



Major Environmental Policies

Ministry Of Environment, R. O. C (Taiwan)

<https://www.moenv.gov.tw/>



Environmental Education

Ministry of Environment Holds 2050 Net-Zero City Exhibition

Net-zero sustainability is not just a goal, it is a trend-setting lifestyle attitude. The National Development Council and the Taipei Computer Association held the "2050 Net Zero City Exhibition" and the "2024 Smart City Exhibition" on 19 March 2024. The Ministry of Environment (MOENV) set up the "Net Zero Sustainable Life Hall" with three major exhibition areas, "Green Technology", "Green Cycle" and "Green Life", exhibiting everything from food, clothing, housing and transportation, to technical monitoring, conversion of wastewater into energy and resources, and smart low-carbon. The aim was to spearhead the practice of net-zero green lifestyle, and showcase Taiwan's latest achievements in the application of technology and the innovative thinking of circular enterprises.

he jointly held "2050 Net Zero City Exhibition" and the "2024 Smart City Exhibition" were attended by nearly 2,200 overseas VIPs from 112 cities and 46 countries from around the world. The scale of the exhibition and the number of overseas VIP visitors for the grand event exceeded last year's. Vice Premier Cheng Wen-Tsan said that digital technology is the foundation of urban governance, and the twin-axis of digital and green transition requires collaboration between government and the private sector. Taiwan's private industry already has a very mature foundation of applications, allowing Taiwan to become a model for smart cities and the "whole city (factory) export" of key

industries. Lin Chia-Lung, Secretary-General to the President, pointed out that cities contribute 67% of global carbon emissions and are the key to achieving net zero. The Smart City Exhibition will drive more cross-domain and cross-city cooperation: "Taiwan not only can help, but also can lead!" Taiwan aims to transform from being a hidden champion in the information industry chain, to be on the forefront of nations that are flexible in smart applications and produces net-zero solutions, and even to become a world hub. Environment Minister Shieu Fuh-Sheng said that the MOENV set up the "Net Zero Sustainable Life Hall" for this year's Net Zero City Exhibition and had 31 stands in three exhibition areas: "Green Life", "Green

Technology" and "Green Cycle". The exhibits were centered on food, clothing, housing and transportation. For example, there was tea serving (quenching thirst and reducing carbon and plastics for the earth); fibers taken from pineapple leaves, normally treated as agricultural waste, were recycled and made into fashionable products, functional clothing, canvas, and vegetable leather for extensive applications. There were also glow-in-dark materials used in public toilets, roads, and school grounds. The long-lasting glowing properties of the materials were combined with appropriate lighting to achieve better energy efficiency. In addition, the use of environmentally friendly building materials, the promotion of electric motorcycles, and interesting board games gave people a taste of what net-zero green life feels like, to help them imagine the daily details of living such a life. Other displays showcased Taiwan's latest achievements in green living, applications of technology and the innovative thinking of circular enterprises. For example: chemical accident prevention combined with technical monitoring and disaster prevention;

development of wastewater treatment technology to turn waste into energy and resources; and smart low-carbon.

Later that day, Deputy Minister Shih Wen-Chen of the MOENV chaired the "Life transition" sub-forum, with honored guests Luis Neves (introducer), CEO of the Global Sustainability Initiative (GeSI), and representatives from eight cities from the United States, Germany and Ukraine. Deputy Magistrate Wang Chih-Hui of the Taitung County Government and Director-General Wu Pei-Yu of the MOENV, shared their experience and insights on how to lead people to change behaviors centered on "life transition" as the main axis, in areas such as food, clothing, housing, transportation, education, entertainment and shopping. Through shared business models, establishing sustainable consumption models and engaging in national dialogue to build consensus, changes can be facilitated in the industrial supply chain to create a sustainable, low-carbon lifestyle and expand the influence of net-zero green living.



■ Minister Shieu Fuh-Sheng MOENV personnel welcome visitors to the MOENV's "Net Zero Sustainable Life Hall"

Climate Change

Drafts Preannounced regarding Carbon Fee Collection, Voluntary Reduction Plans, and Designated Reduction Goals for Collection Targets

The MOENV preannounced the drafts of 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) and 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) according to the Climate Change Response Act (氣候變遷因應法) (the Climate Act hereinafter). The purpose is to establish Taiwan's carbon pricing system and smoothly facilitate reductions. The drafts preannounced on 29 April 2024 are the mechanism for future carbon fee collection and combined with general and preferential fee rates to encourage entities subject to carbon fees to take larger and faster steps toward carbon reduction.

The MOENV stressed that the carbon fee system is designed to provide incentives for carbon reduction instead of a financial tool. The drafts preannounced serve as important guidelines for entities subject to carbon fees to develop their reduction measures and paths early on, as an attempt to move toward Taiwan's goal of net zero by 2050. Communications with the public will be carried out to reach a collective consensus in addition to soliciting comments during the 60-day preannouncement period. The drafts are outlined as follows:

1. Draft of the Regulations Governing Carbon Fee Collection:

(1) Entities subject to carbon fees: Enterprises in the electric power industry and 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) Starting from the next year after carbon fee collection starts, entities subject to carbon fees are to determine the amount of carbon fee payment by the end of May each year based on the emissions from 1 January to 31 December of the previous year.

