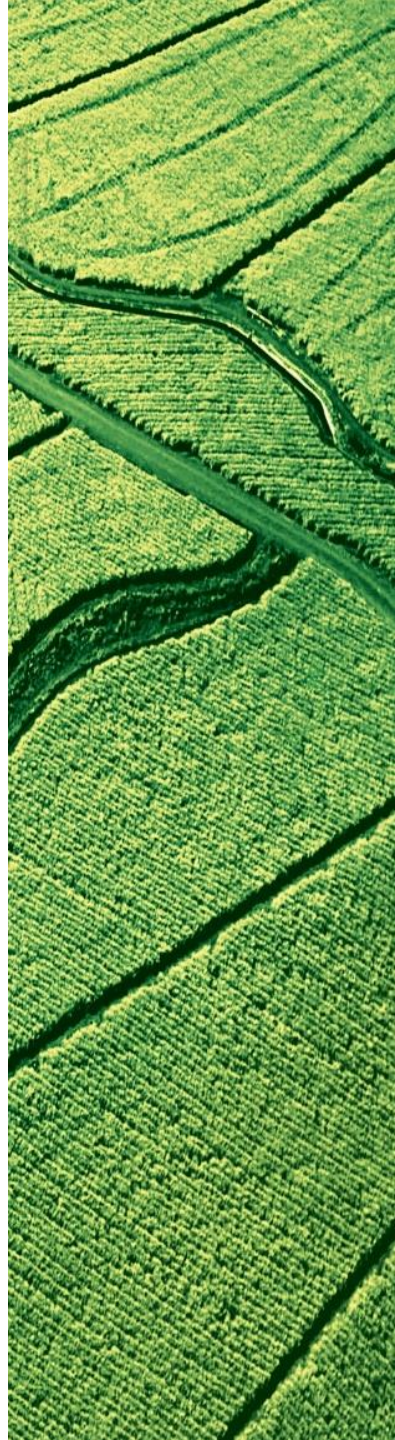
The 64th Meeting of the APEC Expert Group on Energy Efficiency & Conservation (EGEEC 64)
"Utilizing Carbon-Free Energy Technologies to Expand Clean Electricity in APEC"



