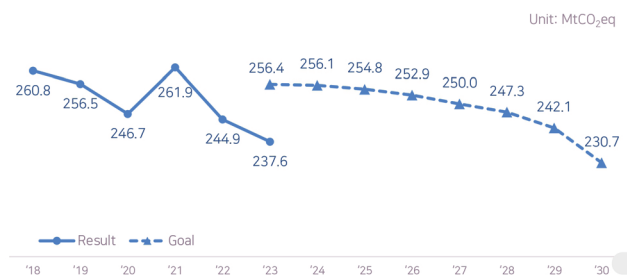
#### ⚡ Energy Transition

- Reduce coal power generation\* and Increase renewable energy\*\*
- \* ('23) 31.4% → ('30) 17.2%, \*\* ('23) 8.4% → ('30) 21.7%



#### 🏭 Industry

- Support and promote innovations and technologies to lower GHG emissions
- Technology Innovation Fund
- Support Investments for the private sector through subsidies, loans, funds, etc.

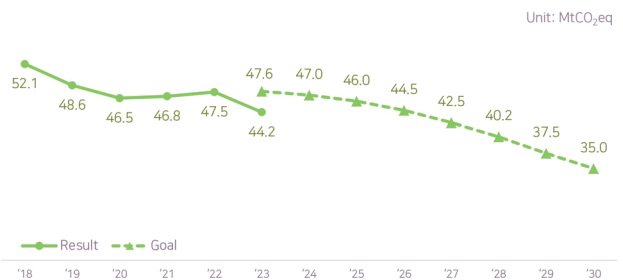


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### III. 2030 NDC Roadmap

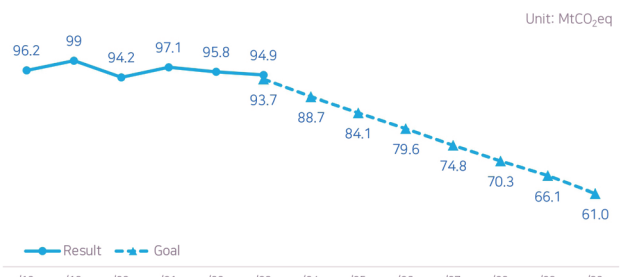
#### 🏠 Building

- Strengthening the energy performance
- Zero-energy buildings of new buildings
- Strengthen the energy performance of existing buildings



#### 🚗 Transport

- Expanding the use of electric and hydrogen vehicles
- Promote the use of public transportation
- Raising biodiesel blending ratio
- Green railway, aviation and shipping

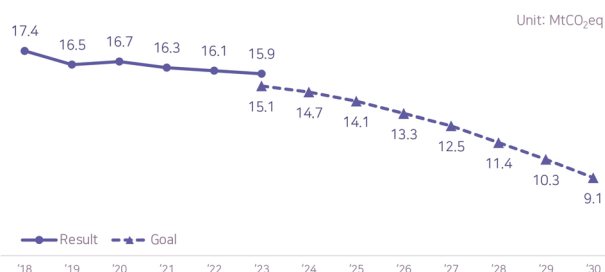


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### III. 2030 NDC Roadmap

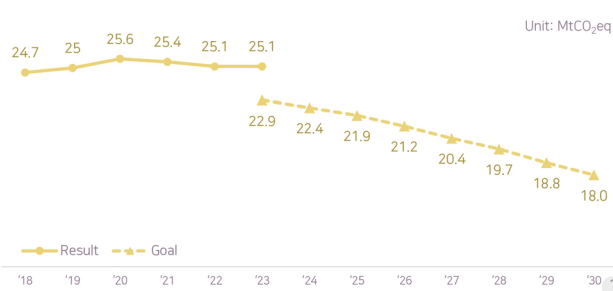
#### Waste

- Source reduction of waste at the production, distribution, and consumption stages
- Stabilize supply of waste as a recycling raw material
- Methane gas recovery from landfill



#### Agriculture, Livestock, Fisheries

- Eco-friendly farming like nitrogen fertilizer reduction
- GHG reduction in the livestock sector
- Reduction and conversion of fossil energy use in the agricultural and fishing machineries



### IV. Preparation for 2035 NDC

#### Considerations on 2035 NDC

##### Paris Agreement Article 4.3

- The next NDC is more advanced than the current NDC
- Reflecting the highest possible level of reduction ambition

##### COP28('23)

- Transitioning the energy system away from fossil fuels
- Triple renewable energy and double energy efficiency by 2030
- Utilize carbon-free technologies such as nuclear, hydrogen.

