Major Environmental Policies
Ministry Of Environment, R. O. C (Taiwan)
https://www.moenv.gov.tw/

Climate Change

MOENV Announces Carbon Fees Collection Rates

The "Collection Rates of Carbon Fees" (碳費徵收費率) were announced on 21 October 2024 as the MOENV approved the rates and completed relevant legislation according to the suggestions of the Carbon Fee Rate Review Committee. The rates will become effective on 1 January 2025 with details as follows:

I.Regular rate: NT$300/ton of CO_{2^e} (tCO_{2^e})

II.Preferential rate A (for compliance with the industry-specific designated reduction rates mandated in Table 1 of the Designated Greenhouse Gas Reduction Goals for Entities Subject to Carbon Fees (**徵收對象溫室氣體減量指定目標**): ***NT$50/t***$CO_{2^e}$

III.Preferential rate B (for compliance with designated reduction rates for technical benchmarks in Table 2 of the Designated Greenhouse Gas Reduction Goal for Entities Subject to Carbon Fees: ***NT$100/t***$CO_{2^e}$

The MOENV's promulgation of the three sub-laws concerning carbon fees on 29 August 2024 has marked the arrival of carbon pricing era in Taiwan. It was then followed by the announcement of the Collection Rates of Carbon Fees, an issue of major public concern. Required by the Regulations Governing Carbon Fee Collection (**碳費收費辦法**), collection targets of carbon fee are to calculate their own greenhouse gas emissions of 2025 and pay the carbon fees accordingly in May 2026.

The MOENV stresses that the carbon fees collection aims for carbon reduction. An entity subject to carbon fees may request for the approval of a preferential rate if it proposes a voluntary reduction plan and then meets the designated goal. To help collection targets smoothly adapt the carbon fee collection system, the MOENV will organize workshops on formulation of voluntary reduction plans, and the Ministry of Economic Affairs will initiate a counselling mechanism to provide professional technical consultation and guidance and help enterprises apply for voluntary reduction plans and suitable preferential rates.

Three Carbon Fee Regulations Announced, Officially Ushering in the Carbon Pricing Era

The MOENV have completed promulgation of three sets of carbon pricing sub-laws based on the Climate Change Response Act (氣候變遷因應法 , the Climate Act hereinafter) in order to establish Taiwan's own carbon pricing system and promote steady carbon reduction. The three announced regulations were the Regulations Governing Carbon Fee Collection (碳費收費辦法), the Regulations for Voluntary Carbon Reduction Management Plan (自主減量計畫管理辦法), as well as the Designated Greenhouse Gas Reduction Goals for Entities Subject to Carbon Fees (碳費徵收對象溫室氣體減量指定目標). This task corresponds to the dual transition to digital and green industries within the net-zero transition strategies of President Lai Ching-te, under which promotion of carbon pricing and market mechanism encourage enterprises to pursue low-carbon transitions. The implementation of the carbon fee system has marked Taiwan's official entry into the erea of carbon pricing. In the future, the government will bring in funding from both public and private sectors and make the carbon fee system the new driving force of Taiwan's green growth.

The MOENV stressed that the carbon fees are collected to accelerate and scale up the reduction efforts, with entities subject to carbon fees able to come up with their own voluntary reduction plans. Once the carbon fee system is in effect, it is estimated to achieve reduction by 37 million metric tons of CO2e by 2030, equivalent to 14% of the total emissions in 2005. The MOENV and Ministry of Economic Affairs (MOEA) will conduct more than ten sessions of meetings There will be enough time for enterprises to prepare and develop their reduction measures up to 2030 and seek the reduction paths and technology best for themselves, thus creating opportunities for green growth through premium fee rates and relevant assistance from the MOEA.

Drafts of the three sub-laws was preannounced on 29 April 2024. Regarding this, industries and civil organizations were invited to nine meetings and a public hearing for communications. Discussed topics included deduction of collection threshold, identification of industries with high carbon leakage risks, adjustment coefficients and schedules for emissions, offsets by domestic reduction credits, base year for designated targets and establishment of benchmarks, and information disclosure of voluntary reduction plans". The MOENV made adjustments under the three sub-laws based on public opinions and suggestions. Key points of the sub-laws are as follows:

I.The Regulations Governing Carbon Fee Collection:

1.Entities subject to carbon fees:

Enterprises in the electric power and fuel supply industry as well as manufacturing industry that meet qualifications of the Enterprise Emission Sources Subject to Inventory, Registration and Inspection of Greenhouse Gas Emissions (事業應盤查登錄及查驗溫室氣體排放量之排放源) and whose annual emissions, both directly from entire factories (sites) and indirect from the use of electricity reach a total of 25,000

metric tons of CO2e or more. In addition, considering fair competition within the same industry, the collection threshold of 25,000 tons of CO2e may be deducted in principle when enterprises determine emissions to be charged for carbon fees.

2.Fee collection period:
Starting from the next year after carbon fee rates are announced and in effect, entities subject to carbon fees are to report their GHG emissions between 1 January and 31 December of the previous year and pay carbon fees by the end of every May.

3.Carbon fee determination:
The carbon fees payable are the "charged emissions" multiplied by the "fee rate". Practices in the EU, Korea, and Singapore (such as partial free allocation or tax exemption) are taking into consideration on calculation of the "charged emissions", and an emission adjustment mechanism is designed in the regulations to prevent carbon leakages. The MOENV pointed out that enterprises are to have voluntary reduction plans approved before applying to be identified as industry with high carbon leakage risks, for which different emission adjustment coefficients are applied in three stages. The emission adjustment schedule, on the other hand, will be announced on a later date considering the international schedules for phasing out free emission allocations, Taiwan's reduction results and industries' international competitive edges. Also, for such industries' charged emissions, the collection threshold of 25,000 metric tons of CO2e is no longer deductible.

