

# Pathway to Net-zero Emissions: Taiwan's Action Plan on Comprehensive Carbon Reduction



**National Development Council**

January 23, 2025



## **Contents of Presentation**

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- 2. Targets for Greenhouse Gas Reduction**
- 3. Carbon Reduction Plans**
- 4. Institutional Innovations**
- 5. Financial Planning**
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# 1. The Background

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# Development History of the Pathway to Net-zero Emissions in 2050

To implement the five strategies for “2050 Green Growth and Net-zero Transition” contained in President Lai’s “National Project of Hope,” align with international standards by establishing Nationally Determined Contribution (NDC) targets, and draft a comprehensive carbon reduction action plan, the administration team is taking pragmatic and steady steps to achieve the 2050 net-zero emission goal.



# Taiwan's Action Plan on Comprehensive Carbon Reduction

## Green Growth and 2050 Net-zero Transition

National Vision

Five Strategies for Project of Hope

Constructing Intelligent Strategies for Green Energy

Promoting Dual-axis Transformation of Industries in Digitalization and Green Development

Creating a Net-zero, Sustainable Green Lifestyle

Government as the Strongest Pillar for Net-zero Transition

An Inclusive and Just Transition for All

Action Plan

Re-optimization

New Flagship Initiatives  
Intensifying Carbon Reduction Efforts

Flagship Carbon Reduction Projects Led by Six Major Sectors

Foundation-building

12 Key Strategies of Net Zero

Dynamic Adjustments

Implementing Self-directed Carbon Reduction

Six major innovative mainstays

Technological Innovation

Financial Support

Carbon Pricing

Regulatory Adjustment

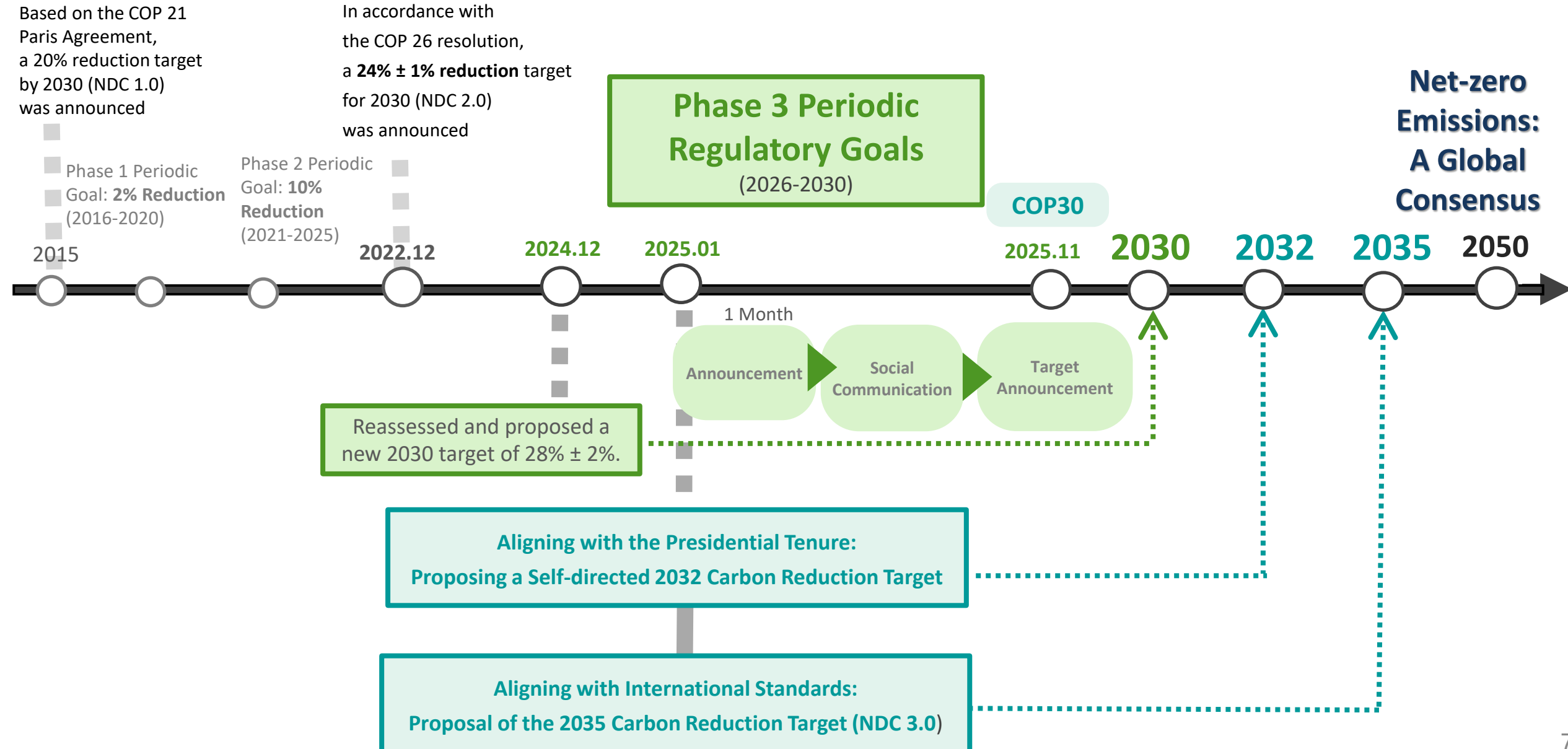
Green-collar Professionals

Community-driven Approaches

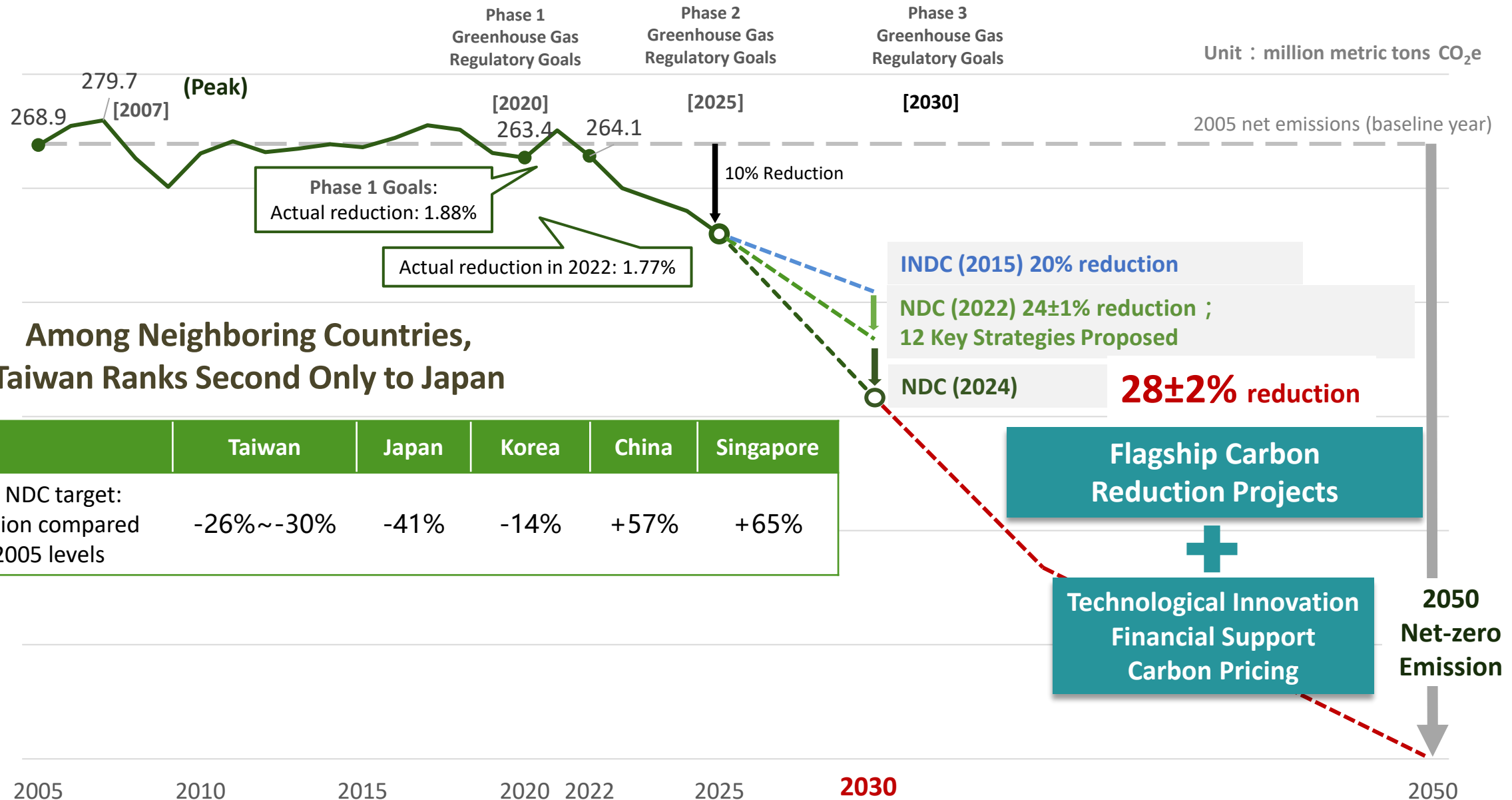
## **2. Reduction Targets for Greenhouse Gas Emissions**