##### IPCC AR6

- Globally, 45% reduction by 2030 and 60% reduction by 2035 compared to 2019 (based on median)

#### 2035 NDC

##### 2030 NDC + Carbon Neutrality

- Korea's 2030 reduction target: Up from 40% reduction compared to 2018
- Implementing the 2050 carbon neutrality target

#### Basic Direction

##### International responsibility

Establish the NDC to join the international climate response effort

##### Scientific basis

Setting an objective reduction target based on scientific modeling centered on the experts in each sector and verified by external experts

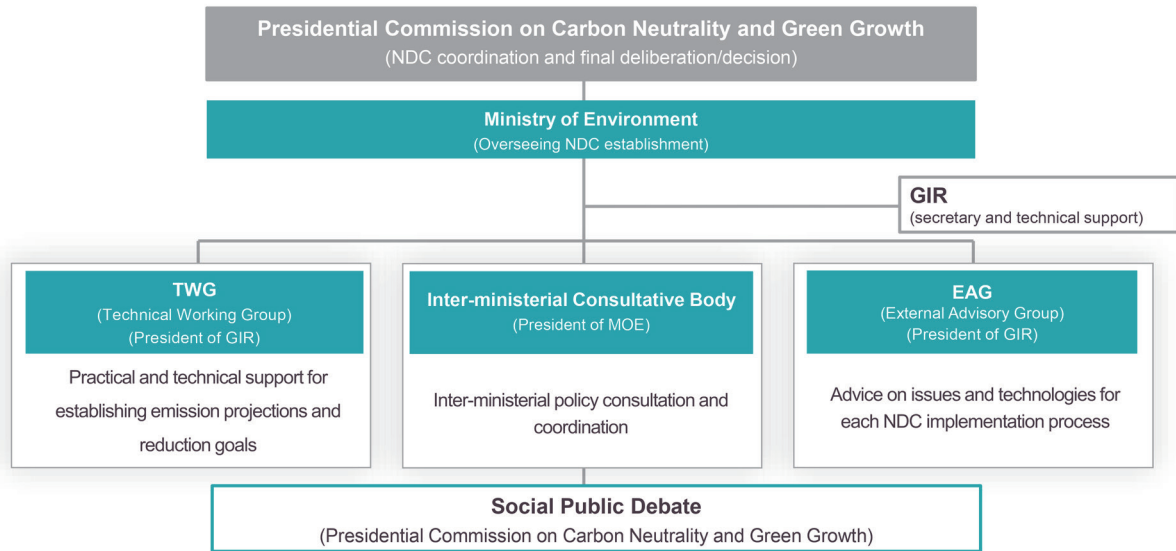
##### Engagement of stakeholders

Forming a social consensus on GHG reduction with stakeholders such as industry and future generations



## IV. Preparation for 2035 NDC

### ◆ Institutional arrangement of 2035 establishment



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## IV. Preparation for 2035 NDC

### ◆ Workflow of GHG reduction Target setting



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## Closing remarks

- **South Korea is doing its utmost to prepare and submit the next NDC, considering global responsibilities and scientific evidence.**

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# Panel Discussion

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## Moderator

**Seung Jick Yoo**

Professor, Sookmyung Women's University

## Panelist

**Youngjun Cho**

Executive Director, Sustainable Management Institution  
at the Korea Chamber of Commerce and Industry (KCCI)

**Sangjae Ryu**

Co-representative, Korean Youth Climate Change Network, BigWave

**So Won Yoon**

Senior Researcher of GHG Reduction Research Team,  
Greenhouse Gas Inventory and Research Center of Korea



## Moderator

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### Seung Jick Yoo

Professor  
Sookmyung Women's University

## Career History

Professor YOO, Seung Jick, got Ph.D. in environmental economics from University of California at Berkeley in 1995, is a professor on environmental economics at Sookmyung Women's University since 2016. Before moving to Sookmyung Women's University, he has been the President of Greenhouse Gas Inventory & Research Center of Korea, the principal national agency in management of national and entity level GHG inventories and setting national, sectoral and entity-level greenhouse gas reduction targets and designing and implementation of K-ETS. He works on the effects of K-ETS and assessment of GHGs emission reductions in Korea.