II.The Designated Greenhouse Gas Reduction Goals for Entities Subject to Carbon Fees and the Regulations for Voluntary Carbon Reduction Management Plan:

Article 29 of the Climate Act specifies that an entity subject to carbon fees may propose voluntary reduction plans and apply for a preferential rate once it has reduced emissions effectively and achieved the designated reduction goals set by the central competent authorities by taking reduction measure. Such measures include switch to low-carbon fuels, adoption of negative emission technologies, improvement of energy efficiency, use of renewable energy, or enhancement of manufacturing process.

1.Designate reduction goal:
Two ways are provided to determine the designate goals; one is the industry-specific reduction rate based on the science-based targets initiative (SBTi), and the other the technical benchmark-based designated reduction rate, established according to international and domestic technical emission benchmarks and under the condition of reaching the nationally determined contributions by 2030.

2.Voluntary reduction plan:
For the eligibility of the preferential rates, an entity subject to carbon fees needs to select the designated reduction rate from either Appendix 1 or 2 in the Designated Goals, and determine the emissions of the target year to be achieved by 2030 accordingly as the designated goal. Once the reduction paths are planned out every year leading up to 2030, including the progress of reduction measure implementation and emissions every year, the application for voluntary reduction plans may be submitted and carried out only after obtaining approvals from central competent authorities.

3.Regular result inspections:
The central competent authorities will inspect the progress of voluntary reduction plans every year. Enterprises need to submit the process report of the voluntary reduction plan of the previous year by the end of every April. Those meeting the set

progress are eligible for the preferential rates in the current year. If found failing to execute the plan accordingly by the central competent authorities after inspection, enterprises are to return the difference of the carbon fees payable between the regular and the preferential rates for the current year and make improvements by a given deadline based on the regulations. Failure to improve by the given deadline will result in cancellation of the voluntary reduction plan.

Finally, the MOENV has set the ratio at 1.2 for the deduction of reduction credits from charged emissions for entities subject to carbon fees who use voluntary reduction plans and offset projects, providing that he deduction limit for using reduction credits shall not exceed 10% of the enterprises' charged emissions. This is to encourage these entities (i.e., major emission sources) to lead those not subject to carbon fees to take reduction efforts and keep funds in Taiwan,. To recognize enterprises' early reduction efforts, it is specified that enterprises not of high carbon leakage risks and participating in the pilot reduction products are eligible for the 30% ration of deduction of reduction credits from the charged emissions for the first 3 years of the collection of carbon fees. Additionally, enterprises not of high carbon leakage risks are eligible to use foreign reduction credits approved by the central competent authorities as an extra supporting package, provided that no more than 5% is deducted from the charged emissions.

The MOENV expressed that Green Point collection will continue to expand green shopping services for Green Points and incentivize more environment-friendly actions to guide the public towards living a net-zero green life. One simple action, however small, can make a big difference in the world if multiplied. The MOENV also sincerely invites more people to join in Green Point collection, act to protect the environment and contribute to a good future for the Earth. Everyone is welcome to download the Green Points APP and become a member, to "Go with the green points and live a net

■ *The MOENV Minister Peng Chih-Ming (middle) announced the three carbon fee sub-laws, marking the arrival of carbon pricing era*

Waste Management

8+N Resource Circulation Alliance Founded Toward Circular Economy Via Collaboration Between Public and Private Sectors

Eight industrial alliances related to resource circulation attended the "Public and Private Collaboration, 8+N Circulation" ceremony on 30 August 2024. Over 200 corporate and government representatives from food production, plastics, textile, health, construction, electronic products, inorganic resources, recycling industry, and other fields together formed the eight alliances under the witness of the MOENV Minister Peng Chih-Ming, Director General Lai Ying-Ying of the Resource Circulation Administration (RCA) and alliance representatives. The alliance representatives shared the purposes and missions of establishing the alliances and the expected achievements in the upcoming year and talked with Minister Peng about the alliances' actions, hoping for more effective links within resource circulation industry via collaboration between the private and private sectors. It is estimated that value of the resource circulation industry will reach up to NT$370 billion by 2030, achieving the goals of green and digital transitions and environmental sustainability.

Minister Peng pointed out that circular economy is the key in responding to climate change and achieving net-zero emission and sustainable development. According to the State of Climate Tech, climate technology funds have invested significantly in circular economy, next only to climate adaptation and transportation. In particular, Minister Peng mentioned the three major funds in Taiwan's green growth strategies. From the Green Growth Fund, the MOENV will seek the investment of NT$10 billion on reduction and circular economy to boost corporate development. Regarding the Insurance Industry Funds, the MOENV has started joining force with the Financial Supervisory Commission to channel funds from insurance companies to circular economy. And lastly for the venture capitals, the MOENV is working with Taiwan Venture Capital Association to encourage venture capitals to support circular economy and net-zero industries. These funding sources will become the important driving force behind industry development. All relevant enterprises are urged to work with the MOENV to expand the scale of circular economy and create new industry values. Hopefully, the alliances will expand from the eight current ones to include more and cooperate to create the economic scale for the resource circulation system. It is also hoped that the alliance members will back amendment of the Resource Circulation Promotion Act (**資源循環促進法**) as civilian supporters. It is believed that more possibilities and imaginations will become practical actions after revisions.

At the same time, with the international awareness of growing plastic pollution, the United Nations is promoting the Global Plastics Treaty as an attempt to solve the problem of plastics from production, consumption to disposal, and puts more emphasis on the importance of resource circulation. The MOENV is in charge of

resource circulation and zero waste under the key net-zero strategies, and continues to strengthen effective resource circulation and use aiming toward the net-zero goal by promoting diversified waste treatment methods, creating circulation parks, and formulating solutions across ministries. In addition, the MOENV is also actively promoting the new cultural movement of environmental protection with measures such as implementing resource sorting and recycling, reducing use of plastic bags and disposable utensils, using more environmentally friendly products, facilitating sustainable consumption, and pushing implementation of resource recycling in both industries and people's daily life.