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# New Carbon Reduction Targets



# Phase 3 Greenhouse Gas Periodic Regulatory Goals





# 3. Carbon Reduction Plans

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# Taiwan's Action Plan on Comprehensive Carbon Reduction

## Top Down: Introduce 20 Flagship Carbon Reduction Projects for Six Major Sectors and Intensifying Carbon Reduction Efforts

### Energy Sector

Ministry of Economic Affairs

- Accelerating Renewable Energy Development
  - Solar Photovoltaics [Ministry of Economic Affairs]
- Accelerating Renewable Energy Development
  - Offshore Windpower [Ministry of Economic Affairs]
- Renewable Energy Breakthrough
  - Geothermal [Ministry of Economic Affairs]
- Renewable Energy Breakthrough
  - Small hydro [Ministry of Economic Affairs]
- Energy – Storage Technology [Ministry of Economic Affairs]
- Methane Pyrolysis [Ministry of Economic Affairs]
- Supply Chain of Hydrogen energy (with Ammonia) [National Development Council]
- Carbon Capture, Utilization and Storage (CCUS) [National Development Council]

### Residential & Commercial Sector

Ministry of the Interior

- Net-zero Buildings [Ministry of the Interior]
- Deep Energy Saving
  - Residential and Commercial Sectors [Ministry of Economic Affairs]

### Agriculture Sector

Ministry of Agriculture

- Agricultural Ecological Resilience and Carbon Sinks [Ministry of Agriculture]
- Low-Carbon Sustainable Agriculture [Ministry of Agriculture]

### Manufacturing Sector

Ministry of Economic Affairs

- Industrial Self-regulated Emission Reduction [Ministry of Economic Affairs]
- Energy Efficiency - Manufacturing Sector [Ministry of Economic Affairs]
- State-owned Enterprise Carbon Reduction
  - China Steel Corporation [Ministry of Economic Affairs]
- State-owned Enterprise Carbon Reduction
  - CPC Corporation [Ministry of Economic Affairs]

### Transport Sector

Ministry of Transportation

- Commercial Vehicle Electrification and Decarbonization [Ministry of Transportation]
- Sustainable Aviation Fuel (SAF) [Ministry of Transportation]

### Environment Sector

Ministry of Environment

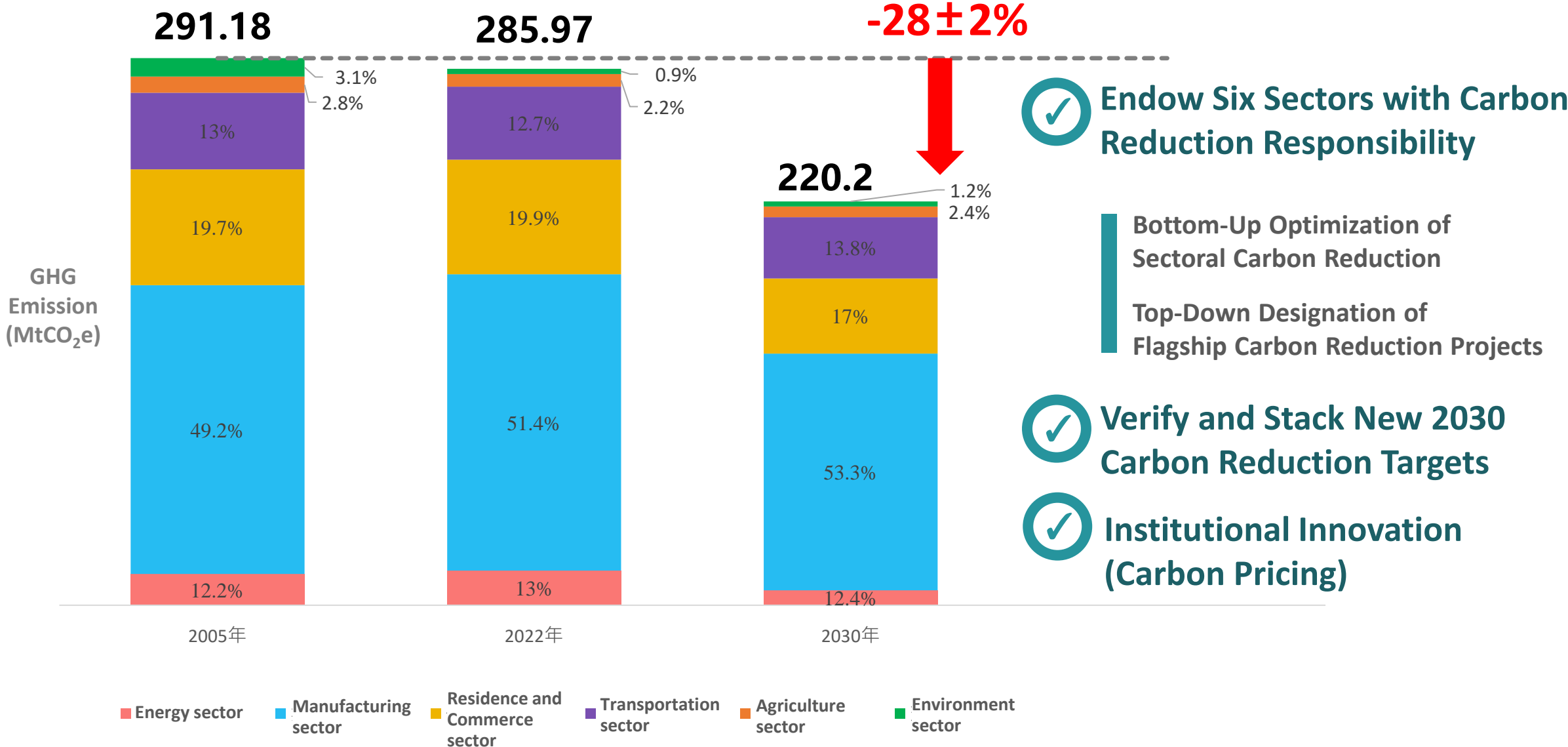
- Resource Recycling [Ministry of Environment]
- Net-Zero Sustainable Green Living [Ministry of Environment]

\* The Environmental Department's Flagship Program Supports Carbon Reduction in Manufacturing, Residential and Commercial, Transportation, and Agricultural Sectors.



Bottom-Up: Dynamically Adjust 12 Key Strategies and Propose 80 Sectoral Carbon Reduction Plans

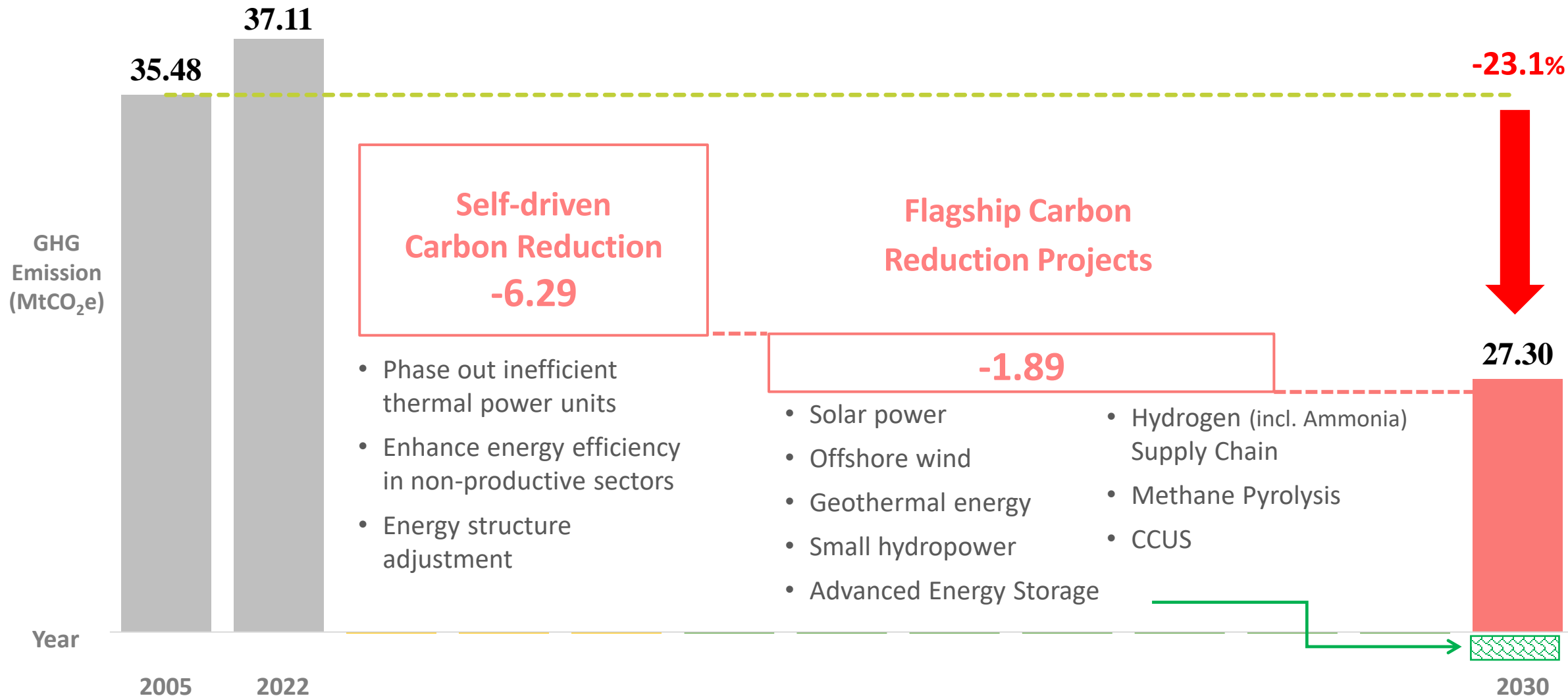
# Comprehensive Carbon Reduction Targets for Six Major Sectors



Note: The carbon reduction target for 2030 is calculated based on a 27% reduction.

