



Taiwan's Climate Policy and Carbon Pricing Plan

Climate Change Administration,
Ministry of Environment

9.19.2023



WELCOME TO THE
UN CLIMATE
CHANGE
CONFERENCE
11/2021

2050 Net-Zero Transition

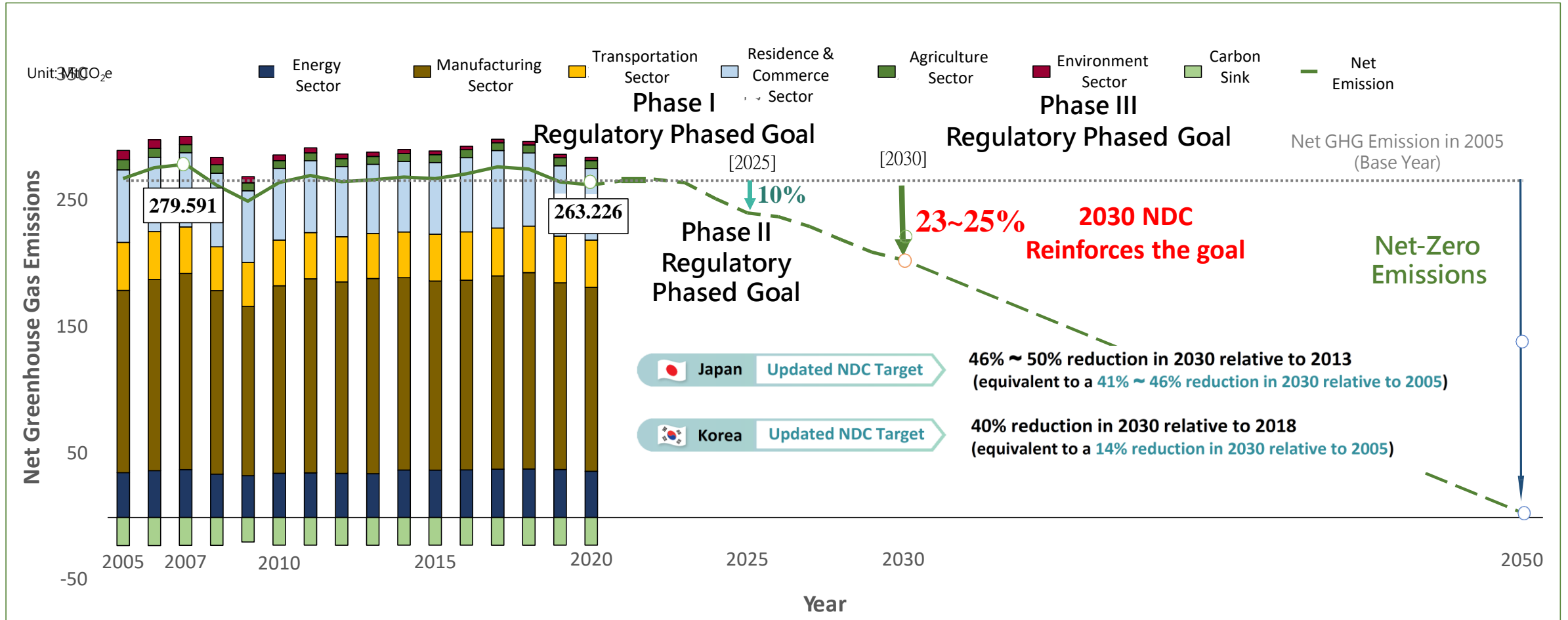
Most countries around the world...
achieving net zero carbon emissions
by 2050, Taiwan is actively preparing
to take steps towards this goal.

President Tsai Ing-wen
~ Earth Day, April 22, 2021



National Long-Term Roadmap for GHG Reduction

Regulatory goals of each phase on a 5-year basic according to the GHG Reduction and Management Act





Taiwan's 2050 Net-Zero Transition

12 Key Strategies



2050 Net-Zero Pathway (milestones)

Buildings

Improving in exterior designs, energy efficiency and appliance energy efficiency standards.

Transportation

Changing in travel behavior, reducing demand for transportation, and electric vehicles.