Chairman Eugene Chien of the Taiwan Institute of Sustainable Energy, as well as the former Minister of Environmental Protection Administration, is also excited about the completion of the Resource Circulation Promotion Act. He said that it was in his term that the Waste Disposal Act (**廢棄物清理法**) was amended to specify producers' responsibilities and establish the recycling system. With other policies like the "Alien Babies" to promote citizen education, Taiwan has outperformed the world in the field of recycling. Once the resource circulation industry grows to maturity in Taiwan, it will help the world and also put Taiwan on the global stage.

The RCA Director General Lai explained that since its establishment the RCA has developed the three major circulation strategies, which are "green design and source management", "energy and resource circulation", and "waste generation-disposal balance and management". alongside its two driving pillars, "smooth circulation network" and "innovative technologies and systems" By putting priority on promotion of ten key projects, the RCA hopes to achieve zero waste and the net-zero vision so as to deal with key issues regarding the circular economy, such as legislations, product costs, technological innovations, behavioral patterns, coordination and cooperation, industry transformation, and international environment. The MOENV just celebrated its first anniversary and has gradually transformed its role from a supervisor previously to an integrator and promoter. The purpose of establishing the 8+N resource circulation alliances is to build a resource sharing platform, improve efficiency of resource matching among industries, and strengthen resource circulation among industries through collaboration of public and private sectors and cooperation across different fields. The ultimate goal is to build up industries' economic scale and maintain smooth resource circulation channels.

When it comes to founding the 8+N Resource Circulation Alliance,"8" means linking the eight alliances that have existed, and "+N" aims to grow and bring in more organizations engaging in resource circulation into the alliance, ultimately creating a network that accelerates resource circulation transformation together from design, production, consumption, recycling to circulation. This cross-domain communication can effectively enhance innovations and values of resource circulation products and services, and encourage formation of an resource circulation industrial chain consisting of manufacturing and service-related industries in the upstream, mid-stream and downstream, which will jointly increase the market influence and increase the industry's economic scale. The alliance has been formed with the government taking the lead in promoting the linkage of various resource circulation industries through MGM (member get member), proving various subsidies

and regulatory adaptation, and introducing resources and funds through public-private collaboration to expand development. Moreover, enterprises are encouraged to introduce digital technologies and tools to improve resource circulation efficiency, accelerate the development of circular economy, and expand economic scale.

The 8+N Resource Circulation Alliance will organize regular meetings or workshops to build a resource circulation platform that incorporates industries, the government, the academia, and the research community Strengths from all fields will be integrated to stay on top of trends and technological developments home and abroad and work together on promotion plans. The Alliance will provide suggestions on policies as important references for policy planning and evaluation, and jointly facilitate the amendment of the Resource Circulation Promotion Act. Hopefully, it will strengthen the effective resource circulation, increase the production values of the resource circulation industry, provide more advantages for Taiwan's resource circulation industry in the global market, and achieve the vision of zero waste and net-zero emissions.

■ *The MOENV Minister Peng Chi-Ming, the RCA Director General Lai Ying-Ying, and alliance representatives witness founding of the 8+N Resource Circulation Alliance*

■ *Eight industrial alliances involving resource circulation and representatives from more than 200 businesses and ministries across various fields attend the founding ceremony*

■ *Alliance representatives talk to Minister Peng for more effective linkage of resource circulation industries trough collaboration between the government and private sector.*

Air Quality

Construction and Operation Included for Offset to Optimize Air Pollution Increment Offset system for EIA Cases and for Better CSR

The MOENV announced the amended Principles for Reviewing Air Pollution Emission Offsets of Development Activities (審查開發行為空氣污染物排放量增量抵換處理原則) (Offset Principles hereinafter) on 1 October 2024. The aim is to set consistent review principles concerning offsets of increment of air pollutants generated by development projects and also as references for environmental impact assessments (EIAs) for development activities.

The MOENV invited relevant agencies, environmental groups, developers and local governments onto eight meetings, listening opinions from all sides and the issues the environmental groups were concerned with. The Offset Principles were revised according to opinions collected and are summarized as follows: plan as required by the central competent authority, the difference between the regular and preferred rates will be collected and improvements required by the given deadline. For those who fail to improve by the deadline, their approved plans will be cancelled. In this case, the enterprise will have to pay for the carbon fees at the regular rate and no longer be eligible for the carbon leakage risk factor due to failure to have its voluntary reduction plan approved.

The MOENV preannounced the drafts of three sub-laws of carbon fee collection on 29 April 2024. All suggestions or comments are welcome. The MOENV and Ministry of Economic Affairs have made three presentations explaining the three sub-laws of carbon fee collection to those subject to carbon fees, and will invite NGOs concerned about the carbon fee collection system for further presentations of carbon fee sub-laws for more comments and suggestions regarding these sub-laws.

I.Expanding offset scale:
Increased emissions of air pollutants during construction activities are included in the Offset Principles.

II.Establishing offset priorities:
Development projects that are stationary pollution sources shall first target stationary sources for their offset efforts on increased air pollutant emissions and, only when the offsets are insufficient, then move on to target mobile sources (replacement of vehicles), reduction regarding fugitive sources, and other reduction sources.

III.Diversifying offset sources:
The revision newly added measures for offset efforts, such as introducing low-pollution transportation vehicles in industrial/science parks, obtaining voluntary management labels for clean emissions for construction machinery, and adoption of air quality purification zones. Offsets are deleted for offshore islands.