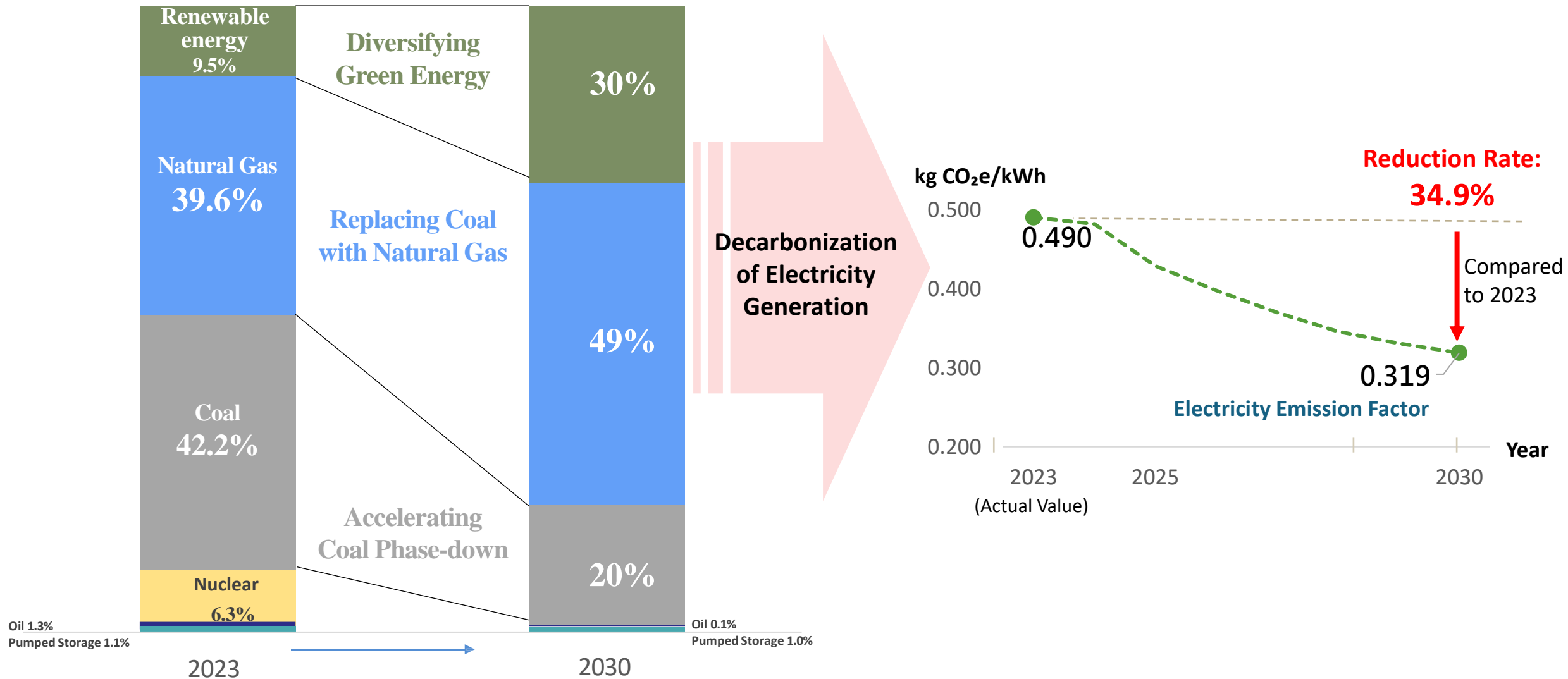
# Energy Sector GHG Reduction Actions (1/4)

■ GHG reduction by 2030: 8.18 MtCO<sub>2</sub>e



# Energy Sector GHG Reduction Actions (2/4)

## ■ Electricity emission factor to decrease to 0.319 kg CO<sub>2</sub>e/kWh by 2030



**Note:** Electricity Emission Factor = (GHG Emissions from Power Sold by Electricity Enterprises - GHG Emissions from Line Loss) / Total Electricity Sales

# Energy Sector GHG Reduction Actions (3/4)

## Accelerating Renewable Energy



### Solar Power

- ✓ **Installation Space** Incentives for rooftops; mandatory installation requirement for new buildings
- ✓ **Efficiency Improvement** Replacement of existing facilities with high-efficiency solar panels
- ✓ **Procedural Reform** Inter-governmental coordination mechanism; application support platform



### Off-shore Wind

- ✓ **Zonal Development** Continue promoting zonal development
- ✓ **Marine Spatial Inventory** Identify potential new offshore areas
- ✓ **Capital Investment** Attract private funds for windfarm development

## Breakthroughs in Renewable Energy



### Geothermal Energy

- ✓ **Capacity Enhancement** State-owned enterprises leading the introduction of drilling equipment
- ✓ **International Cooperation** Expansion of deep geothermal drilling projects
- ✓ **Procedural Reform** Inter-governmental coordination mechanism; indigenous tribal consultation



### Small Hydropower

- ✓ **Project Sources Expansion** Investigate potential sites
- ✓ **Incentive Increase** Review feed-in tariffs; develop reward mechanisms
- ✓ **Procedural Reform** Govt-led land integration for project investment

## Deploying Advanced Technologies



### Advanced Energy Storage

- ✓ **End User Energy Storage** Design the time-of-use tariff for behind-the-meter storage; establish off-site joint demo zones
- ✓ **FC Subsidy Expansion** Provide subsidies for fuel cell installation.

# Energy Sector GHG Reduction Actions (4/4)

## Deploying Advanced Technologies

### Flagship Carbon Reduction Projects



#### Hydrogen (Incl. Ammonia) Supply Chain

- ✓ **Hydrogen Application** Expand hydrogen/ammonia co-firing technology and fuel cell deployment
- ✓ **Infrastructure** Build hydrogen refueling station; expand liquid ammonia storage
- ✓ **Hydrogen supply** Prioritize low-carbon ammonia imports; develop domestic hydrogen production technology



#### Methane Pyrolysis

- ✓ **Pilot site** Establish hydrogen co-firing pilot site
- ✓ **Expansion** scale up hydrogen production from methane pyrolysis



#### Carbon Capture, Utilization, and Storage (CCUS)

- ✓ **Technology Boost** develop efficient and low-cost carbon capture technology and promote steel-carbon co-production
- ✓ **Site Setup** Establish carbon storage pilot and commercial sites

### Self-driven Carbon Reduction

#### Phase-out Inefficient Thermal Power Units

- ✓ Replace old units with newly installed units by 2030

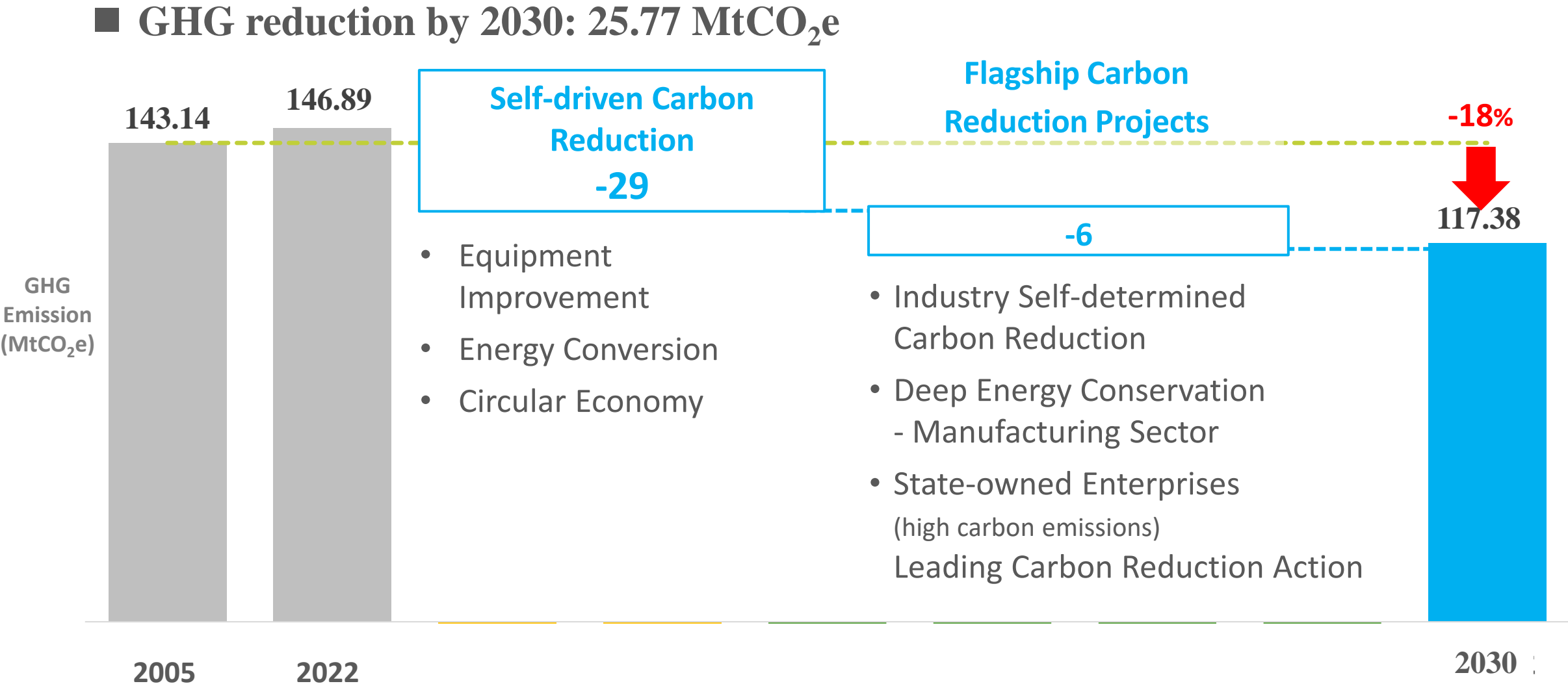
#### Enhance Energy Efficiency in Non-productive Sectors