Industry

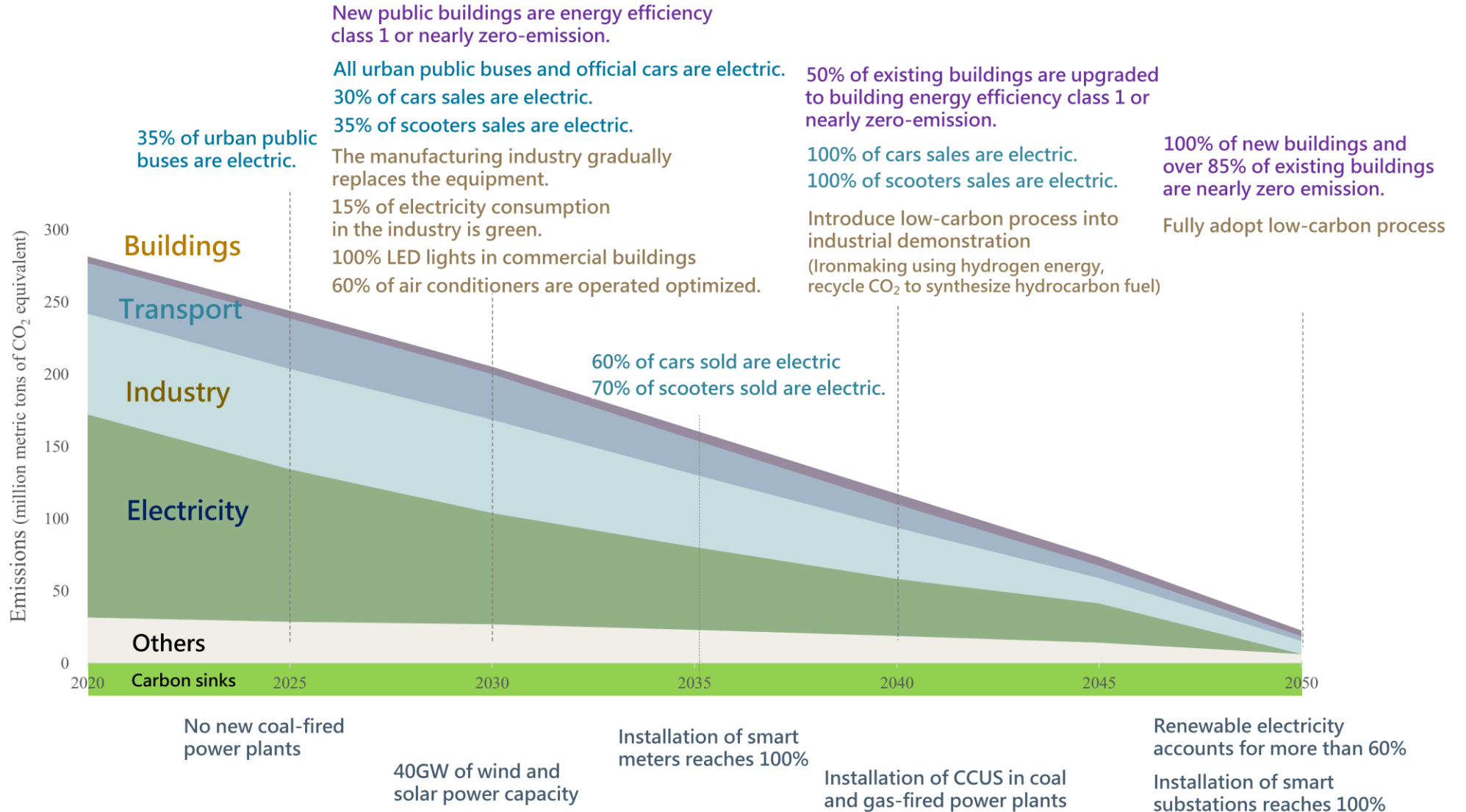
Improving in energy efficiency, fuel switching, circular economy, and innovative technologies.

Electricity

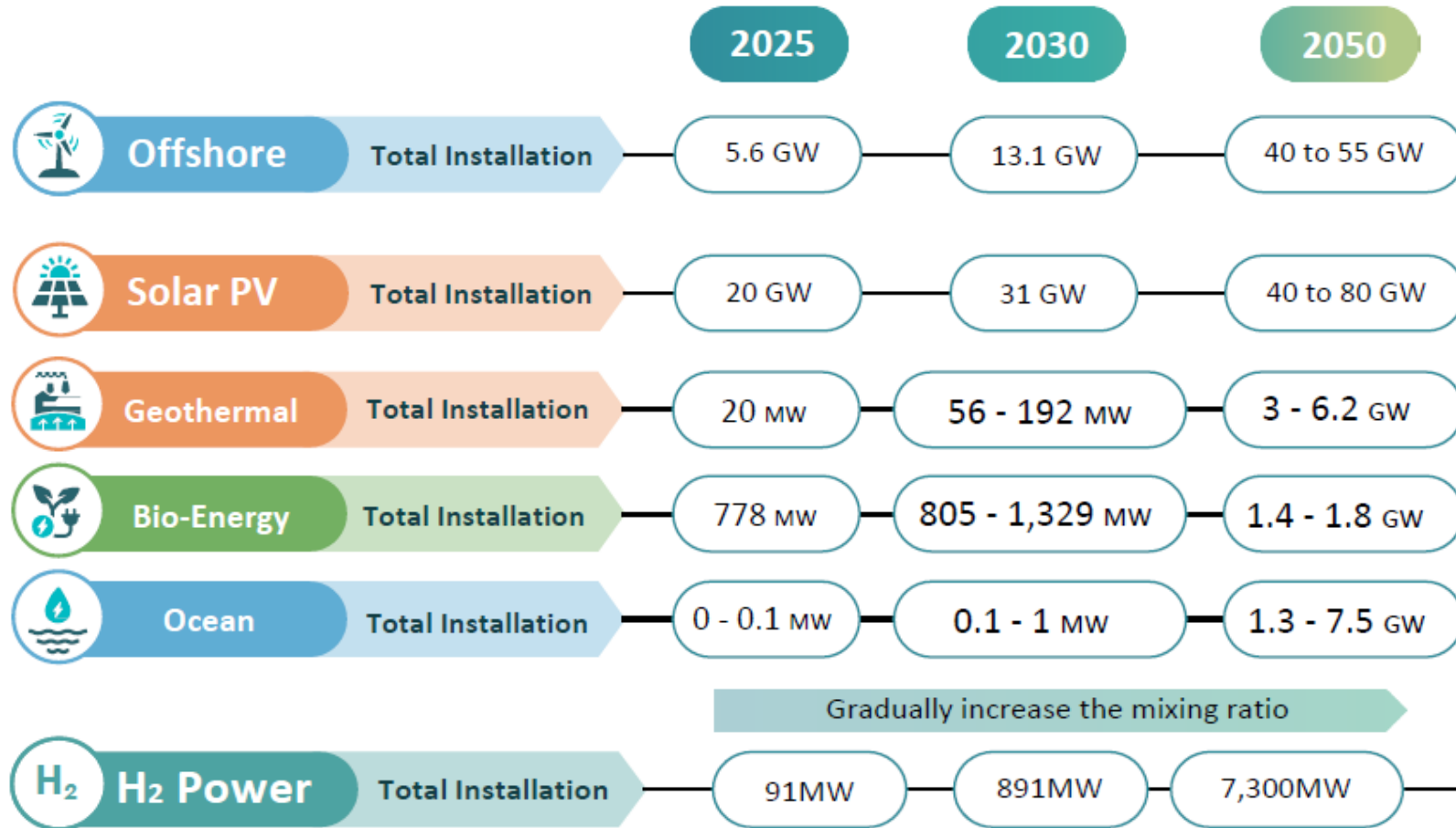
Scaling up renewable energy, developing new energy technologies, energy storage, and power grid upgrade.