(3) The carbon fee payable by the entities subject to carbon fees is the "charged emissions" multiplied by the "fee rate". For the calculation of "charged emissions", the MOENV took into consideration the global competitions faced by the industry and the fact that the low-carbon transition requires a certain amount of time and space. Therefore, to guide the industry to invest funds in carbon reduction works, a transition mechanism was designed in the collection regulations based on the practices in EU and other countries (such as partial free allocation or tax exemption). For industries with high carbon leakage risks, different carbon leakage risk coefficient (0.2, 0.4, and 0.6) are given in

three stages to adjust charged emissions and to maintain the edges of Taiwan's industries in the international competition. Industries with high carbon leakage risks that are interested in this transition mechanism are to submit an application for voluntary reduction plans to the central competent authorities for approval for the eligibility of this mechanism. In addition, the collection threshold of 25,000 metric tons of CO₂e will not be deducted from the charged emissions for such industries.

2.Drafts of 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 entities subject to carbon fees who switch to low carbon fuels, adopt negative emission technologies, increase energy efficiency, use renewable energy or take measures to reduce GHG emissions effectively by improving manufacturing processes and reaching goals designated by the central competent authority, may propose voluntary reduction plans and apply for a preferential rate from the central competent authority. The preannounced drafts this time are designed to achieve the 2030 reduction goal.

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

(2)Voluntary reduction plan: for the eligibility of the preferential rates, entities subject to

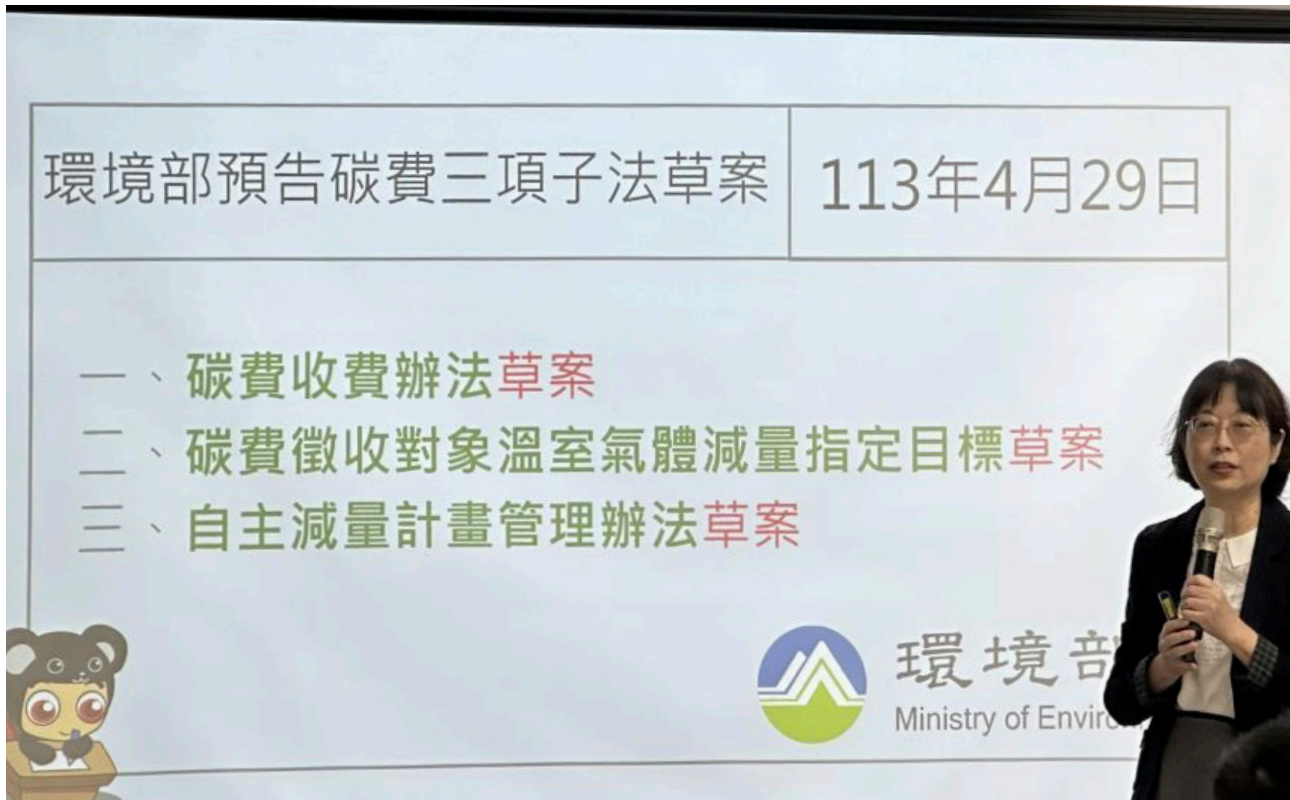
carbon fees must select one of the two ways of determination to set their designated reduction goal for 2030 and develop their own reduction measures to be adopted until 2030. A voluntary reduction plan shall be submitted to the central competent authorities and will be reviewed by a review board formed by all central competent industry authorities.