Economy Update in Chinese Taipei

--Carbon Reduction Actions in the Energy Sector

09 Apr. 2025

Administrated: ITRI Industrial Technology Research Institute

Progress of Advancing the 2050 Net-Zero Pathway

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

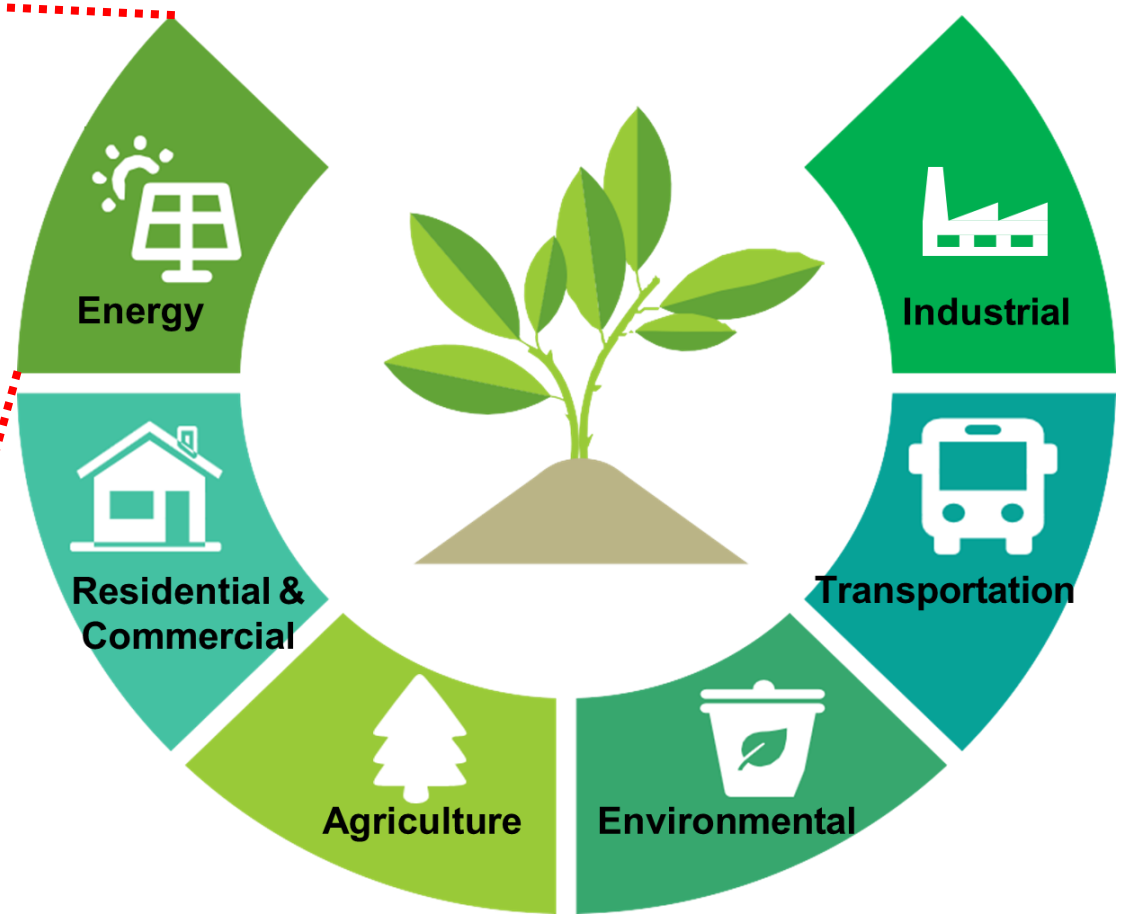
To implement **"Hope Project"** and major strategies for "Green Growth and the 2050 Net-Zero Transition," the government is aligning with international commitments by setting Determined Contribution targets. The administration has formulated a comprehensive carbon reduction action plan to steadily and pragmatically achieve the 2050 net-zero goal.

Comprehensive Carbon Reduction Action Plan

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

- Renewable Energy Acceleration – Solar PV Power
- Renewable Energy Acceleration – Offshore Wind Power
- Renewable Energy Breakthrough – Geothermal Energy
- Renewable Energy Breakthrough – Small Hydropower
- Technological Energy Storage
- Decarbonized Hydrogen Fuel
- Hydrogen (including Ammonia) Supply Chain
- Carbon Capture, Utilization, and Storage (CCUS)