IV.Offsetting from near to far:
The revisions has specified the priority for the selection of locations for which

development activities conduct offsets for increased air pollutant emissions (in the same city/county, in same air quality zone, and in the vicinity of upwind cities/counties of the air quality zone). The different offset ratios are also specified, 1:1.2 for the same city/county, 1:1.3 for the same air quality zone, and 1:1.4 for the vicinity of upwind cities/counties of the air quality zone). All of the above are set to offset development-generating pollutions from the nearest sources.

The MOENV points out that the current offset principles target stationery, mobile and fugitive sources. Developers would fund existing public and private venues to cut down air pollution in order to obtain a certain proportion of offset credits for pollution reduction. Statistics from 2019 up till now show that the MOENV has reviewed 174 development projects, whose total increased air pollutants generated from development activities of developers amount to approximately 10,500 metric tons/year. The post-offset net increment has dropped to approximately 2,150 metric tons/year, a nearly 80% offset with reduction actions. This indicates that the offset system is effective in reducing the environmental impacts of new development projects. It is expected that this amendment of the Offset Principles will improve the offset system.

The MOENV is currently planning to develop an information platform for offsets of increased air pollutant emissions from development activities in response to the public call for to disclosing the offset information. The platform will provide development projects' offset promises, implementation status of offsets, as well as information of matching those in need of diverse offset methods. This aims for transparency of offset information by helping all concerned parties learn more about offset sources, developers' offset status and offset verification.

***C**limate **C**hange*

MOENV Approves Forest- and Bamboo-Based Reduction to Increase Natural Carbon Sinks

The MOENV review committee of GHG offset programs and voluntary reduction projects had its eighth meeting on 28 October, approving two reduction methods of local natural carbon sinks, which are "reinforced forest-based management" and "bamboo forest-based management". By adopting these reduction methods to increase carbon sinks and obtain reduction credits, enterprises have the incentives to invest in strengthening or improving existing forestry for woodlands or bamboo forests, therefore helping achieve the goal of net-zero emission through expanding and accelerating the results of carbon sinks.

The Management Regulations for Voluntary Greenhouse Gas Emission Reduction Projects(**溫室氣體自願減量專案管理辦法**)(the Management Regulations hereinafter) specify that an enterprise that has submitted its voluntary reduction plan to apply for reduction credits are required to execute the plan by adopting reduction methods. In regard to this, the MOENV has announced 143 reduction methods under 13 categories on 1 February 2024. The Management Regulations also specify that enterprises may apply to the MOENV for review of new reduction methods in order to take in reduction methods that have advanced along with the technological evolution and become suitable for Taiwan's environmental conditions. Therefore, the Ministry of Agriculture requested the review of the two methods mentioned above in January 2024, which were later approved in the committee meeting on 28 October after the draft announcement, public opinion consultation, and discussions in meetings with experts. These two methods are the first ones that have been requested for review and then approved and involve natural carbon sinks after the promulgation of the Management Regulation.

The two reduction methods are summarized as follows:

I.Scope and conditions of application

The "reinforced forest-based management" applies to woodlands other than wetlands, where tree-based interplanting, mowing, stand density management, thinning, pruning, harvesting and other forest management measures are practiced. Applications for registration are to be submitted within three years from the implementation date. The "bamboo-based forest management", on the other hand, applies to properties with bamboos as main land uses five years before the beginning of the programs, and where bamboos (e.g., Makino bamboo and Moso bamboo) grow in a scattered manner and account for 50% or more of forest vegetations, or clusters of bamboos (e.g., thorny bamboo and long-shoot bamboo) account for 20% or more of vegetations. Both also include trees growing within the boundaries set of the bamboo harvesting projects. These trees and bamboos shall not be logged unless it is necessary for the purpose of forest protection.

II.Determination of results of wood/bamboo products included as carbon sinks

Calculation of the results of carbon fixation of woods and bamboos after they are made into products is what sets the tree/bamboo-based forestry apart from previous reforestation. The reduction methods approved this time set specific categories for manufactured wooden/bamboo products so as to have conservative estimation of the amount of carbon captured in wooden/bamboo products, and exclude products with short lifecycle for the calculation. And to track the whereabouts of wooden/bamboo products, applicant shall provide legal documents recording harvests and transactions of wood/bamboo materials as proof, which are to be registered in the officially recognized tracking system for wooden/bamboo products.

The MOENV indicates that the domestic reduction method to increase carbon sinks is "forestation and reforestation for carbon sink" among the 143 announced methods for voluntary reduction programs and applies to forestation on non-forest

lands. To provide incentives for promoting increase of carbon sinks through "existing forests of trees and bamboos", the Ministry of Agriculture (MOA) took references from the international practice of "Improved Forest Management (IFM) and drafted proposal of new reduction methods. A panel of experts, put together by the MOENV and consisting of external experts and scholars review committee members, reviewed these methods based on the environmental, technological and legislative conditions of Taiwan in hopes that they are suitable for Taiwan's forest development. The methods can be adopted by enterprises committed to acquire reduction credits via forest management and help increase natural carbon sinks in Taiwan and therefore achieve the goal of net-zero emission.

The two approved reduction methods will be announced by the MOENV on the Voluntary Greenhouse Gas Reduction and Offset Information Platform for public access, once they are revised by the Ministry of Agriculture (MOA) according to the meeting resolutions. The MOENV reminds all that forest management are to comply relevant regulations and recommends careful evaluation as planning and implementation of voluntary reduction programs require a certain degree of professional expertise as well as substantial manpower, resource, and time. For maximized benefits, the MOENV also suggests that those interested tion plan thoroughly, apply for registration, ensure compliance with relevant requirements, and, after being reviewed and approved, proceed to implementation.