(3)Regular result inspections: The central competent authorities will inspect the progress of the voluntary reduction plan every year. Enterprises need to submit the progress report of the voluntary reduction plan for the previous year by the end of every April. Those who meet the progress are eligible for preferential rates in the current year. However, the voluntary reduction plan will be cancelled in accordance with regulations if an enterprise is found by the central competent authorities failing to implement the plan accordingly, and the difference in payment between the general rate and the preferential rate for the current year will be recovered.

Finally, the MOENV sets the ratio of reduction credits from charged emissions at 1.2 for entities subject to carbon fees who use the voluntary reduction projects and offset projects, provided that the deduction limit for using reduction credits shall not exceed 10% of the enterprise's charged emissions. This is to encourage entities subject to carbon fees (major emission sources) to lead those not subject to carbon fees for emission reduction and keep their funds in Taiwan as a priority. Also, the ratio of reduction credits from charged emissions at is set at 0.3 for enterprises not of high carbon leakage risks which started the pilot reduction projects two years before the collection of carbon fees, as recognize their early reduction efforts. In addition, enterprises not of high carbon leakage risks are eligible to use the foreign reduction credits approved by the central competent

authorities as an additional supporting package, provided that the upper reduction limit does not exceed 5% of the charged emissions.

The MOENV pointed out that the carbon fee collection system is designed with reduction in mind, rather than an additional source of government incomes. It is hoped that the economic incentives of carbon fee collection will accelerate the carbon reduction of Taiwan's industries and facilitate the low-carbon transition.



■ Tsai, Ling-Yi of the MOENV's Climate Change Administration explains the three preannounced sub-laws of carbon fee collection

Climate Change

MOENV Releases First Voluntary Reduction Method List

The MOENV just approved 143 greenhouse gas reduction methods under 13 sectoral scopes for voluntary reduction projects according to the Greenhouse Gas Voluntary Emission Reduction Projects Regulations (溫室氣體自願減量專案管理辦法) Article 12. The announcement was made public on the Voluntary Greenhouse Gas Reduction Offset Information Platform to provide feasible reduction measures for enterprises or governments of all level which are interested in acquiring offset credits by implementing reduction projects in Taiwan. All aim to achieve greater and faster reduction results.

The MOENV pointed out their experience in promoting the greenhouse gas (GHG) reduction projects have been based on the UN's Clean Development Mechanism (CDM) since 2015. With the existing CDM and local reduction methods in mind, the voluntary reduction projects developed according to Articles 10 and 11 of the regulations shall comply with the MRC principles of being measurable, reportable and verifiable MRC principles. They are also required to incorporate additionality, conservatism, and permanence and avoid causing environmental hazards and repeated calculations. Under the 10 Core Carbon Principles (CCPs) of the Integrity Council for the Voluntary Carbon Market (IC-VCM), a total of 143 reduction methods under 13 sectoral scopes have been reviewed and approved as methods applicable to the first set of voluntary reduction projects. It will allow the MOENV-issued reduction credits to align with internationally recognized

quality specifications in order to achieve substantial reduction results. In addition, the MOENV specified that verification by a third-party verification body may be omitted for 10 reduction methods during application and registration. These 10 methods, including replacement of lighting fixtures, water chillers, and other energy equipment, are mature reduction techniques, involve easy and clear calculations and have been carried out. Thus, the administrative procedures are simplified so that applying organizations become more interested without compromising substantial reduction results.

The MOENV emphasized that an enterprise interested in obtaining reduction credits is required to carry out voluntary reduction projects via the approved and announced reduction methods. Application of reduction credits will start only after monitoring shows substantial reduction results.

First Methods for Voluntary GHG Reduction



■ MOENV announced 143 methods under 13 sectoral scopes for first set of voluntary GHG reduction projects

Air Quality

Amended Points Recording and Handling Announced for Violating Regulations Regarding Fugitive Dust Air Pollutions from Stationary Sources

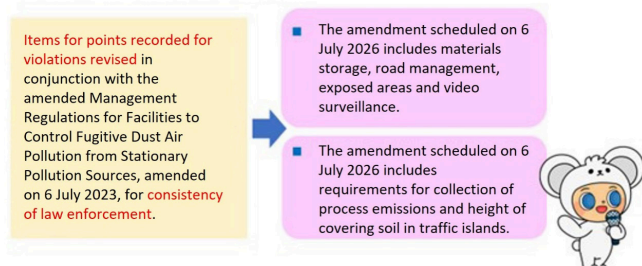
The MOENV promulgated the amended Principles for Recording of Points and Handling for Violating Management Regulations for Facilities to Control Fugitive Dust Air Pollution from Stationary Pollution Sources (固定污染源逸散性粒狀污染物空氣污染防制設施管理辦法) (the Principles hereinafter) on 2 April 2024. This was done according to the amended Management Regulations for Facilities to Control Fugitive Dust Air Pollution from Stationary Pollution Sources (固定污染源逸散性粒狀污染物空氣污染防制設施管理辦法) (the Management Regulations hereinafter) promulgated on 6 July 2023. The recording of points for and handling of violations are specified so that local environmental authorities implement the Management Regulations with a consistent basis and in a manner proportional to the extent of violations.