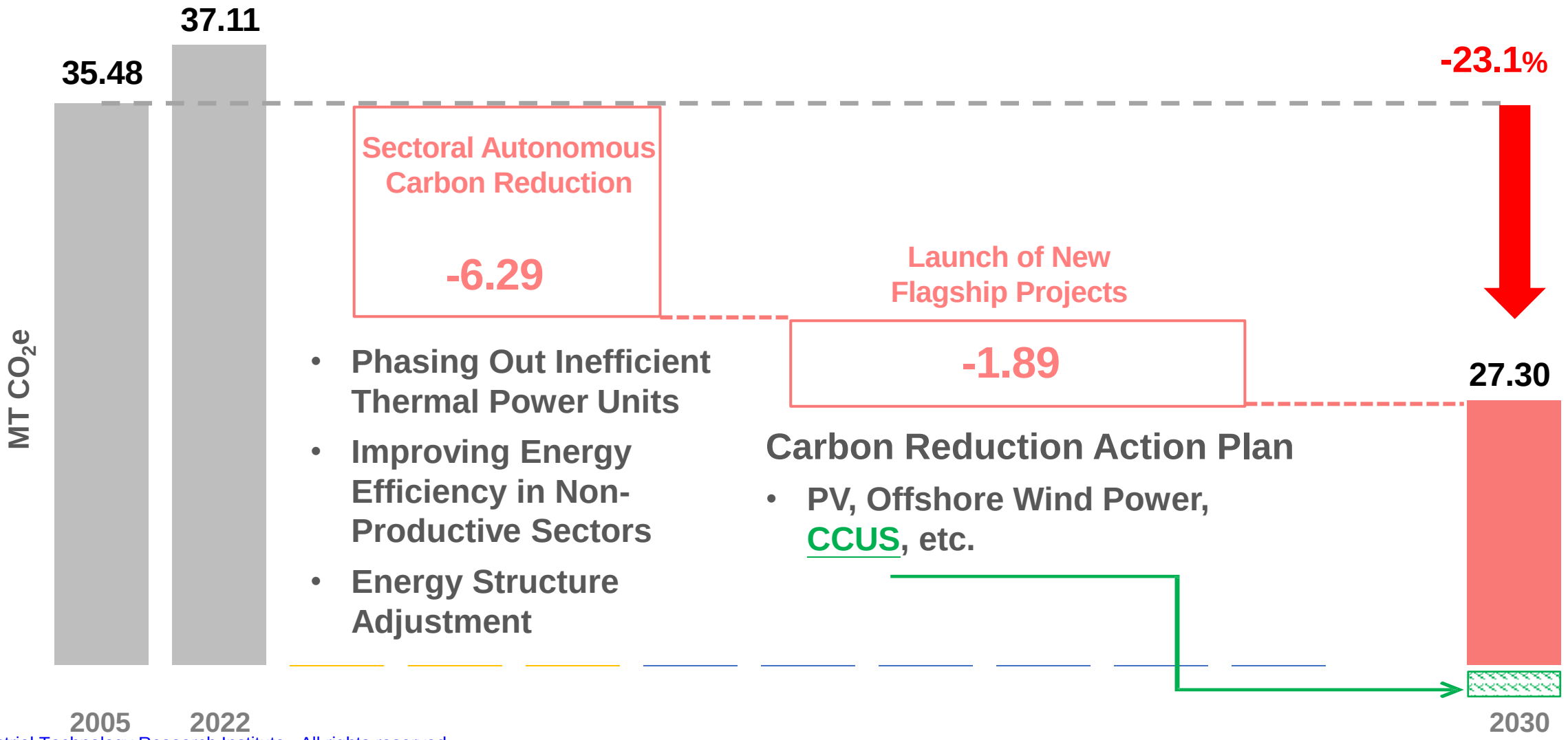
Six Major Sector



Carbon Reduction Actions in the Energy Sector(1/4)