Negative emissions technologies

Demonstration by 2030. At scale by 2050.



Energy Transition

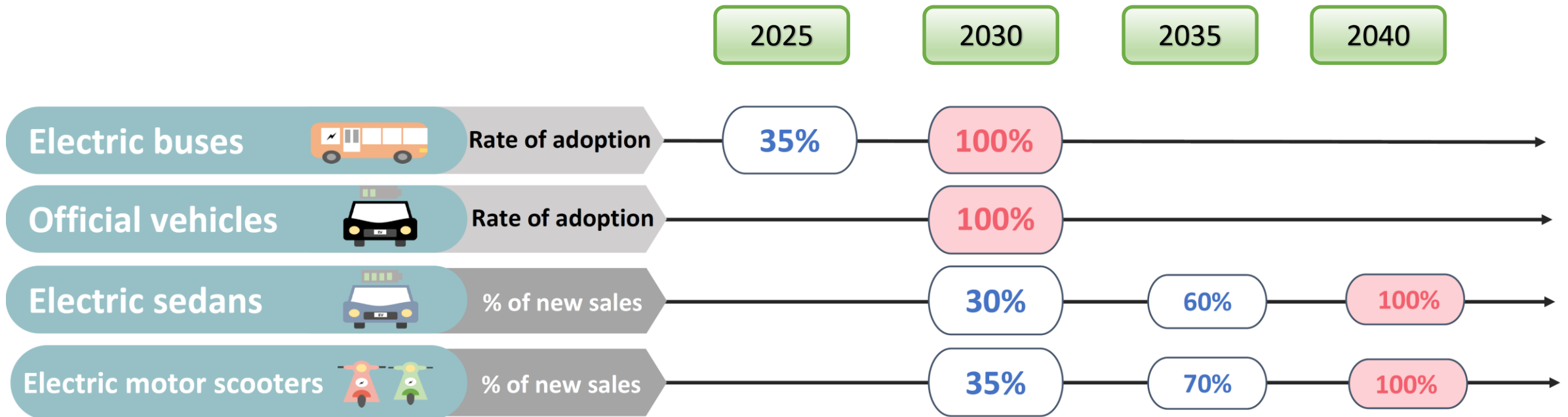


2050 Electricity

Renewables 60-70%
 Hydrogen 9-12%
 Gas + CCUS 20-27%
 Pumped storage 1%

Electric Vehicles

- Public charging facilities still not widely available, in need of technology development for key parts of electric bus, key parts for major systems such as motor, controller and battery still mostly reliant on imports.
- Starting first with public transportation, the government will take the lead to electrify municipal bus and official vehicles by 2030.





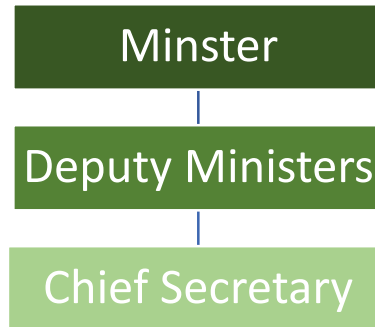
Inter-Ministerial Taskforce on Promoting Just Transition

- Transitions must be fair, inclusive and just for everyone, leaving no one behind. That is the very spirit of the Paris Agreement.
- Taiwan has over 14 million motorcycles, now only 4% is electric, but expecting to reach 10% by 2030.
- It is a key challenge for the transport sector to move towards electrification and net zero. USD 200 million has been allocated from 2023 to 2026 to promote transition of motorcycle shops, with a target of having 80% of shops complete training for electric motorcycle maintenance by 2026.