This amendment is in line with the amended Management Regulations, revising items that warrant point recorded for violation in the table of Article 2 of the Principles simultaneously. New addition target public and private venues which fail to install or adopt air pollution control facilities, monitoring instruments or video surveillance systems in accordance with the Management Regulations, and have proposed alternative method and have it approved by municipal or county (city) competent authorities, but still fail to carry out the alternative. They will be considered failing to install or adopt air pollution control facilities and have ten points recorded for violations. This is designed to urge implementation of alternative methods at

public and private venues and prevent unusual emissions of air pollutants.

Furthermore, in conjunction with Article 14 of the Management Regulations, paragraph 2 of Article 7 and paragraph 3 of Article 9 of the Principles are to be implemented three years after the promulgation, and the rest of the amendment is given a buffer year after promulgation. The new regulations will be implemented on 6 July 2024. The MOENV points out that the new system is about to be take effect. Public and private venues subject to the Management Regulations need to check again that the air pollution control facilities in the place and comply with the amendment in order to avoid violations and punishments.

Reasons and features of amendment of the Principles for Recording of Points and Handling for Violating Management Regulations for Facilities to Control Fugitive Dust Air Pollution from Stationary Pollution Sources



Reasons and features of amendment of the Principles for Recording of Points and Handling for Violating Management Regulations for Facilities to Control Fugitive Dust Air Pollution from Stationary Pollution Sources

Cross-departmental Forum Held to Enhance Environmental Law Enforcement

The Cross-departmental Forum on Environmental Law Enforcement took place at National Chung Hsing University on 21 and 22 March 2024. It was held by the MOENV jointly with the Taichung Branch of Taiwan High Prosecutors Office, the Taichung District Prosecutors Office, the Environmental Protection Bureau of the Taichung City Government, the Academy for the Judiciary of the Ministry of Justice and the National Chung Hsing University School of Law. Nearly 200 people from the departments of prosecutors, police, environmental protection, investigation and forestry management in central Taiwan, judges and prosecutors in training, and National Chung Hsing University were invited to attend the forum. They shared opinions and insights on the administrative investigation and criminal investigation procedures and integration in environmental law enforcement, and had courses demonstrating evidence collection with technology to improve law enforcement efficacy.

The MOENV's Environmental Management Administration (EMA) stated that this forum themed "The Intertwining of Administrative Law and Criminal Law in Environmental Crimes – Case Study of and Lessons from the Collaborative Model of Taichung District Prosecutors Office and Homeland Security Team". Attendees centered on 4 sub-topics, namely "Application and Limitation of Technological Evidence Collection in Administrative Investigation in Environmental Protection Cases", "Use of Evidence Collected from Administrative Investigation in Criminal Procedure", "The Intrigue Relationship between Criminal Injustice and Administrative Injustice: A Public Law Perspective" and "Procedures of Integrating Criminal Investigation and Administrative Investigation: The Perspectives of Code of Criminal Procedure". Prosecutors from the Taichung District Prosecutors Office, professors from National Chung Hsing University, Shi Hsin University, and Ming Chuan University,

representatives from the EMA's Central Center of Environmental Management and the Taichung City Environmental Protection Bureau served as the interlocutors and reporters on each topic, providing their valuable knowledge and sharing experience.

The EMA pointed out that the procurators, police and environmental authorities established a cooperation platform in 2011. Thanks to the cross-departmental efforts, 3,200 environmental crimes and 11,000 people were prosecuted so far. The environmental crimes often involve huge illegal interests, and the evolution of environmental crimes into organized crimes and the resulting environmental pollution problems have become a top continuous concern to the society. Criminal penalties have been specified in Taiwan's Criminal Code and environment-related legislations in order to protect the environment. The criminal investigation and the determination

of constituent elements, on the other hand, rely on the interactions and cooperation between prosecutors and environmental authorities. It is hoped that this forum served as a brainstorming session that would inspire more sophisticated practices and implementation principles in terms of the collaboration between administrative and criminal investigations to enhance the effectiveness of environmental law enforcement.

The EMA said that "technological law enforcement for environmental protection" is one of the visions when it was founded. Other than active participation in criminal cases across counties, cities, and agencies, the EMA also actively plans a national science and technology law enforcement strategy, working towards crime prevention from the source and making environmental law enforcement more comprehensive and effective.