***C**limate **C**hange*

IEMN Meeting Shows US-Taiwan Efforts in Leading Global Electronic Product Circulation Strategies

The MOENV's Resource Circulation Administration (RCA) organized the 2024 International E-Waste Management Network (IEMN) Annual Meeting. The event was launched on 2 October with more than 70 guests from Argentine, Brazil, Colombia, Malaysia, the Philippines, Thailand, Tuvalu, the US and Vietnam as well as the MOENV's partners in Taiwan. Attendees discussed global strategies of electronic product circulation, shared experience and technologies, and led partner countries in resource circulation to improve efficiency of resource use and reduce extraction and use of resources.

The IEMN's establishment was facilitated when Taiwan signed the environmental technology agreements with the US. Both the US and Taiwan have been working together since 2011 to promote the IEMN and dedicated to appropriate disposal of electronic wastes around the world, helping all partner countries establish

effective management system and develop technologies with their wide influence. The IEMN is transitioning gradually from focusing on recycling and disposal of electronic wastes in the past to developing circular economic strategies toward the goal of net zero and sustainability.

In his opening speech, the MOENV Minister Peng Chih-Ming mentioned that Taiwan strives for net-zero emission with recycling playing an important role in its pathway to net zero by 2050. In the past the Environmental Protection Administration (predecessor of the MOENV) had since its establishment been dedicated to extending manufacturers' responsibilities with the unique fee collection and subsidization system and also promoting the 4-in-1 recycling program. Now, the MOENV has been founded and makes further efforts to create a circular economy. For years, garbage sorting has become a new fashion that is intertwined with people's daily life, with a recycling rate of over 58%.

Minister Peng pointed out further that electric appliance and electronic products are a major part of Resource Circulation and Zero Waste, Taiwan's eighth key strategy for 2050 net-zero transition. The RCA has been making efforts to launch environmental protection policies different from the previous ones in aspects from circular design, source management, intensified recycling to circulation for reuse, such as establishing maintenance index for electronic products and promoting digital product histories, rental instead of purchase, and circular procurement for a sharing economy. There are also policies that provide preferential rates as economic incentives for use of recycled plastics in electronic products, which with those above encourage practice of green designs and help it become a driving force. At the same time, the RCA combines the consensus of environmental protection with cultural creativity to promote environmental education and motivate public participation, thus making environmental protection easier.

Facing the brutal challenge of promoting resource circulation, Taiwan has started to utilize strategies to operate as a group, integrating multiple resources and looking for ways to establish alliances within the same industries or among different industries. Various industries are encouraged to develop new competition models, come up with different products or technologies, accelerate upgrades and transformations, and maintain its edge in the international market.

Aiming to continue exchanges with the world on environmental protection, this three-day event included discussions where policies and practices were shared, appliance maintenance activities, and visits to enterprises. More importantly, Taiwan was able to interact with its friends around the world, build a more solid cooperation platform, and set a new milestone for an environment capable of sustainable development by sharing its experiences.

■ *The US and Taiwan jointly lead international partners in global electronic product circulation strategies and hold the annual IEMN meeting in Taiwan from 1 to 3 October.*

■ *The RCA Director General Lai Ying-ying welcomes guests to the IEMN meeting in Taiwan on 1 October.*

■ *The US and Taiwan jointly lead international partners in global electronic product circulation strategies and hold the annual IEMN meeting in Taiwan from 1 to 3 October.*

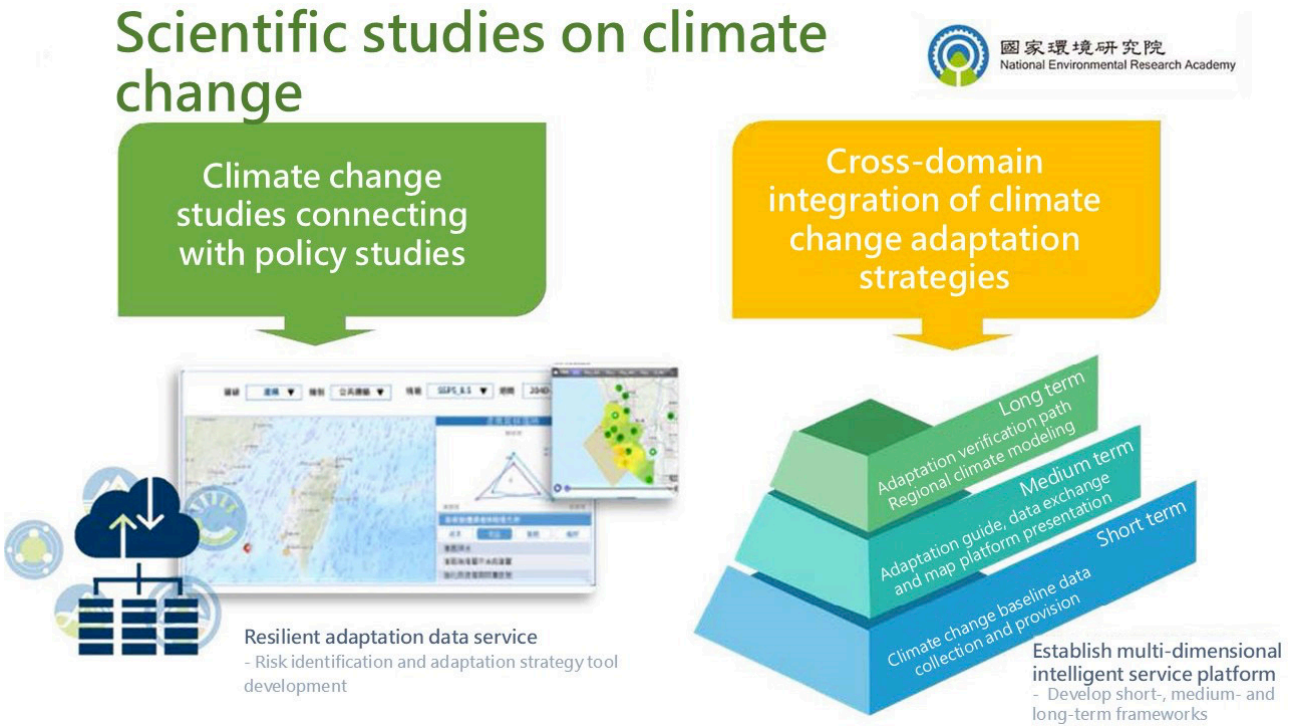
■ *Jane Nishida, Assistant Administrator of the USEPA's Office of International and Tribal Affairs, recognizes Taiwan's efforts in proper disposal of global electronic wastes and helping partner countries establish effective management system and develop technologies (opening ceremony conducted online due to typhoon)*