Organization and Legislation Reforms

Ministry of Environment (Est. 8/22/2023)



Subordinate Agencies

- ▶ Climate Change Administration
- ▶ Resource Circulation Administration
- ▶ Chemicals Administration
- ▶ Environmental Management Administration

Subordinate Institution

- ▶ National Environmental Research Academy

Implementation Units

- ▶ Department of Comprehensive Planning
- ▶ Department of Environmental Protection
- ▶ Department of Atmospheric Environment
- ▶ Department of Water Quality Protection
- ▶ Department of Monitoring and Information

Supplementary Units

- ▶ Department of General Affairs
- ▶ Department of Personnel
- ▶ Department of Government Ethics
- ▶ Department of Accounting
- ▶ Department of Statistics
- ▶ Department of Legal Affairs



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- **Net Zero Emissions Division**

Coordination of the National Climate Change Action Guideline and greenhouse gas-related action plans

- **Emissions Management Division**

Monitoring of greenhouse gas emission sources and implementing the carbon footprint verification and management.

- **Emissions Reduction and Trading Division**

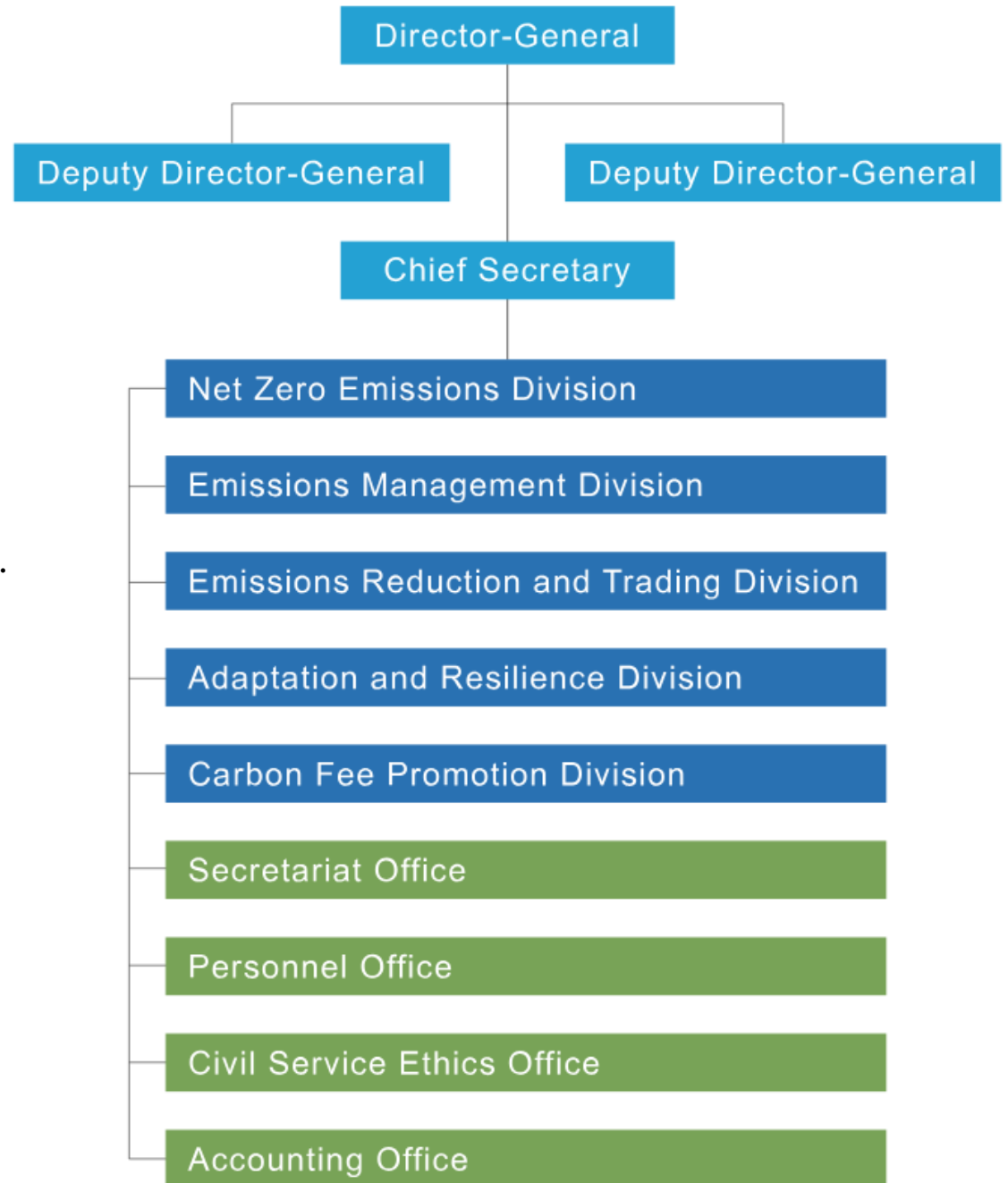
Supervising laws and regulations for voluntary greenhouse gas reduction projects.