■ Attendees at the opening ceremony of the 2024 Cross-departmental Forum on Environmental Law Enforcement

Climate Change

Climate Info Hub to Officially Go Online on Earth Day 2024

The online volume of keywords such as "net zero emissions" and "greenhouse gases" entered into search engines has surged in recent years, which clearly shows the need to integrate climate information and disclose it to the public. In order to implement the Climate Change Response Act and improve the public participation mechanism for information disclosure, the Ministry of Environment (MOENV) revised the official website of the Climate Change Administration (CCA; at <https://www.cca.gov.tw>), scheduled for official launch on Earth Day 2024. At the same time, the "Climate Info Hub" (at <https://www.cca.gov.tw/info/>) is designated as the dedicated website for open climate information from government agencies at all levels, employing the Climate Info Hub concept to create a channel for transparent

and open climate information and public participation. In addition, external content websites such as “Climate Talks” (at <https://www.cca.gov.tw/climatetalks/>) are integrated in the CCA’s official website to provide the public with the latest and most accurate climate information, and the CCA is committed to making the website bilingual to bring Taiwan’s climate governance in line with international standards. Several keys to the revision are described as follows:

1.Designate the Climate Info Hub for integration of open statutory climate information

It is specified in Article 24 of the “Enforcement Rules of the Climate Change Response Act” that the information to be disclosed by the competent authorities at all levels and those of target enterprises shall be made public on designated website(s). Information is to be made open and publicly accessible through a single channel. For this, the MOENV established the “Climate Info Hub” and designated it as the statutory open climate information website of Taiwan, enabling, for example, the disclosure of documents from central agencies down to local governments on greenhouse gas reduction and climate change adaptation. The documents to be made public range from: the National Climate Change Action Guidelines, periodic regulatory goals, Sectorial GHG Reduction Action Programs, the National Adaptation Action Plan, action programs for seven adaptation areas, result reports, national GHG emissions inventory, national reports on the reduction action plans of local governments, and their achievement reports. To date, a total of 212 documents have been uploaded to the website. The architecture of the information platform is based on the “Environmental Impact Assessment Inquiry System,” where climate information is categorized and concentrated upwards for easy access and downloads. All central competent authorities for target enterprises and local governments will follow this pattern to disclose information on this website.

2.Build a channel accessible to the public for participation in climate actions

To promote public participation in climate change policies and strengthen communications, public meetings required by the Climate Act and held by governments at all levels shall be made public on the "Climate Info Hub" at a certain time before the meetings are held, including public hearings of central agencies and local government symposiums. The website will include meeting information, reports, and even meeting minutes, live broadcasts and recordings in full. The public may access the webpage for free, register online to attend meetings, make real-time inquiries for complete and accurate information, and provide online comments, while public comments can be solicited for document drafts. In addition, through the platform, government agencies at all levels may publish information on climate change-related forums, public hearings, communication workshops, and legislation amendment meetings, allowing the public access to the latest meeting information all at one site, thereby promoting public participation and enhancing capacity building.

3.Integrate information of content type websites for easy access

Continuous efforts are made to improve and enrich the content of the official website of the Climate Change Administration, lower the threshold for people to access climate information, and integrate three websites:


"Climate Talks", "National GHG Inventory Report" and "We Are on the Same Ship – Taiwan Climate Change Adaptation Platform". For example, the integrated "Climate Talks" will still provide interactive graphics to keep the public up to date on the latest greenhouse gas reduction results of Taiwan and the six main ministries involved, as well as progress of the 12 key strategic action plans for the transition to net zero. Meanwhile, citizens can post comments online in public discussions on climate change.

4. Build bilingual websites to connect to the world

This website update is committed to building a bilingual environment to make Taiwan’s achievements in climate change governance accessible to the world. An English webpage is provided and English versions of documents related to international conventions are published, such as Nationally Determined Contributions (NDC), the National GHG Inventory Report, GHG National Communication, and Adaptation Communication. All of this is done to promote the internationalization and globalization of Taiwan's important climate governance information, expand the scope of open information and maximize the effectiveness of international connections.V




■ Climate Change Administration website upgrade in both Chinese and English





 環境部氣候變遷署
 Climate Change Administration
 Ministry of Environment

Climate Info Hub


氣候資訊公開平臺

<https://www.cca.gov.tw/info/>




-  Search by category
-  Read and download by chapter
-  Info of previous meetings

■ Climate Info Hub


 環境部氣候變遷署
 Climate Change Administration
 Ministry of Environment

Climate Talks

<https://www.cca.gov.tw/climatetalks/>



臺灣2050淨零排放路徑及策略
 Taiwan's Pathway to Net-Zero Emissions in 2050 ▶▶▶

氣候公民您好！
 歡迎您踴躍參與調查、
 提供意見、提供本國系統、
 我們期待與各界專家學者提供諮詢
 意見納入執行參考。
 氣候公民對話，需要您的參與！

我有意見

■ Climate Talks

Chemicals

MOENV Adds Substances to Control List in Line with Stockholm Convention

Perfluorohexane sulfonic acid, its salts and associated compounds are included in the Annex A elimination list as part of the United Nations Stockholm Convention on Persistent Organic Pollutants (hereinafter the Stockholm Convention). To keep up with this measure, these substances are now classified as Class 1 toxic chemical substances as announced by the Ministry of Environment (MOENV). They are listed under Category 1 and operation and management regulations have been established. At the same time, the use of perfluorooctane sulfonic acid, perfluorooctane sulfonate fluoride and perfluorooctanoic acid for foam fire extinguishing equipment for Class B fires has reached the phase-out deadline under the Stockholm Convention. Thus, the use of these substances is no longer permitted, in line with international management trends.