National Environmental Research Academy and Central Weather Administration Cooperate to Expand Climate Change Research Capacity

Regarding the improvement of Taiwan's climate change response capabilities, the National Environmental Research Academy (NERA) of the Ministry of Environment (MOENV) joined forces with the Central Weather Administration (CWA) of the Ministry of Transportation and Communications (MOTC) to rapidly expand their capacity to conduct climate change research. A Memorandum of Understanding (MOU) between the MOENV and the CWA was signed on 14 August 2024 at the MOENV office, which will improve cooperation and enable more effective use of scientific and technical R&D resources from both sides.

The NERA indicated that the CWA is in charge of the monitoring, analysis, simulation and estimation of weather and sea conditions, which is closely related to what the NERA does in terms of climate change studies. In particular, the CWA recently put its sixth generation super computer into operation and established a GPU (graphics processing unit) computation system to accelerate the development of AI (artificial intelligence) weather forecasting applications. With this in mind, the NERA and the CWA combined existing computing resources, and plan to cooperate with domestic and foreign industries and academic research circles to actively use advanced data science and technology to develop digital systems for climate change adaptation and decision-making. The NERA has laid a solid foundation in environmental research over a long period. Combined with the CWA's rich data and experience in meteorology services, cross-domain cooperation will surely produce abundant results. The MOU sets the direction for future cooperation between the two agencies, with climate change, environmental governance, and pollution prevention among the focuses of joint research.

At present, the NERA, the CWA and other agencies are working hard on a plan to integrate cross-domain applications related to climate change adaptation and risk resilience, which is expected to facilitate work on major domestic issues such as climate change adaptation and risk resilience building. At the same time, through cooperation in climate adaptation research and service platform construction, a climate service collaboration platform will be established to provide climate science information services and practical applications that are closer to users. This will serve as the scientific basis for the national climate adaptation strategy and help transform Taiwan into a low-carbon, sustainable and climate-resilient society.



■ *Building an intelligent service platform for climate change adaptation*

■ *Jane Nishida, Assistant Administrator of the USEPA's Office of International and Tribal Affairs, recognizes Taiwan's efforts in proper disposal of global electronic wastes and helping partner countries establish effective management system and develop technologies (opening ceremony conducted online due to typhoon)*

■ *President Tsung-Yung Liu of NERA (left) and Administrator Cheng, Chia-Ping of CWA (right) signing the MOU*

■ *President Tsung-Yung Liu of NERA (left) and Administrator Cheng, Chia-Ping of the CWA (right) with the signed MOU*

Climate Change

MOENV Publishes Guide for Enterprise Declaration of Carbon Neutrality

Many enterprises have declared on their own that their products, services or organizations achieve carbon neutrality, showing their actions of greenhouse gas reduction. However, it remains questionable whether the reductions are as substantial as declared, or it is simply greenwashing under the disguise of carbon neutrality. The MOENV has published the Guide for Enterprise Declaration of Carbon Neutrality (企業宣告碳中和指引) on 25 September 2024 to demonstrate to enterprise how to declare carbon neutrality while keeping the public from being misled by false declarations or failure to fully disclose information. It is also an effort to educate the consumers ways to examine the authenticity of enterprises' reduction actions in order to decide whether to support the declaring enterprises.

The MOENV points out that the Guide for Enterprise Declaration of Carbon Neutrality is developed to help enterprises set GHG reduction goals and ensure that they put in actual efforts to achieve these goals and become fully transparent by disclosing all relevant information. The guide is summarized as follows:

Drafts of the three sub-laws was preannounced on 29 April 2024. Regarding this, industries and civil organizations were invited to nine meetings and a public hearing for communications. Discussed topics included deduction of collection threshold, identification of industries with high carbon leakage risks, adjustment coefficients and schedules for emissions, offsets by domestic reduction credits, base year for designated targets and establishment of benchmarks, and information disclosure of voluntary reduction plans". The MOENV made adjustments under the three sub-laws based on public opinions and suggestions. Key points of the sub-laws are as follows:

I.Applicable to carbon neutrality declarations for an organization, product or service

Carbon neutrality refers to balance between emissions and removals of GHG generated by human activities, which can be achieved by approach including offsetting emissions with carbon credits. The Guide for Enterprise Declaration of Carbon Neutrality applies to carbon neutrality declaration made by enterprises for an organization, product or service after they acquire substantial results through GHG inventory, reductions and offsets.

II.Three core principles to be followed: Emission inventory, reduction and offset

1.Inventory:
An enterprise shall perform a complete GHG emission inventory, select an appropriate target for carbon neutrality and ensure that it represents the enterprise itself or strive to have all products, as practically as possible, achieve neutrality

instead of a single product. It means that the enterprise should not claim neutrality with just a handful of “symbolic actions” out of its many emission activities, one of greenwashing brought up by the World Economic Forum (WEF).