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

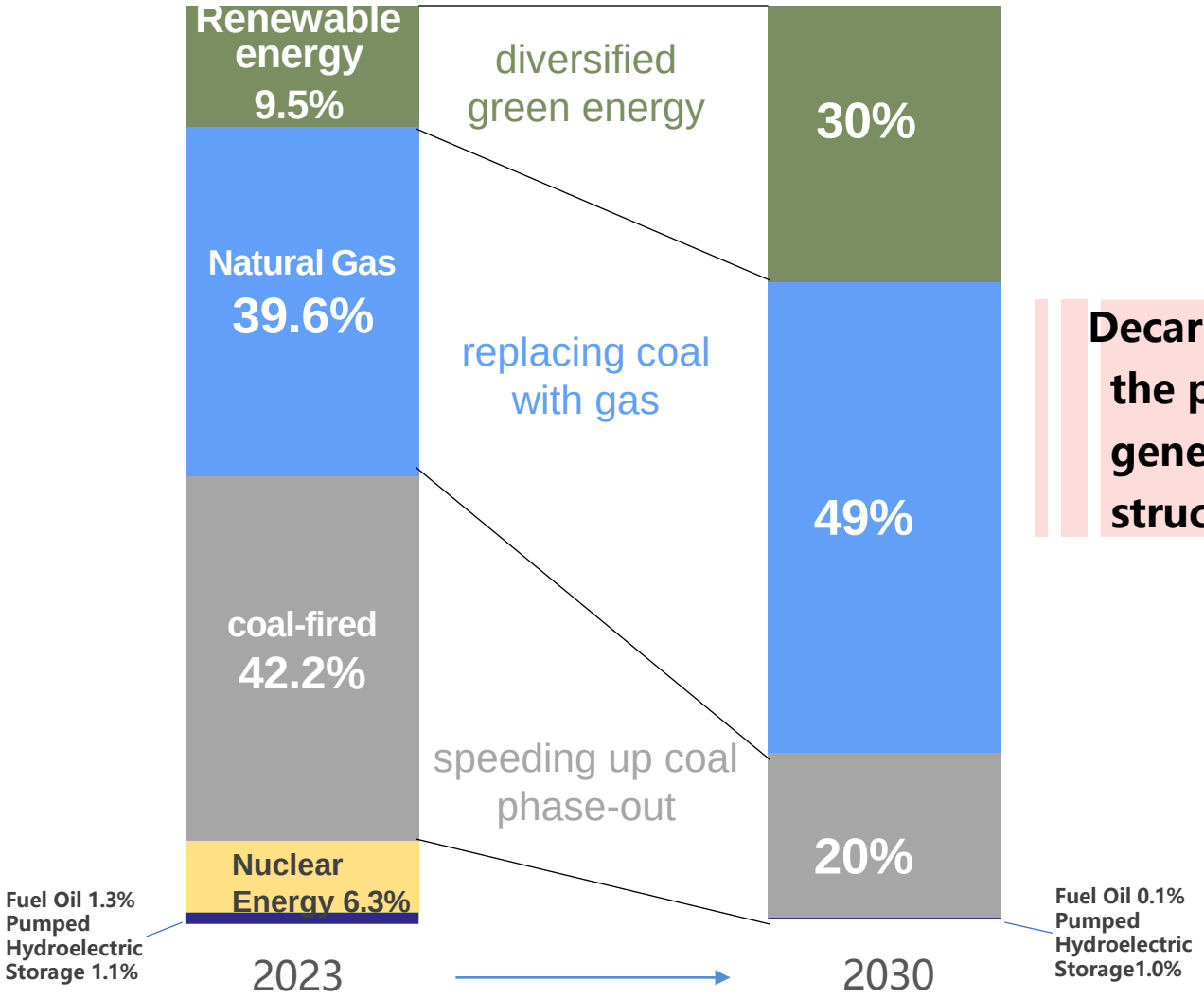
■ 2030 Carbon Reduction Target: 8.18 Million Metric Tons CO_2e



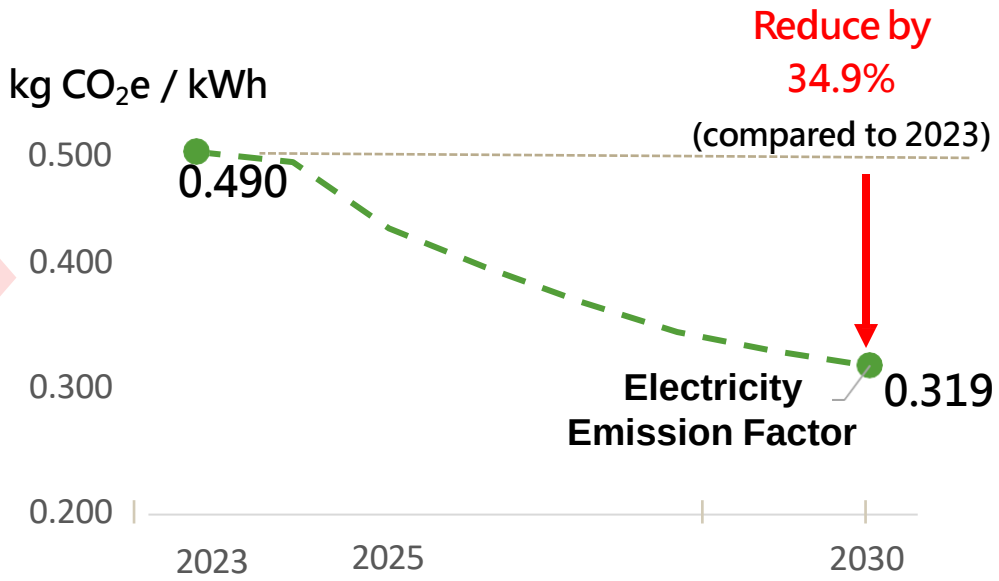
Carbon Reduction Actions in the Energy Sector(2/4)