The MOENV pointed out that perfluorohexane sulfonic acid, its salts and associated compounds have been added to the Annex A (elimination) list of the Stockholm Convention and, therefore, the manufacture, import, sales and other uses not publicly declared of these substances are now banned in Taiwan. However, the use of these substances for the purposes of research, experiments and education is still permitted, within concentrations that satisfy the control levels.

The MOENV stated that perfluorooctane sulfonate (PFOS), perfluorooctane sulfonate lithium acid salt (PFOS-Li), perfluorooctane sulfonate fluoride (PFOSF) and perfluorooctanoic acid (PFOA) were determined to be toxic chemical substances and controlled by laws that took effect in 2010 and 2018, to prevent perfluorinated and polyfluoroalkane organic substances from polluting the environment and harming human health, and to comply with the Stockholm Convention. Now, since the control of perfluoroalkyl organic compounds has been tightened under the Stockholm Convention, the concentration control levels have also been tightened, and the use of these substances is no longer permitted, since their usage in fire-extinguishing foam for fire-extinguishing equipment for Class B fires has expired as

per the Stockholm Convention.

The MOENV stated that a number of meetings were held to consult with industry in response to this change, and the consulted firms said that they are familiar with the Stockholm Convention and have actively reduced the use of per- and polyfluoroalkyl substances or have sought alternative substances. Currently, none of the 147 types of perfluorohexane sulfonate, its salts and associated compounds in this announcement are used, except for small amounts used for research, testing and educational purposes. Regarding traces of pollutants that are not intentionally added, the MOENV added that the requirement does not apply to per- and polyfluoroalkyl substances that are used at a concentration below the listed thresholds and are not intentionally added, as per the international exemption threshold regulations.

The MOENV emphasized that a grace period will be given to operators, in stages from 6 to 18 months, for perfluorohexane sulfonate, its salts and associated compounds, as well as perfluorooctane sulfonic acid, perfluorooctane sulfonate lithium salt, perfluorooctane, sulfonyl fluoride and perfluorooctanoic acid, in concentrations less than 0.01%, and for

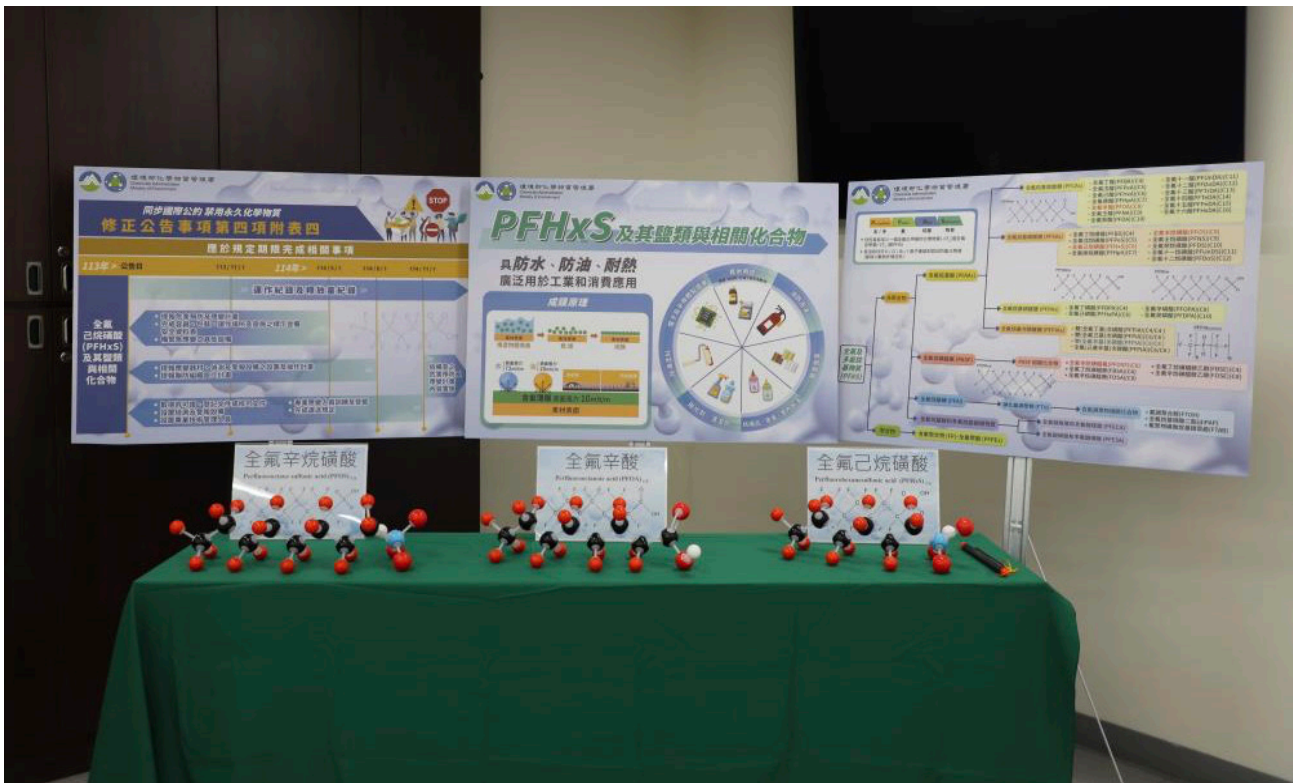
which requirements have been met, such as completed license (approval) document application, labeling, hazard prevention and other measures specified in the chapter on contingencies.