- **Adaptation and Resilience Division**

Promotion of climate change adaptation policies, regulations, action projects, and action plans.

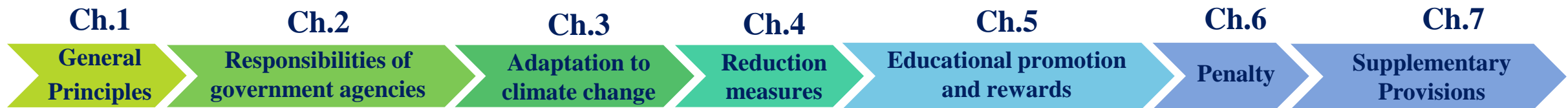
- **Carbon Fee Promotion Division**

Implementation of carbon fee collection policies, systems, and regulations.



Climate Change Response Act

- Amended the Greenhouse Gas Reduction and Management Act to the **Climate Change Response Act**.
- **Jan. 10, 2023: Legislative Yuan passed at third reading. Feb. 15, 2023: the Act promulgated by the President.**
- **Taiwan is the 18th country to put net-zero emission target into law**



- **Net Zero by 2050**
- **Strengthening Climate Governance**

Clear division of authorities, National Council for Sustainable Development responsible for coordination and integration

Strengthening Climate Change Adaptation

Capacity Building for Climate Change Adaptation Plans and Programs, scientific reports and risk assessments



- **Accelerate carbon reduction**
- **Enhance industrial competitiveness**

- collect carbon fees, special appropriation for special use
- Strengthen carbon emissions inventory and inspection
- Promote reduce carbon emissions and carbon credit trading



Public participation, Personnel training

- Promote climate education
- Implementation of information disclosure and public participation
- Just Transition

Strengthen Climate Governance



National Council for Sustainable Development is responsible for coordination, delegation and integration of the national climate policy.

National Climate Change Action Guideline

5-year Periodic Regulatory Goals

National Climate Change Adaptation Action Plan

Sectoral GHG Reduction Action Programs

Adaptation Action Program

GHG Reduction Implementation Programs

Climate Change Adaptation Implementation Programs

Special municipality, county and city competent authorities to establish **climate change response steering committee**