- ✓ Evaluate replacement of air conditioning facilities over 9 years old with high-efficiency and convertible models

#### Energy Structure Adjustment

- ✓ Expand renewable energy and low-carbon energy supply

# Manufacturing Sector GHG Reduction Actions (1/2)





# Manufacturing Sector GHG Reduction Actions (2/2)



## Industry Self-determined Carbon Reductions

### Flagship Carbon Reduction Projects

- ✓ Assist the **top 500 emitting manufacturers** in implementing self-determined carbon reductions
  - Expert site visits; implement carbon reduction measures
- ✓ Assist **140,000 SME manufacturers** with low-carbon transformation
  - Promote carbon reduction in supply chains through "large enterprises leading small ones" with support from government resources

### Self-driven Carbon Reduction

#### Process Improvement

- ✓ Provide system optimization technical services
- ✓ Implement energy management and monitoring systems
- ✓ Promote green factory certificates



## Deep Energy Conservation

- Manufacturing Sector

- ✓ Implement **three key** guarantees to strengthen **ESCO service capacity**
  - \$NT10 billion project loan with credit guarantee
  - Risk reduction through insurance claims
  - Investment matchmaking for ESCO's
- ✓ **Three-stage Plan** for implementing industrial energy conservation
  - Establish an ESCO model (18 entities)
  - Introduce ESCO in state-owned enterprises (379 entities)
  - Expand to private enterprises (3,018 entities)

#### Fuel Switch

- ✓ Promote low-carbon production
- ✓ Match supply and demand for biofuels
- ✓ Expand green power use in manufacturing sector



## State-owned Enterprises (with high carbon emissions) to Lead Carbon Reduction Actions

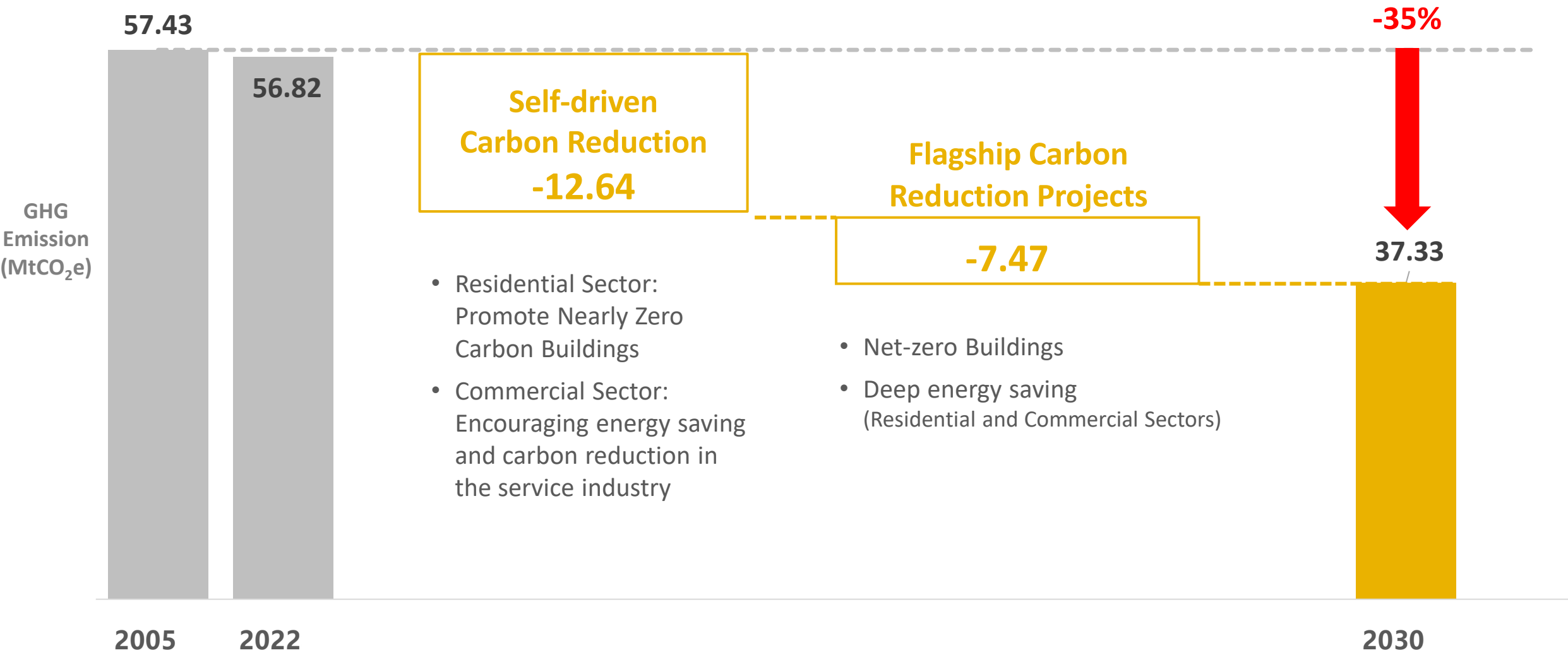
- ✓ **CSC Corporation Carbon Reduction**
  - Enhance energy efficiency
  - Apply low carbon material in blast furnaces
  - Increase steel scrap use
  - Apply carbon-free fuel in industrial furnaces
- ✓ **CPC Corporation Carbon Reduction**
  - Refining procedural adjustments
  - Use renewable energy
  - Use low-carbon materials
  - Enhance energy efficiency

#### Circular Economy

- ✓ Regional energy integration
- ✓ Invest in innovative tech R&D
- ✓ Waste resource recycling

# Residential and Commercial Sectors Carbon Reduction Projects (1/2)

■ Carbon Reduction Target for 2030: 20.1 (Mt CO<sub>2</sub>e)



# Residential and Commercial Sectors Carbon Reduction Projects (2/2)



## Net-zero Buildings

Old residential buildings and social housing move toward low carbon and net zero development

Expand building energy efficiency improvements

Dual transformation of smart and net zero building

### Existing Buildings

#### Building Energy Efficiency Improvement Demonstration Subsidy

Public-owned Building Demonstration Public Participation

Public-owned existing buildings and national park service buildings  
Expand public participation in the real estate industry, cooperatives, and building security industry

### New Buildings

#### Building Regulation Amendments and Implementation

- Revised energy conservation design standards (building energy efficiency)
- Develop and issue mandatory installation of solar PV regulation

### Innovative Technology

#### Apply Low-carbon Construction Methods and Digital Net-zero Applications

#### Residential Sector :

##### Promote Nearly Zero-Carbon Buildings

- ✓ Promote green buildings
- ✓ Nearly Zero-Carbon Building assessment
- ✓ Promote renewable energy
- ✓ Develop a building energy efficiency labeling system
- ✓ Existing buildings energy reduction management



## Deep energy saving (Residential and Commercial Sectors)

Advanced Energy Efficient Equipment and Practices

Mandatory control measures

Independent carbon reduction

Carbon reduction incentive mechanisms

### Residential

#### Boost Replacement of old, inefficient appliances before Raise Minimum Energy Performance Standards

- Extend the Appliance Replacement Campaign to 2026 and the Commodity Tax Refund Program for highly efficient appliances to 2030
- Enforce the current level 3 as new MEPS of refrigerators and air conditioners from 2030

### Commercial

#### Prioritizing the Large Energy Users & Implementing Energy-saving Measures

- Implementing ESCOs energy-saving plan, providing energy-saving equipment subsidies
- Raising the annual energy-saving target from 1% to 1.5% for large energy users
- Encouraging independent carbon reduction in the service industry (counseling, training, low-carbon fuel replacement, etc.)