In addition to revised management matters, the MOENV also invited the Ministry of Agriculture, Ministry of Health and Welfare, Ministry of Economic Affairs, Ministry of Finance, Ministry of the Interior, Ministry of Labor, Ministry of Education, Ministry

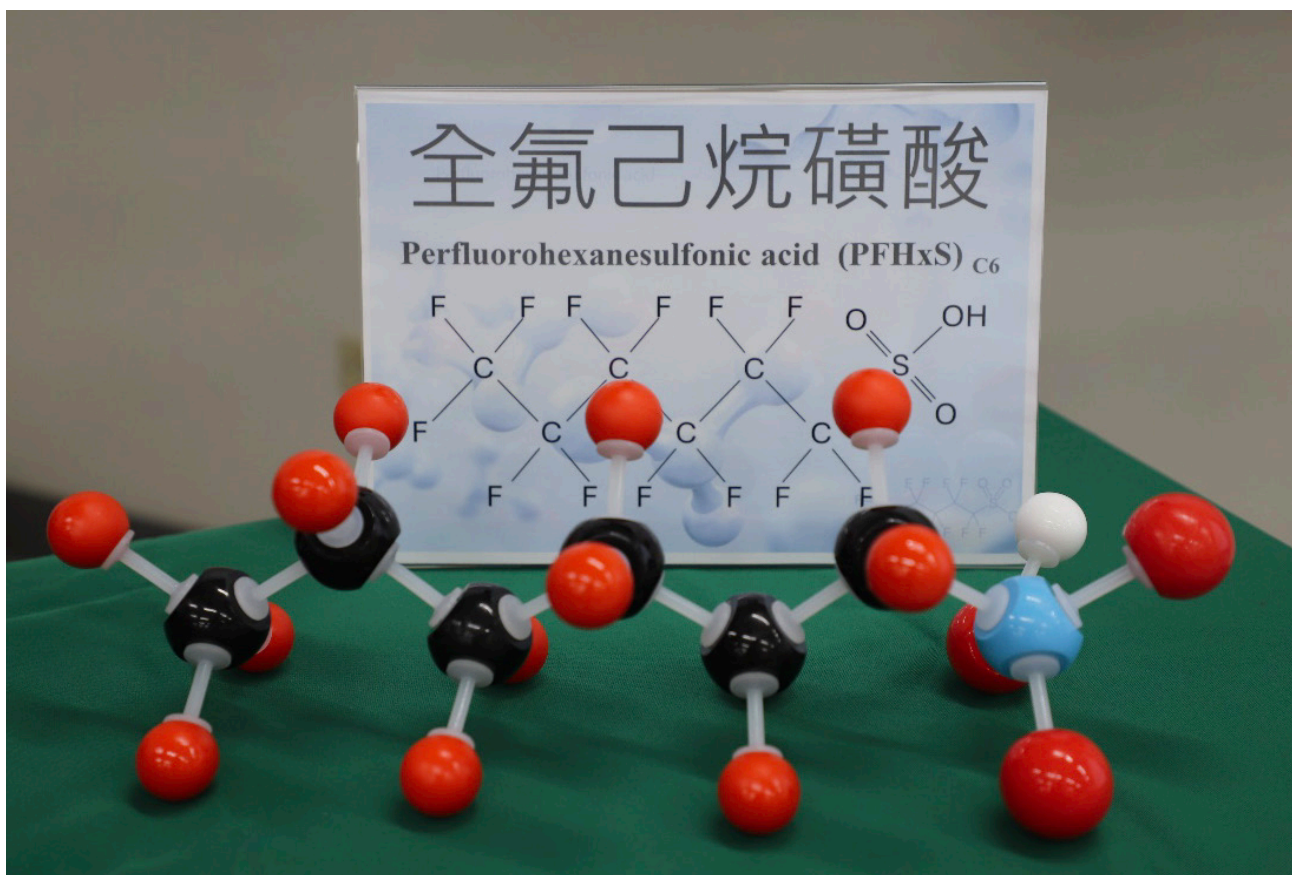
of National Defense, the Ocean Affairs Council and National Health Research Institute to work together and draft a "per- and polyfluoroalkyl substances (PFAS) management action plan" to align with international trends. Comments have been collected from the industrial and academic sectors. A joint management mechanism will be discussed based on the regulations of governmental departments for public health and environmental safety.