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

■ Electricity Emission Factor to Be Reduced to 0.319 kg CO_2e by 2030



Decarbonizing the power generation structure



Carbon Reduction Actions in the Energy Sector(3/4)

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

Flagship Projects

Solar PV Power

☑ **Space configuration**
- Incentives for small rooftop solar installations

☑ **Enhancing energy efficiency**
- Requirement for solar installation in new buildings

Offshore Wind Power

☑ **Block Development**
- Continuously advancing zonal development

☑ **Ocean Area Assessment**
- Identifying potential new offshore areas

Geothermal Energy

☑ **Capacity Enhancement**
- State-Owned enterprises leading the introduction of drilling equipment

☑ **International Cooperation**
- Expanding deep geothermal drilling projects

Small Hydropower

☑ **Expanding Project Sources**
- Investigation and assessment of potential sites

☑ **Enhancing Incentives**
- Reviewing feed-in tariffs and developing reward mechanisms

Technological Energy Storage

☑ **User Energy Storage**
- Introducing time-of-use pricing for behind-the-meter storage and promoting joint off-site demonstration projects

☑ **Expanding Subsidies**
- Increasing incentives for fuel cell installation

Carbon Reduction Actions in the Energy Sector(4/4)

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

Flagship Projects

Strategic Deployment of Adveanced Technologies

Hydrogen Supply Chain (including Ammonia)

☑ **Hydrogen Application**
- Expanding hydrogen/ammonia blending power generation technology and fuel cell installation

☑ **Infrastructure**
- Expanding the development of hydrogen refueling stations and enhancing the deployment of liquid ammonia storage tanks

Decarbonized Hydrogen Fuel

☑ **Test Site**
- Establishing a hydrogen-blended power generation testing facility

☑ **Expanding Development**
- Gradually scaling up decarbonized hydrogen production from natural gas

Carbon Capture, Utilization, and Storage (CCUS)

☑ **Technology Advancement**
- Developing high-efficiency, low-cost carbon capture technologies

☑ **Site Development**
- Establishing Carbon Storage Pilot and Commercialization Sites

Autonomous Carbon Reduction

Phasing Out Inefficient Thermal Power Units

☑ Phasing out aging power units by 2030 and replacing Them with newer, more efficient units

Improving Energy Efficiency in Non-Productive Sectors

☑ Evaluating the replacement of air conditioning units over 9 Years old, prioritizing high-efficiency and inverter-based systems