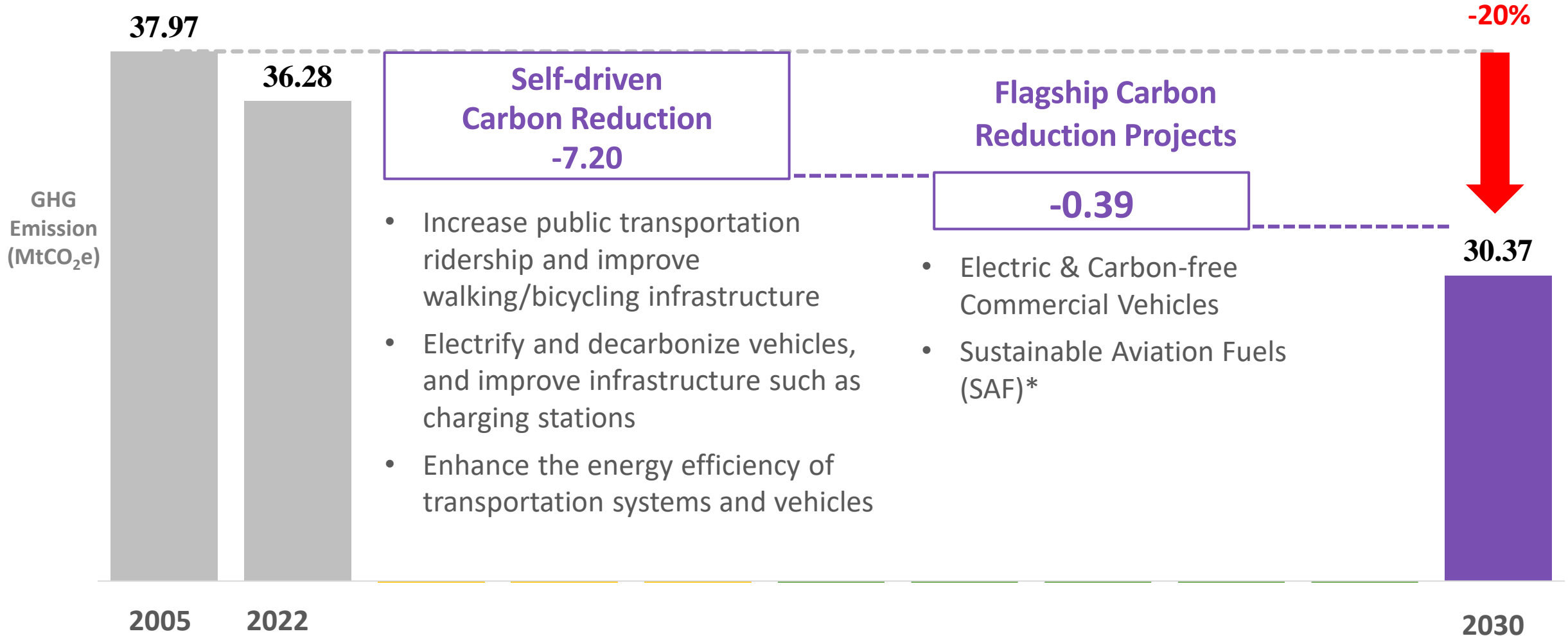
#### Commercial Sector: Encouraging energy saving and carbon reduction in the service industry

- ✓ Establishing mandatory control measures for the service industry
- ✓ Providing incentive mechanisms for carbon reduction in the service industry
- ✓ Encouraging independent carbon reduction in the service industry

# Transportation Sector Carbon Reduction Action Plans (2/2)

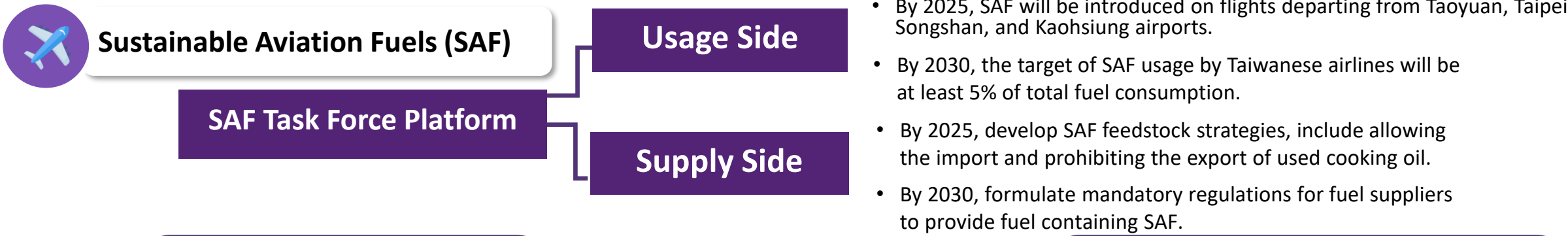
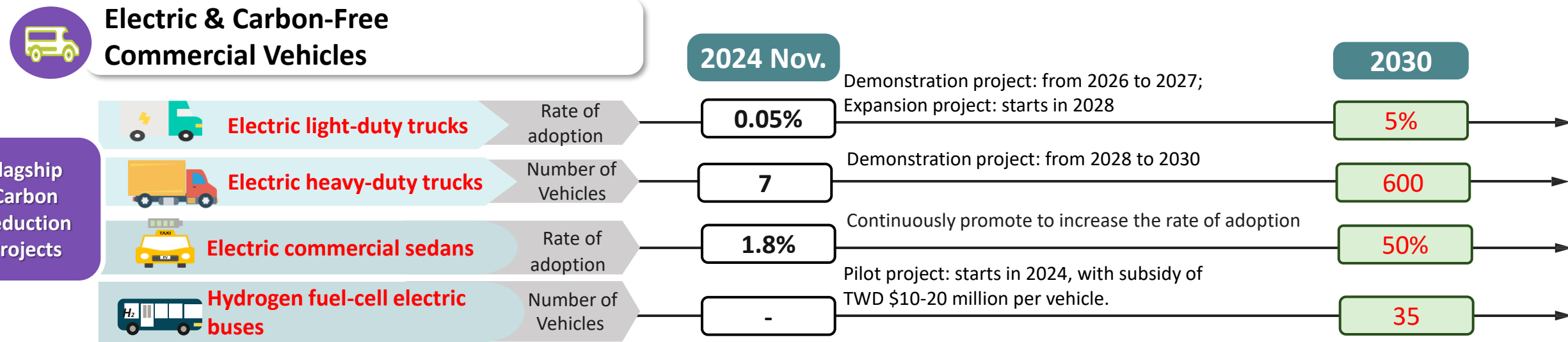
- The emission reduction target is 7.59 million metric tons of CO<sub>2</sub>e by 2030.

Unit: million metric tons of CO<sub>2</sub>e



\* Carbon Reduction for International Aviation is not included as it falls outside the scope of the NDC.

# Transportation Sector Carbon Reduction Action Plans (2/2)

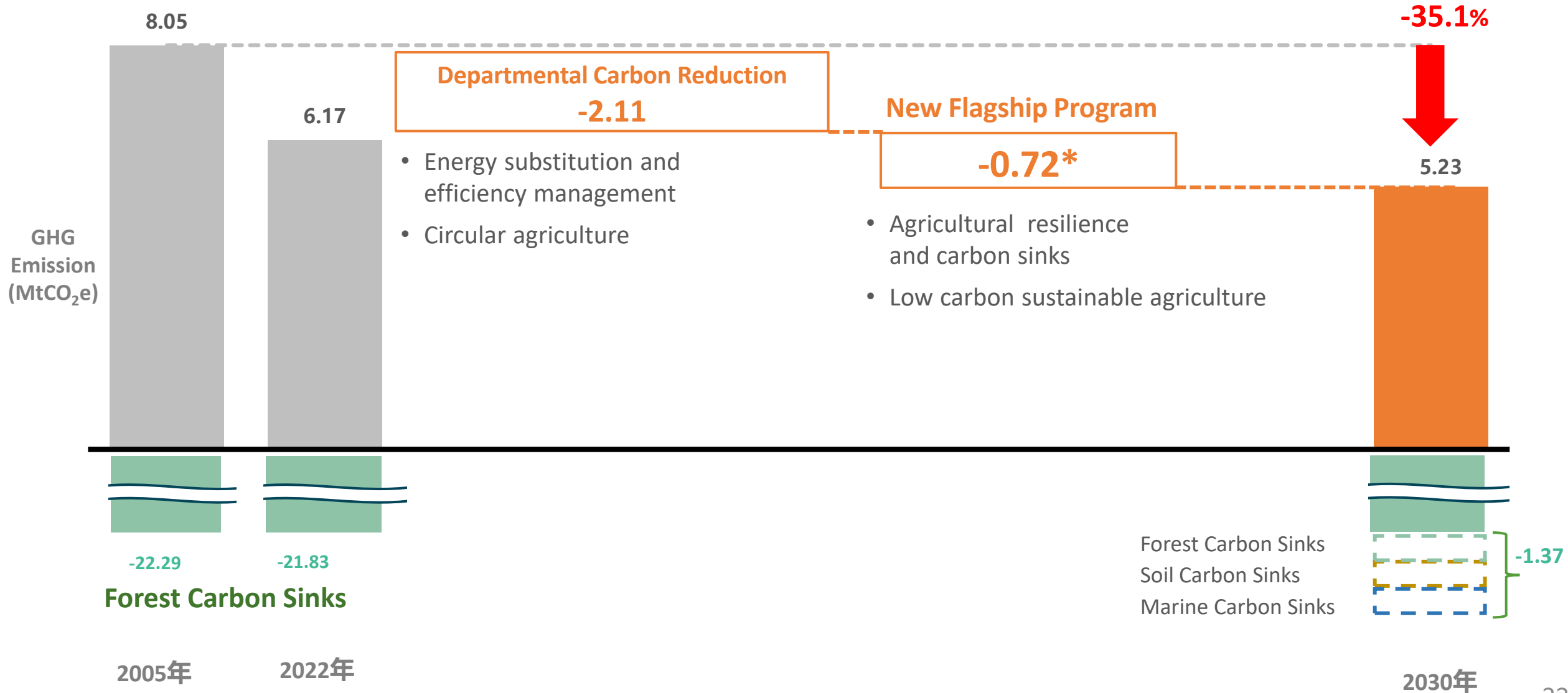


Self-driven Carbon Reduction

- **Increase public transportation ridership and improve walking/bicycling infrastructure**
    - ☑ Enhance the public transportation system
    - ☑ Provide fare discounts
- **Electric and carbon-free vehicles, and improve infrastructure such as charging stations**
    - ☑ Promote the electrification of city buses, passenger cars and scooters, and enhance the supporting infrastructure for the user environment.
- **Enhance the energy efficiency of transportation systems and vehicles**
    - ☑ Develop intelligent transportation systems, enhance vehicle energy efficiency and energy-saving tire management, switch to low-carbon garbage trucks, and promote the shore power program.