## Panelist

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### Youngjun Cho

Executive Director

Sustainable Management Institution

at the Korea Chamber of Commerce and Industry (KCCI)

## Career History

Youngjun Cho is Executive Director of the Sustainable Management Institution at the Korea Chamber of Commerce and Industry (KCCI). He has experience in environmental policy, and corporate sustainability. Mr. Cho currently serves as a member of several national committees, including those advising the Korean government on carbon neutrality, renewable energy, and industrial transformation. His work focuses on aligning national policy, corporate strategy, and global sustainability standards.

He has worked on green transition, ESG strategies, and public-private cooperation for climate innovation.



## Panelist

### Sangjae Ryu

Co-representative  
Korean Youth Climate Change Network, BigWave

## Career History

Sangjae Ryu is a distinguished climate and energy specialist with extensive experience in hydrogen fuel cell R&D, carbon neutrality policy, and youth climate leadership. He currently serves as Co-representative of BigWave, Korea's leading youth climate action group, and as Manager at Hyundai Motor Company's Electrification Energy Solution Process Technology Development Team, where he oversees advanced R&D on MEA processes for hydrogen fuel cells in mobility applications. His research interests include climate policy, hydrogen mobility, and youth engagement in climate governance.

Ryu's expertise spans the development and implementation of national carbon neutrality and green growth strategies. He has played a pivotal role in Korea's Carbon Neutrality and Green Growth Implementation Monitoring Team, evaluating national GHG reduction performance and policy progress. His international engagement includes participating in policy study tours with the Asia Society and Korea Foundation, facilitating dialogue with EU and US energy and transport policymakers, and organizing workshops for Korean youth on global decarbonization trends. His dedication was acknowledged with the Prime Minister's Commendation for Carbon Neutrality and Green Growth Merit in 2024.



## Panelist

### So Won Yoon

Senior Researcher of GHG Reduction Research Team  
Greenhouse Gas Inventory and Research Center of Korea

## Career History

Dr. So Won Yoon is currently a senior researcher at Greenhouse Gas Inventory & Research Center of Korea, GIR, having joined the GIR when it was founded in 2010. As the team manager, she played a pivotal role in developing Korea's 2020 national greenhouse gas reduction target, the national reduction roadmap, the intended nationally determined contribution (2030 national greenhouse gas reduction target), and the 2050 LEDS.

She also contributed to the design of Korea's emissions trading system cap setting and the system for monitoring the status of GHG reduction implementation. Currently, she is actively involved in the establishment of Korea's 35 NDC.

Dr. Yoon began her doctoral studies in 1995 and has conducted various projects using the AIM model. After earning her Ph.D. in 2001, she joined the climate policy team at IGES in Japan, where she gained extensive experience in the global climate system and conducted a project using the Leap model.

Since joining GIR, she has been leading greenhouse gas mitigation policy support projects utilizing bottom-up reduction models such as the message model and overseeing the implementation of greenhouse gas reduction measures.

She holds her master's degree in environmental ecology planning at Seoul National University and received her Ph.D. in environmental resources from SangMyung University.

# Side Event

## Lessons from the First BTR :

Sharing Experiences and Building Capacity for Enhanced Transparency in Developing Countries

### Moderator



[PATPA]

Jost Wagner

Managing Director, The Change Initiative  
& Chief Navigator(Executive Director), Asia-Pacific Futures Network

### Panelist



[Rwanda]

David Ukwishaka

Greenhouse Gas Inventory Officer,  
Rwanda Environment Management Authority (REMA)



[Zimbabwe]

Edwin Nyamugadza

GIS and Remote sensing specialist / Mapping officer, Forestry Commission



[Philippines]

Emmanuel Causon

Development Management Officer II, Climate Change Commission



[Türkiye]

Hasan Alsancak

Environmental Engineer, Ministry of Transport and Infrastructure



[Sri Lanka]

Nithini Gardiye Punchihewa

Development officer, Ministry of Environment



[Argentina]

Tamara Legnazzi

GHG Inventory and NIR Coordinator, Directorate of Climate Impact





**16th International  
Greenhouse Gas  
Conference**



Ministry of Environment

**Greenhouse Gas Inventory  
and Research Center**