Central

Local

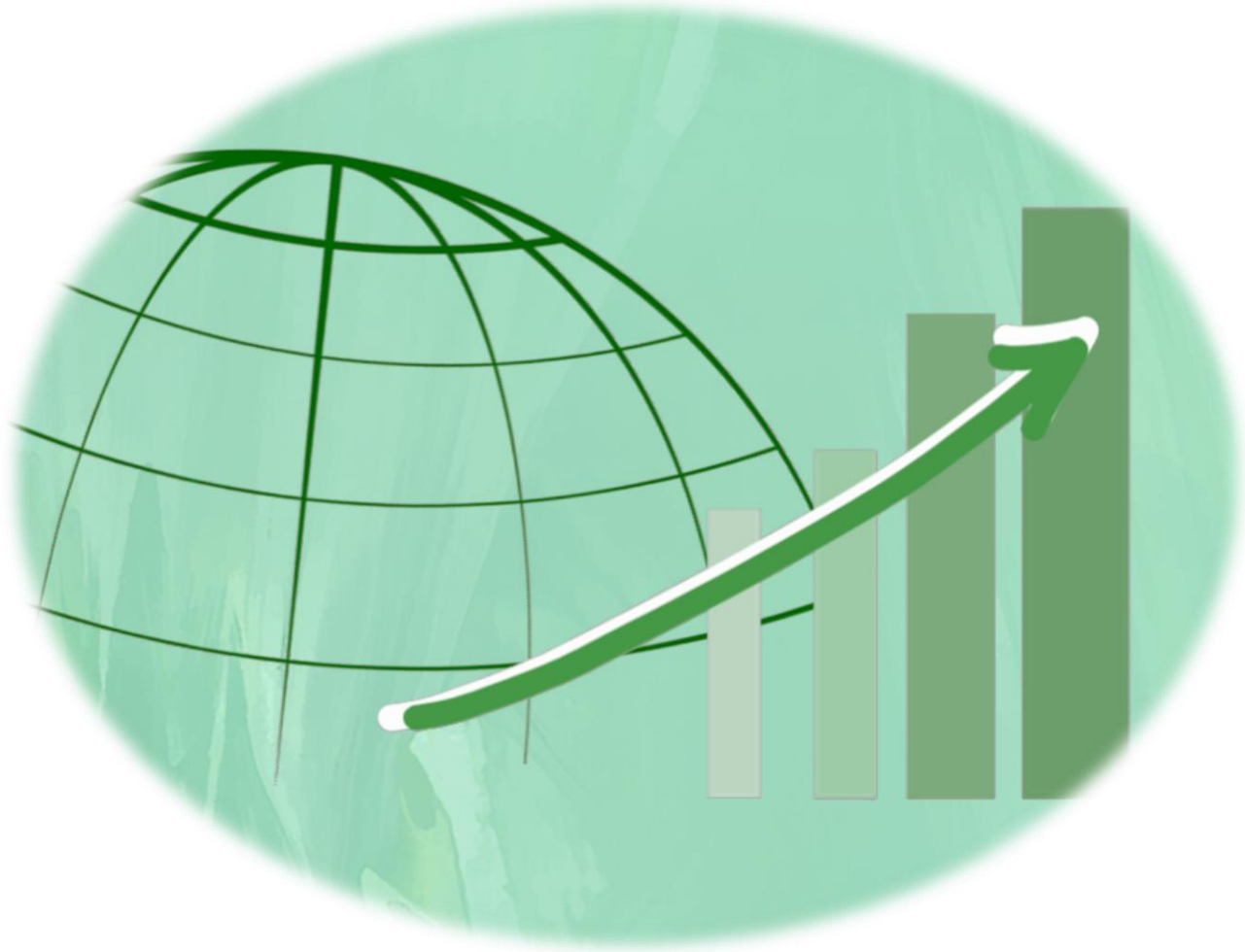


Ministry of Environment



Sectoral Competent Authorities





Carbon Pricing

Promote Carbon Pricing and Multiple Incentives

Inventory and verification

- ✓ Classification for management
- ✓ Enhance verification capacity

Energy efficiency standard

- ✓ Production Process
- ✓ Manufactured or imported vehicles
- ✓ New buildings

Carbon footprint

- ✓ For announced products, manufacturers, importers or sellers should obtain carbon footprint verification within a specified period and display it on the container or package



Voluntary offsets trading

- ✓ Encourage voluntary reduction and issue reduction credit
- ✓ Establish a supply and demand mechanism to promote credit trading

Environmental Impact Assessment Commitments Offset

- ✓ For newly built or modified facilities up to a certain scale, the GHGs increments should be offset by a certain percentage

Carbon Fee

- ✓ Use economic instruments to promote carbon reduction
- ✓ Raise incentive by levy and expenditure

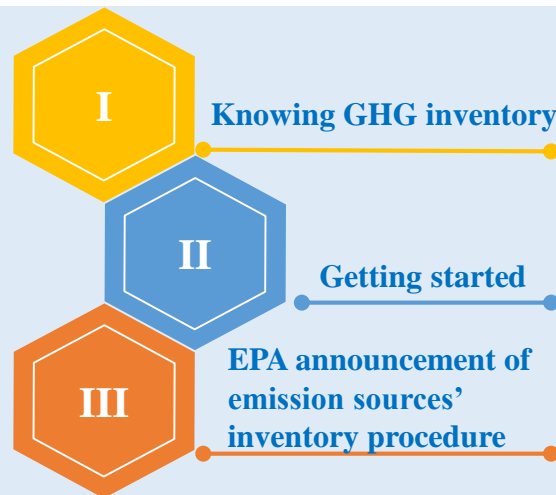
Advanced GHG Inventory and Verification

Improve inventory management

- Direct + indirect emission sources > 25,000 tons of CO₂e/year, and complete inventory by April 30 and verification before October 31 every year
- Provide individual assistance
- GHG inventory guideline and calculation tools