# Carbon Reduction in the Agricultural Sector (1/2)

## Carbon reduction target for 2030: 2.82 million tons CO<sub>2</sub>e



# Carbon Reduction in the Agricultural Sector (2/2)



## Agricultural Resilience & Carbon Sinks

- ✓ **Agricultural resilience** Enhancing agricultural climate risk management and discovering diversified agricultural patterns
- ✓ **Forest Carbon Sinks** Increase afforestation area; Improved forest management
- ✓ **Marine Carbon Sinks** Restoration and management of seagrass, mangroves, wetlands and salt marshes
- ✓ **Soil Carbon Sinks** Adjustment of crop tillage patterns; Application of soil biological resources

### Energy substitution and efficiency management

- ✓ Acquisition of fishing boat; Encouragement of fishing rest; Energy saving waterwheel; Rice bran instead of fuel



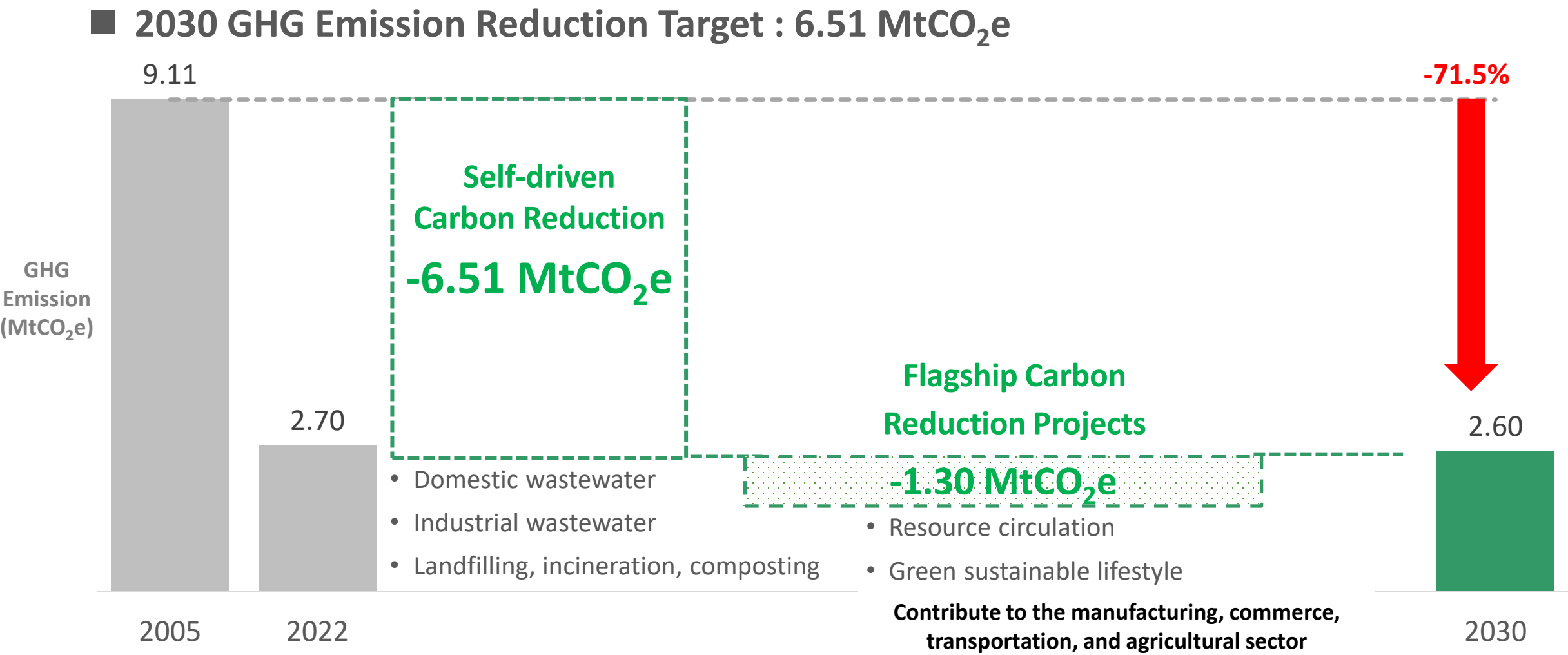
## Low Carbon & Sustainable Agriculture

- ✓ **Paddy Fields** Alternative wet and dry (AWD); Precision fertilization
- ✓ **Energy Efficiency Management** Acquisition of oversea based fishery ship; Livestock farm electricity saving
- ✓ **Circular Agriculture** Efficient and low carbon emission livestock nutrition model; Energy, feed, material and fertilizer for agricultural residues
- ✓ **Energy Substitution** Electric Farming Machines

### Circular agriculture

- ✓ Livestock Biogas Reuse
- ✓ Livestock manure application

# Environmental Sector GHG Emission Reduction Actions (1/2)





# Environmental Sector GHG Emission Reduction Actions (2/2)



## Resource Recycling

Enhancing Carbon Recycling and Supporting Other Sectors in Carbon Reduction

### Resource Recycling

Climate Circular Technology Parks, 8+N Resource Recycling Alliances, Fully Electric Resource Recycling Vehicles

### Public Incineration Plants

Establishing low-temperature power generation and enhancing power facilities, Setting Up Carbon Capture & Reduction Facilities

### Pollution Control & Energy Efficiency Upgrades for Carbon Reduction

Replacing High-Efficiency Energy-Saving Equipment, Building Recycling Systems, Upgrading to Energy-Saving Lighting

### Animal Husbandry

Biogas power generation, subsidies for wastewater energy-saving projects



## Net-Zero Sustainable Lifestyle

Driving Industrial Supply-Side Carbon Reduction Through Behavioral and Consumption Pattern Changes

### Eco-Labeling & Green Procurement

Subsidizing business applications and expanding government green procurement

### Thermal Insulation Improvement for Existing Homes

Subsidizing insulation improvements and prioritizing local green materials

### Eco-Friendly Restaurants Low-Carbon Transition

Promoting low-carbon diets and reducing single-use tableware

### Encouraging Low-Carbon Lifestyles

Promoting behavioral change through eco-points incentives

### Building Green Living Pilot Zones

Collaborating with local governments to create low-carbon residential & commercial spaces

### Low-Carbon Sustainable Community Certification & Resilient Home Development

Assist villages and communities in applying for the Low Carbon Sustainable Homeland Certification, create locally characteristic low-carbon lifestyles, and develop community green-collar talents

Flagship Carbon Reduction Projects

Self-driven Carbon Reduction

## Domestic wastewater

- Increasing domestic wastewater treatment rate
- Developing sustainable & smart sewage system

## Industrial Wastewater

- Promoting wastewater methane recovery
- Biogas power generation, improving river water quality

## Landfilling, Incineration, Composting

- Diversified waste treatment, waste reduction & recycling, and carbon reduction technologies

# 4. Institutional Innovation

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# Six Major Innovative Mechanisms

## 2050 Transition to Net-zero Emissions



National Council for  
Sustainable Development

League of  
Sustainability Officers

Public Private  
Partnership (PPP)

Led by the  
Government

technological  
innovation



financial  
support



carbon  
pricing



regulatory  
adjustment



green-collar  
professional



community-  
driven



# Technological Innovation

## Key Focus Areas of Net-Zero Technology

### Energy transition technology



Sustainable Low-Carbon Hydrogen



Multiple Usages in Ocean Energy



Forward-Looking Deep Geothermal Energy

### Decarbonizing industry



Carbon Storage Integrated with Social Governance



Biomass Sustainable Energy Resource Utilization

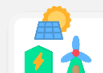


Circular Resource Green Design



Industrial Equipment Integration with AIoT  
for Innovative Energy Saving

### Net-zero infrastructure

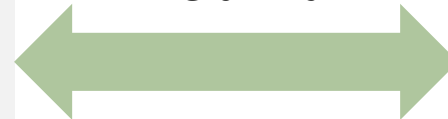


Net-zero Smart Grid



Infrastructure and Built Environment

## Forward-Looking Technology Development Field Trial



## Flagship Carbon Reduction Projects by Six Sectors



經濟部

- Methane Pyrolysis
- Small Hydro
- Geothermal
- Deep energy saving
- Energy storage technologies



環境部

- Carbon Capture and Storage
- Resource Circulation
- Carbon pricing and international cooperation



國家發展委員會

Hydrogen  
(including Ammonia)  
Supply Chain



Sustainable  
Aviation Fuel (SAF) and  
Transportation  
Decarbonization

# Financial Support

## Green Finance 3.0

### Green and Transition Finance Action Plan



- Announce the Second Edition of the **Reference Guidelines For the Recognition of Sustainable Economic Activities**, expand the scope of applicable industries (e.g., chemicals, steel, semiconductors, etc.)
- Announce **Recommended Coverage for Transitional Plans**, assist enterprises in orderly transformation and serve as a basis for discussions in the financial sector



- Guide the financial sector in assessing and disclosing carbon emissions from their own operations and investment portfolios (Scope 3)



- **Incorporate corporate Self-determined Reduction Plans, Voluntary Mitigation, and Taiwan Offset Project (TOP)** as priorities in investment and financing decision-making assessments



- Guide funds into green and sustainable development sectors. Release **Sustainability Bond** and **Green Financial Products** to support green growth.