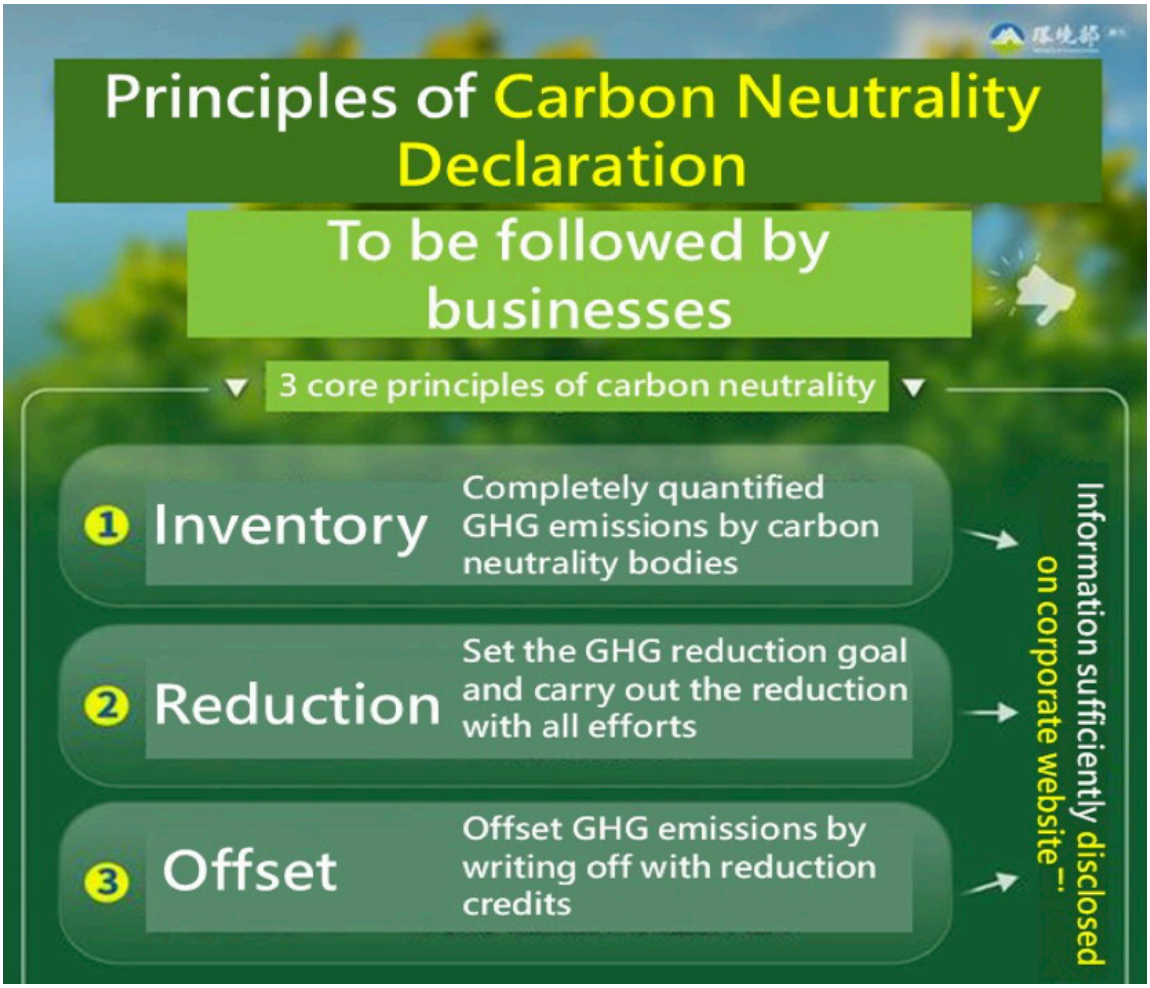
2.Reduction:
Enterprises are to determine short-term to long-term reduction pathways and targets based on widely recognized and science-based carbon reduction approaches, such as Science Based Targets Initiative (SBTi), and lower emissions of the neutrality target ac-cordingly by taking concrete initiatives to cut down emissions or remove increments. Al-so, there is to be evidence showing that it has done what it can for reduction, including disclosing implementations of reduction measures, adopting the best feasible technolo-gy currently available, or any proof of having achieved the goals set for the current stage along the long-term net-zero pathway.

3.Offset:
If in need of achieving neutrality by offsetting the remaining emissions with reduction credits, an enterprise shall prove that it has done what it can to reduce the neutrality tar-get’s emissions, and that the reduction credits used are to come from one or more re-duction projects that are authentic and comply with international standards. Before using reduction credits for offsets, enterprises shall investigate the source with due diligence to ensure that the credits are unique, authentic, permanent and not calculated repeatedly, as required by the standards under the guide. Furthermore, the time of the credits used for neutrality occur shall precede the carbon neutrality period by no less than five years.

III.Support required with complete, specific and correct open information

The MOENV indicates that another common greenwashing mentioned by the WEF is “selective disclosure”. An enterprise shall ensure that its information disclosed is thorough, precise, and correct when pursuing carbon neutrality. The information, including boundaries of carbon neutrality targets, calculation processes, reduction results and offset sources, are to be disclosed over its corporate website in a manner that is easily accessible to stakeholders and the general public.

The MOENV also states that it takes all sectors to cope with climate change. Enterprises are to ensure the authenticity and validity of their own carbon neutrality through scientifically rea-sonable calculations and third-party verification. Enterprises’ ultimate purpose of their substantial efforts for climate change is to achieve the final net zero through reduction and car-bon sink increase, rather than the carbon neutrality during the process. An open statement of measures that they will keep adopting and goals in the future when enterprises declare car-bon-neutral at the current stage.