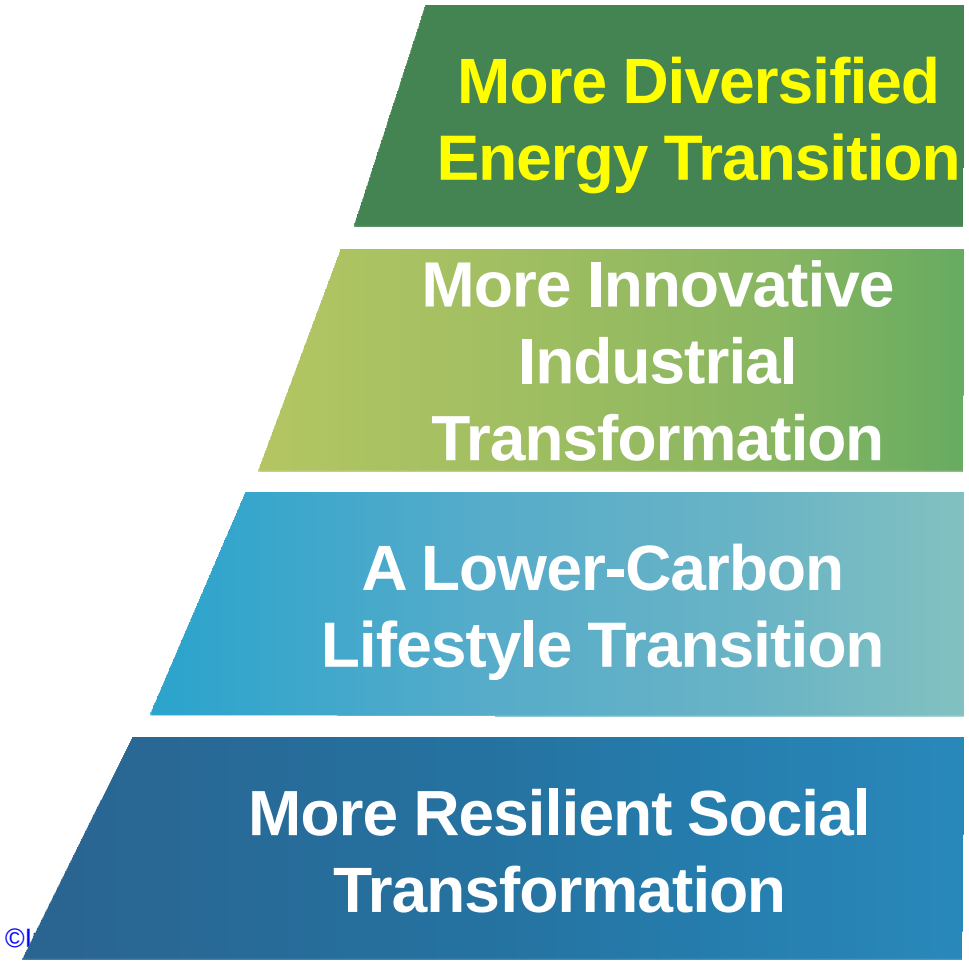
Energy Structure Adjustment

☑ Expanding renewable energy: building a low-carbon energy supply

Expected Benefits

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

Strengthening the Four Key Transformations



Propelling Green Growth 2030

Providing Low-Carbon Energy

- The power emission factor has decreased from 0.490 in 2023 to 0.319 (kg CO_2e / kWh).
- The air pollution level has been reduced by 40% compared to 2019.

Enhancing Energy Independence

- The dependency on imported energy has decreased from 96.2% in 2023 to 90%.

Building a Green Economy

- Government budget allocation exceeds NT$1 trillion.
- Driving private investment of NT$5 trillion.
- Cultivating 80,000 green-collar workers.

Thank you for your time and attention.

Technological Innovation

Resource： (Net-Zero Pathway: CT's Comprehensive Carbon Reduction Action Plan) by.NDC

3 Key Strategic Areas for Net-Zero Technologies

Energy Transition Technologies

- Sustainable Low-Carbon Hydrogen
- Hybrid Offshore Energy
- Advanced Deep Geothermal Power Generation

Decarbonized Industry Development

- Carbon Storage Integration with Social Governance
- Sustainable Biomass Energy Utilization
- Resource Circularity and Green Design
- Industrial Equipment Integration with AIoT for Innovative Energy Saving

Net-Zero Infrastructure

- Net-Zero Smart Grid
- Infrastructure and Built Environment

Advanced Technology

R&D and Field Validation

Ministry Carbon Reduction Flagship Project

MOEA

- Decarbonized Hydrogen Fuel
- Small Hydropower
- Geothermal Energy
- Deep Energy Saving
- Technological Energy Storage

MOE

- Carbon Capture and Storage (CCS)
- Resource Circulation
- Carbon Pricing and International Cooperation

NDC

- Hydrogen (including Ammonia) Supply Chain

MOTC

- Sustainable Aviation Fuel (SAF) and Transportation Carbon Reduction