Improve verification management and capacity

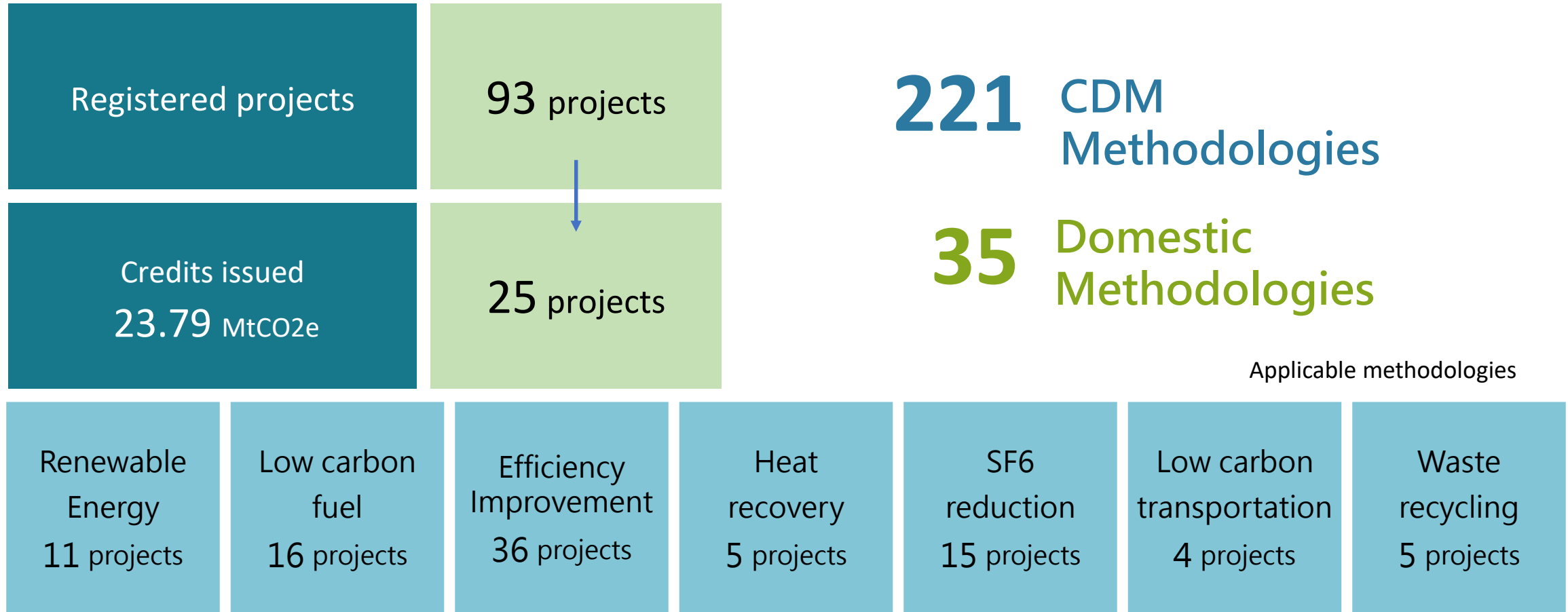
- 14 verification bodies can conduct GHG inventory
- Improving verification capacity: 270 professionals have been trained since 2022
- Revised verification agencies' management measures
- Revised verification guidelines



- ✓ CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃ are regulated, including direct emission and indirect emission from energy use.
- ✓ In 2022, about 500 entities completed GHG emissions reporting and registration, whose emission accounts for 224.15 MtCO₂e direct emissions, about 75% of Taiwan's total emissions.

Status of Voluntary Reduction Project

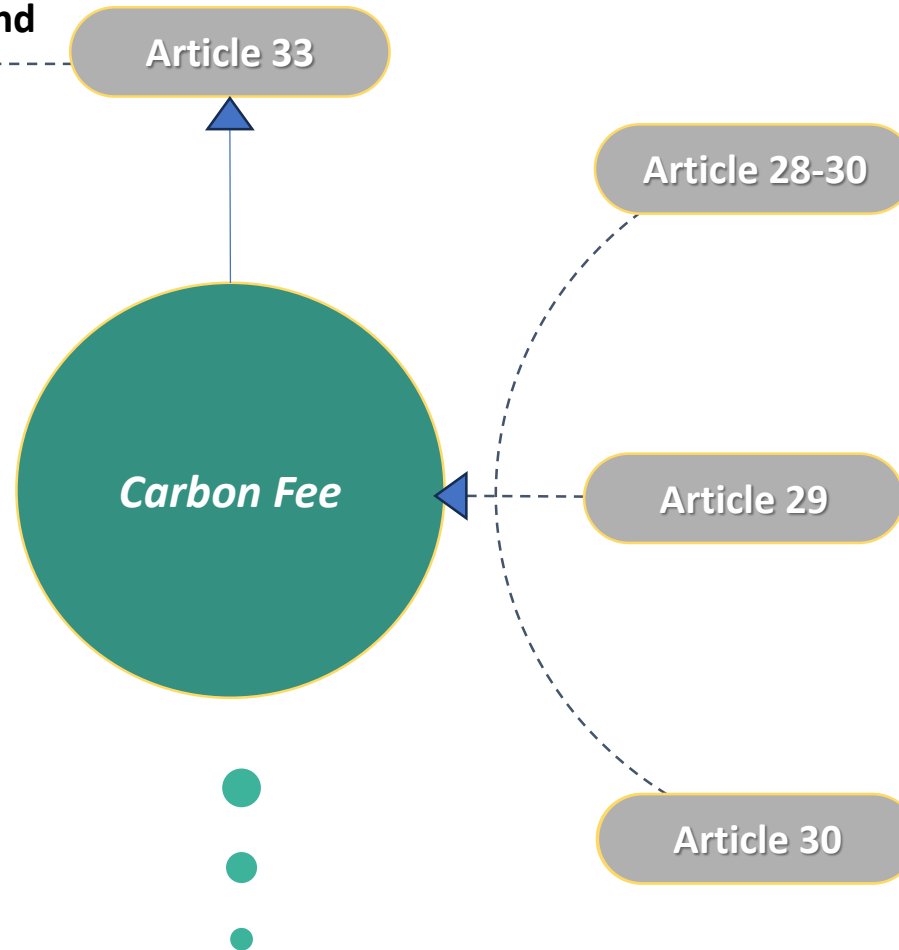
- Program for voluntary reduction projects started in 2010, so far 23.79 Mt issued.