■ *Principles of carbon enutrality declaration to be followed by businesses*

■ *Deputy Minister Shih Wen-Chen explains the MOENV's promulgation of the Guide for Enterprise Declaration of Carbon Neutrality"*

MOENV and NASA cooperate to invite Southeast Asian countries to come to Taiwan, a giant leap for cross-border cooperation for air pollution control

As a cooperative effort to improve the air quality in Taiwan and Southeast Asia, the Ministry of Environment (MOENV) worked with NASA for the South & Southeast Asia–Air Improvements in the Region (SSEA-AIR). 9 government officials and experts from Mongolia, the Philippines, Thailand and Vietnam were invited for exchanges of air pollution control strategies. The workshop started with the speeches of Minister Peng Chih-Ming of Environment and Mr. Justin Spenillo, U.S. EPA Environmental Protection Specialist, on 9 Sep. The MOENV will share Taiwan's air quality control experience on issues of interest to the participating countries, arrange field visits, and have substantive technical exchanges with these countries for better international interactions.

The MOENV expressed that this was a 5-day event of international interactions where the experts shared the experience of their respective countries on strategies for air pollution control. The US Environmental Protection Agency shared their US EPA fire smoke maps, national air quality standard technology program training and establishment of air quality standards with the MOENV and local environmental protection bureaus in person and through online tele-conferencing, which is valuable for the implementation of air pollution control, as the information provided is helpful for setting a foundation for strategy formation, combining technical tools and their applications, and improve the control performance.

The MOENV has produced fruitful results in air pollution improvement and control effective-ness in recent year, as a series of control strategies, legislations and regulations were rolled out. This time, the MOENV shared the experience with the participating countries on topics of their interests; for example, how to fund the works to be done for air pollution improvement, Phase II air pollution control program targets, real-time monitoring of stationery pollution sources, emission management of mobile pollution source, technical control of construction activities, and indoor air quality mark and legislation. A field visit to several places was arranged to demonstrate intelligent jobsite for construction control, roadside inspection on mobile pollution source and how surprise inspections are performed. The participating experts were im-pressed by the efforts Taiwan has done for air pollution control and the results produced.

The MOENV indicated that Taiwan is unique geographically. In spring, the monitoring efforts are focused on pollutants migrated over a long distance from Indo-China and in winter, the northeastern winds bring pollutants from China. The air pollutants migrate cross border from one country to another. The participating countries learned from one another in this technical workshop

and hoped to deepen the international cooperative efforts, as a workshop like this create a win-win pattern of cooperation for the air pollution control in Asia and accelerate the improvement of air quality.

■ *Guests of the workshop*

■ *Minister Peng of Environment giving his speech*

■ *Mr. Justin Spenillo of US EPA giving his speech*

■ *Participating guests and the staff of Departments of Atmospheric Environment and Monitoring and Information*

■ *All participants after the US EPA speech*

■ *Visit to monitoring station at Fuguijiao*

13th Annual APMMN Partners Meeting solidifies the technical co-operation in Asia Pacific

The "13th Annual Asia-Pacific Mercury Monitoring Network (APMMN) Partners Meeting" was held on 3 Sep with Miss Jane Nishida, Assistant Administrator for EPA's Office of Inter-national and Tribal Affairs, and Dr. Peng Chih-Ming, Minister of Environment co-hosting the opening ceremony. More than 50 government officials and experts from 16 countries, including Australia, Fiji, India, Indonesia, Japan, Maldives, Mongolia, Nepal, Korea, Palau, Singapore, South Africa, Sri Lanka, Thailan and the US, participated in this meeting, discussing and sharing what they have done for mercury monitoring and management.

The MOENV indicated that this meeting has been held in Taiwan for 2 years straight, suggesting Taiwan's efforts are highly regarded in Asia Pacific region in terms of mercury monitoring technology and management capacity. The MOENV worked with the US EPA to set up the Annual Asia-Pacific Mercury Monitoring Network (APMMN) in 2012 and help partner countries improve their mercury monitoring capabilities, which contributes to the gradual decrease of mercury level in the atmosphere year by year. So far, assistance has been provided in establishing 14 mercury wet deposition samplers in several partner countries and collecting and analyzing more than 1,700 rainwater samples for mercury. The MOENV will continue to expand regional cooperation for environmental monitoring, and strengthen international monitoring mechanisms, monitoring technology interactions and data sharing.

The meeting was broadcast online through teleconferencing. The activities included the briefing of David Schmeltz, senior analyst at the U.S. EPA's Office of Atmospheric Programs, and David Gay of the U.S. National Atmospheric Deposition Program, on APMMN's current progress and future prospects; report of Japan's National Institute for Minamata Disease on mercury levels in the East China Sea and northwestern Pacific Ocean; MOENV's report on best practices and achievements in response to the United Nations Environment Program's Minamata Convention on Mercury; and the current development of partner countries' mercury monitoring. Mercury wet deposition sampling and analysis technology training was also provided to improve partner countries' mercury monitoring technology and data quality, deepen Taiwan's cooperation with Asia-Pacific countries in mercury monitoring, and increase Taiwan's international monitoring visibility.

The MOENV pointed out that the cross-departmental "Plan to Promote the Implementation of UN's Minamata Convention" (**執行聯合國汞水俁公約推動計畫**) was launched in response to the global trends of mercury management and as the basis of mercury management promotion in Taiwan. The joint efforts of all departments involved have paid off as all 9 categories of mercury-containing products in the

Minamata Convention were successfully placed in the monitoring list as scheduled. The flow and use of mercury are controlled from the source, and the environment, commodities and food are sampled and monitored. The management of mercury-containing waste is strengthened and education and publicity are carried out, and the efforts to improve management measures continue to ensure a healthy living environment for the people. As a member of the global village, Taiwan hopes to establish a close partnership through this workshop to jointly promote the Minamata Convention on Mercury and create a sustainable future for generations to come.

■ *Minister Peng giving his speech at the opening ceremony*

■ *Miss Jane Nishida, Assistant Administrator for EPA's Office of International and Tribal Affairs, giving her speech*

■ *13th Annual Asia-Pacific Mercury Monitoring Network (APMMN) Partners Meeting*