## Expand ESCO Assistance



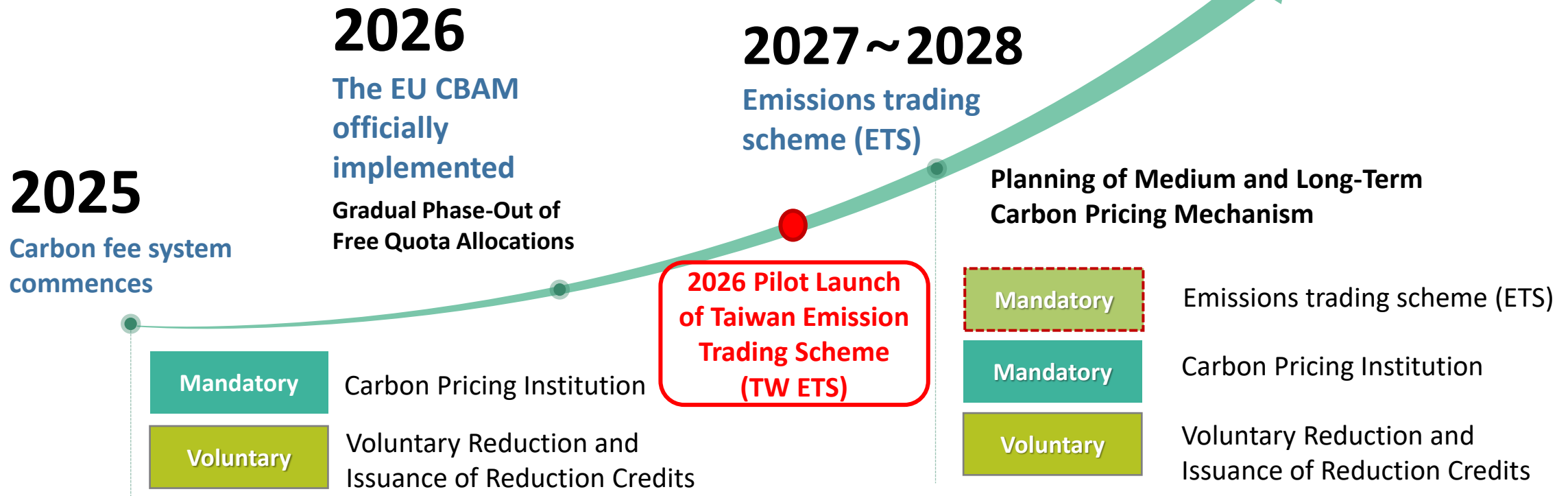
- Expand the scale of ESCO credit guarantee, strengthen the credit guarantee + insurance system, and reduce business risks

# Carbon Pricing



Align with international best practices to promote carbon pricing in Taiwan

- Implement carbon fees first, with incentivized rates to promote effective emission reductions, accompanied by diverse reduction mechanisms such as voluntary emission reduction credit issuance.
- The carbon fee system will reduce 37 million tons of CO<sub>2</sub>e by 2030, approximately 14% of the emissions level of 2005.



# Regulatory Adjustments

New or Revised Regulations Related to Net Zero:

**11 Laws** and **24 Regulatory Orders** (or Administrative Rules)

Climate Legal  
Foundation

Revised and published in February 2023 and completed the Revisions Regulations  
**Enforcement Rules of the Climate Change Response Act**  
Governing the Collection of Carbon Fees etc. 12 Priority Sub-laws

## Mature Green Energy

- The Electricity Act
- Energy Administration Act
- Standards for Installing Solar Photovoltaic Power Generation Equipment in Buildings

## Forward-looking Green Energy

- Renewable Energy Development Act
- Regulations Governing the Management of Carbon Capture and Storage

## Low-carbon Transformation

- Statute for Industrial Innovation
- Circular Economy Promotion Law
- Waste Disposal Act

## Lifestyle Transformation

- Urban Planning Act
- Condominium Administration Act Building Administration Division
- Sewerage Act
- National Park Law
- Energy Conservation Standards for New Buildings

## Green Finance

- Securities and Exchange Act
- Regulations Governing the Preparation of Financial Reports by Securities Firms/Futures Commission Merchants/Insurance Enterprises
- Regulations Governing Information to be Published in Annual Reports of Banks, Public Companies, Financial Holding Companies, and Bills Finance Companies

# Green-collar Professionals



Create Green Job Opportunities

Assist Affected Groups in Employment

## Assess Workforce Demand

- Estimating Green-collar Employment Trends
- Understanding Skill Requirements for Green-collar Talent

## Facilitate Supply and Demand Matching

- Green-collar Professionals Information Platform
- Green-collar Job Matching

## Expand Talent Development

- Public-Private Partnership on Professionals Development
- Professionals Development Incentive Subsidies

### Vehicle Maintenance Personnel

Ministry of Transportation and Communications

### Employed Workers

Ministry of Economic Affairs

### School Students

Ministry of Education

### Ecological Carbon Sequestration Personnel

Ministry of Agriculture

### Financial Personnel

Financial Supervisory Commission



### Employed Workers Unemployed Personnel

Ministry of Labor

### Construction Management Personnel National Parks

Ministry of the Interior

### Maritime Personnel

Ocean Affairs Council

### Environmental Personnel

### Inspection Personnel

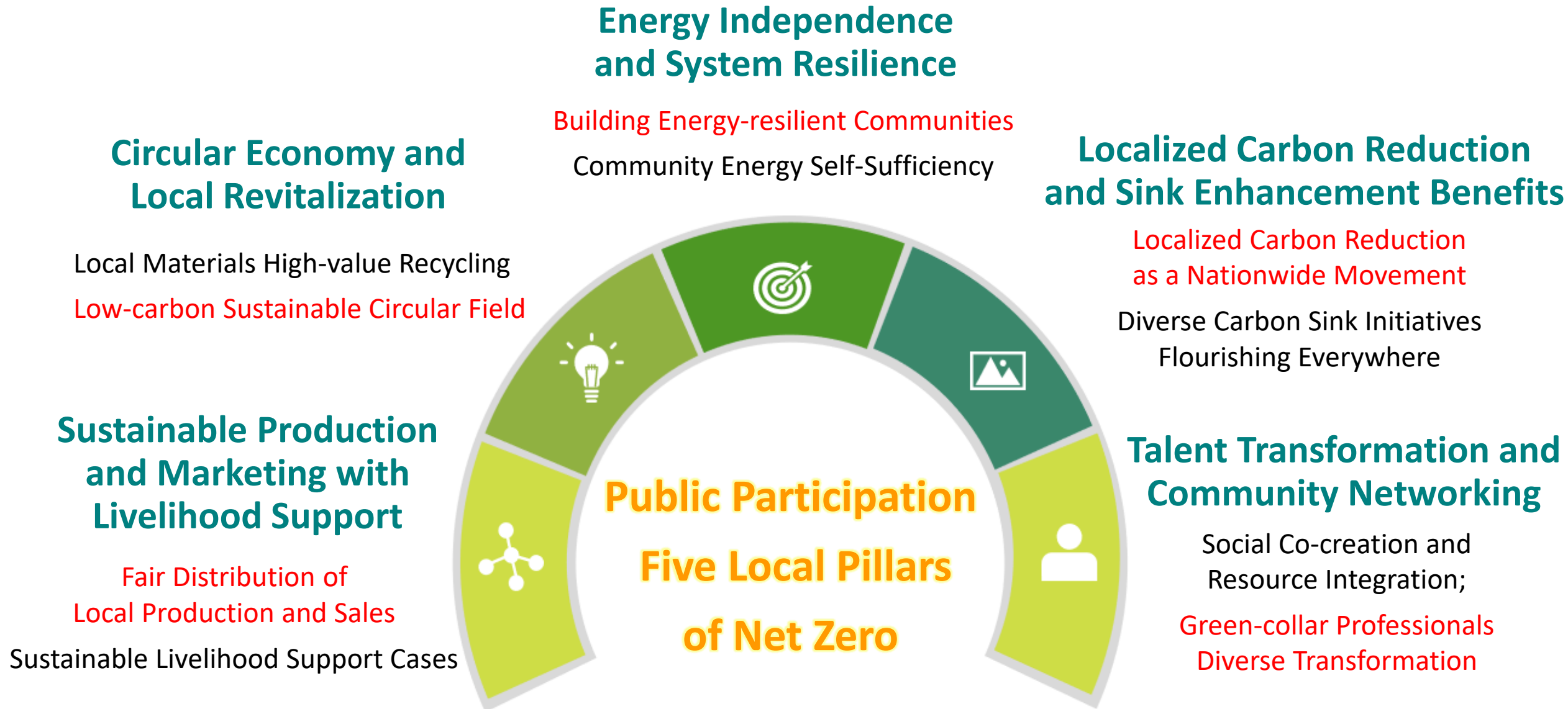
### Green-collar Youth

Ministry of Environment

Attract Global Talent, with an **Expected Cultivation of 80,000 Green-collar Professionals by 2030**