Impose Carbon Fee: Ear-Marked Fund

Revenue Recycling of GHGs Fund

- Ear-marked for GHG emissions reductions and climate adaptation
- Promote climate change adaptation, carbon footprint, education and just transition
- Consultation, subsidies and grants for GHG reduction and R&D
- Competent authorities and local governments for implementation of GHG reduction
- Reporting shall be regularly made public



Carbon Fee Framework

- Phased-in carbon fee payment in accordance direct and indirect emissions. (Large emitters)
- Deduct direct Emission Sources of electric power production for power consumption
- Rate is determined by the Fee Rate Review Committee and reviewed periodically

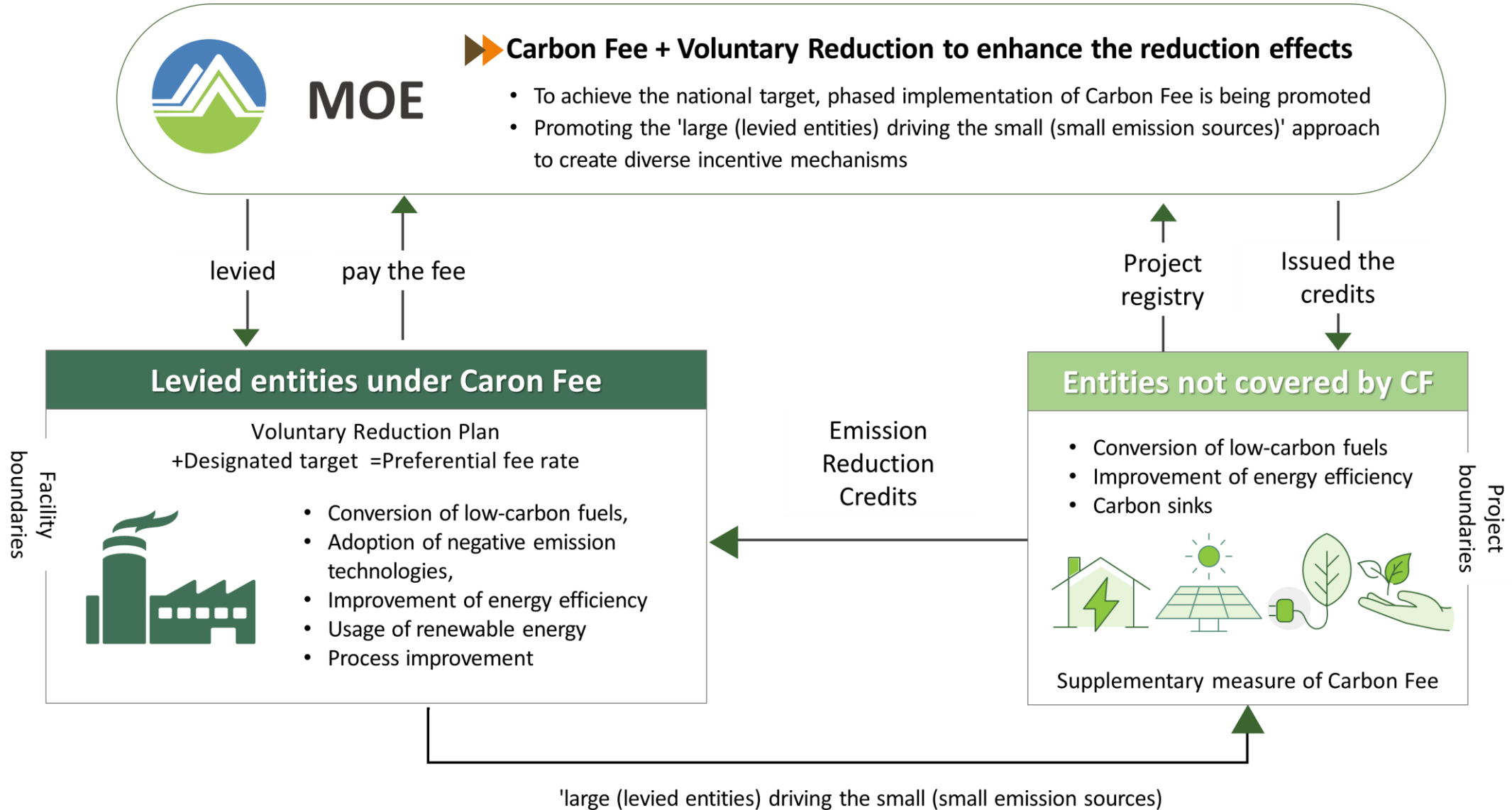
Voluntary reduction plan+ preferential rate

- Entities that propose voluntary reduction plan and reach the target will be approved for preferential rate

Usage of reduction credits

- Entities subject to carbon fee levy may deduct emissions using reduction credits

Voluntary Reduction Plan and Project





Prospects of Future Collaboration

- The EU and Germany leads others around the world in carbon pricing policy - the German ETS on transport and building sectors as another example.
- Through past exchanges, Taiwan has learned from Germany's experience to strengthen the MRV mechanism and carbon pricing infrastructure.
- Look forward to continue the collaboration on capacity building on carbon pricing options, considering regional developments in the future.
- Through capacity building programs, Taiwan also hope to work with others in the Asian region to explore collaboration and potential linkage.

Thank you!



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