# Community-driven Approaches



# Just Transition

National  
Project  
of Hope



Ensure Opportunities for  
Individuals, Industries,  
and Communities



Transform Climate Change  
into Opportunities for  
Regional Development

Evidence-based  
Data Governance

Local Society  
Communication

Stakeholders  
and Key Issue  
In-depth  
Identification

Labor Market  
(Change of Labor  
Structure)

Industrial  
Development  
(Net-Zero Policy Adaptation)

Livelihood Care  
(Energy Vulnerability  
Assessment)

Regional Equity  
(Spatial Development  
Strategy)

Policy  
Support

Employment Guidance

- Framework Guidelines for Labor Issues
- Promotion of Various Vocational Training and Employment Guidance Measures by Ministries

Financial Support

- Green and Transitional Finance
- Green Growth Fund
- Greenhouse Gas Management Fund

Industry Assistance

- High-carbon Emission Industries and SMEs' Net-zero Transition
- Green Talent Supply and Demand Matching

Social Security

- Guidelines for Support Program Design for Disadvantaged Groups
- Ensuring Equal Development Opportunities for Indigenous People and Women

# 5. Financial Planning

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# Financial Planning

Government  
Funding Input



Expanding the Net-zero  
Carbon Emissions Budget



Expanding Government  
Green Expenditures



Driving Private  
Funding



Strengthening Government  
Incentive Measures



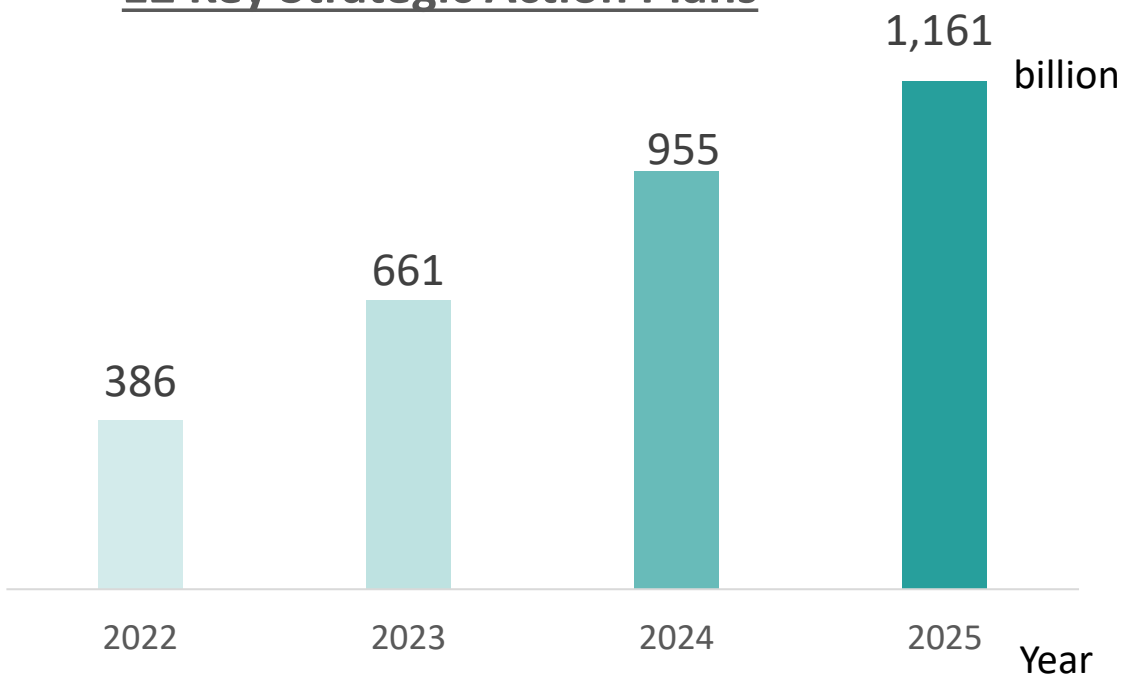
Promoting Green and  
Transitional Finance







# Net-zero Carbon Emission Budget Planning



- By 2030, Government Budget Investment to Exceed NT\$1 trillion
  - The budget for the **12 Key Strategies Action Plans** for net-zero transformation is increasing annually, reaching NT\$116.1 billion in 2025
  - An additional NT\$231.023 billion has been allocated for the **flagship carbon reduction plans** across six major departments

12 Key Strategic Action Plans



 Energy	864.51 billion 2024~2030
 Manufacturing	500.20 billion 2026~2030
 Residence and Commerce	192.00 billion 2026~2030
 Transportation	411.88 billion 2025~2030
 Agriculture	77.85 billion 2026~2030
 Environment	263.79 billion 2024~2030

# Expanding Government Green Expenditures



## Green Budget Expenditure

### Formulate Net-zero Green Guiding Principles:

1. Public Infrastructure,
2. Social Development,
3. Technological Development, and
4. Non-Programmatic

#### Public Engineering

- By 2030, public infrastructure green funding will reach NT\$160 billion
  - The proportion of public infrastructure will reach 20%
- Develop seven categories of "Engineering Carbon Reduction Operational Guidelines" (architecture, water resources, soil and water conservation, national highways, provincial highways, railways, and sewers)

#### Governmental Procurement

- By 2030, the total public and private green procurement is expected to reach NT\$165 billion
- The annual increase rate of the proportion of government operational expenses and private-sector funding reaches 10%

## Green Growth Fund + Carbon Fees

### Green Growth Fund

- **Total budget: NT\$10 billion**, strengthening investment in net-zero sustainable emerging industries, and guiding private capital investment

**The maximum investment amount for a single enterprise is NT\$150 million**

**Domestic enterprises + foreign enterprises operating in our country**

### Greenhouse Gas Management and Control Fund

- Carbon fee revenues are incorporated into the Greenhouse Gas Management Fund, with priority given to greenhouse gas reduction efforts, subsidies, and incentives for businesses to invest in greenhouse gas reduction technologies, as well as the promotion of climate change adaptation measures

Note: Green expenditure refers to costs related to green construction methods, green materials, green energy, and green environments

# Guide Private Capital Investment



## Strengthen Government Incentive Measures

### Trillion-NT dollar-investment National Development Plan

- Establish a public-private partnership platform to guide **private sector participation** in green energy and other public infrastructure projects

### National Financing Guarantee Mechanism

- Increase the guarantee ratio to 80%, provide a **guarantee limit of NT\$90 billion**, and promote major infrastructure projects such as green energy

### ESCO Performance Credit Guarantee

- Increase the guarantee ratio to 95%, provide a **guarantee limit of NT\$10 billion**, and enhance the capacity for deep energy-saving measures

### Tax Incentives: Amend Article 10-1 of the Industrial Innovation Act

- Increase the investment expenditure limit to **NT\$2 billion**, with **energy-saving and carbon-reduction projects** included in the applicable scope



## Green and Transition Financial Action Plan

### Domestic Banks' Loans to the Green Industry

Loan Balance is **NT\$3 trillion**  
(as of the end of November 2024)

### Issuance of Sustainable Development Bonds

A cumulative issuance of **NT\$688.5 billion**  
(as of January 20, 2025)

### Insurance Industry's New Investments in the Green Energy Sector Investment Amount:

**NT\$160.5 billion**  
(as of the end of November 2024)

**Green Investment and Finance to Exceed NT\$5 trillion by 2030**

# 6. Anticipated Benefits

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# Anticipated Benefits

## Advancing Four Key Transitions

Fostering a More Diversified Energy Transition

Driving a More Innovative Industrial Transition

Adopting a More Low-carbon Lifestyle

Fostering a More Resilient Society

## Driving Green Growth



2030



### Delivering Low-carbon Energy Solutions

Electricity emission factor decreased from 0.490 kgCO<sub>2</sub>e/kWh in 2023 to **0.319 kgCO<sub>2</sub>e/kWh** in 2030.  
Air pollution volume reduced by **40%** compared to 2019



### Enhancing Energy Independence

Dependence on imported energy reduced from 96.2% in 2023 to **90%** in 2030.



### Creating Green Economies

The government has allocated over **NT\$1 trillion** to the budget, which has attracted domestic sectors to invest **NT\$5 trillion**.  
Additionally, **80,000** green talents have been nurtured.

**The End**  
**Your advice is welcomed!**