■ Director General Yein-Rui Hsieh of the Chemicals Administration explains recent regulatory amendments



Information on perfluorohexane sulfonic acid, its salts and associated compounds displayed at a press conference on alignment with international conventions



Model of perfluorooctane sulfonic acid molecule

“Environmental Education Discovery Center” Offers Fun and Green Credits in Year of the Dragon

To learn more about the environment, the Ministry of Environment (MOENV) recommends visiting the “Environmental Education Discovery Center” (<https://eeis.moenv.gov.tw/front/>), which allows visitors to learn about environmental education opportunities provided by the Ministry over the years and to increase environmental knowledge. At this time of year, educational games full of Chinese New Year flavor have been designed for families to play while earning green points for environmental protection. Hopefully, through this exploration process environmental knowledge will spread and the ability to act to preserve the environment will spread among the general public.

The “Environmental Education Discovery Center” established by the MOENV is designed to provide high-quality environmental education resources and a wide diversity of educational services. The Center is based on an electronic library and the concept of exploratory learning that allows visitors to learn more about environmental topics such as atmospheric environment and monitoring, water and soil environments, resource circulation, climate change, and environmental education. It can be adapted for different modes of education (e.g., environmental teaching, self-learning, participation in activities, learning through competition), and it also provides county/city maps for various learners (e.g., based on age or social background). It provides the resources to fit specific learner needs and widen knowledge about the environment. All were welcome to visit online during the Chinese New Year holidays.

The “Environmental Education Discovery Center” presented a rich assortment of material for children visiting with their parents during the Chinese New Year

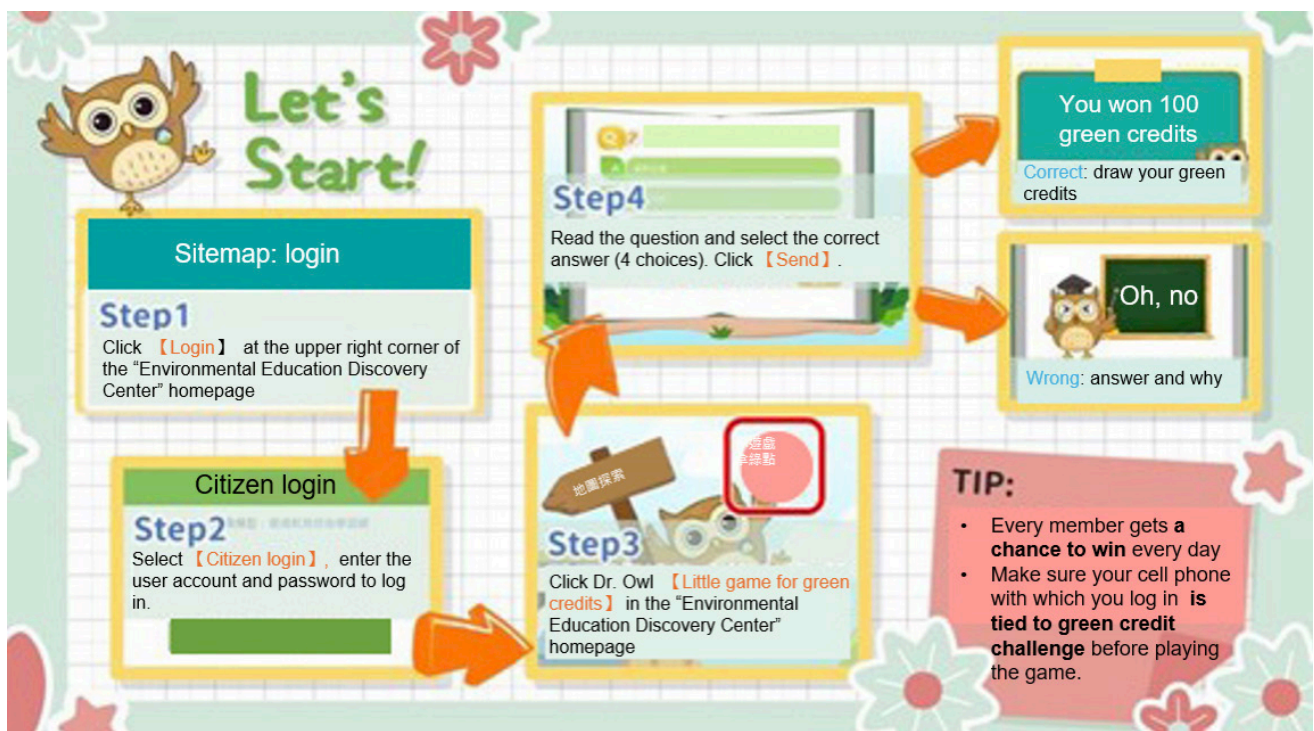
holidays. There was the “listen to a story about the environment” podcast designed for children, with stories designed to inspire children’s environmental awareness, highlight the importance of environmental protection, and develop their knowledge about environmental protection. Reading is the key to wisdom. In the “Environmental Education Discovery Center,” there are dozens of picture books illustrating local cultural characteristics and environmental topics specific to local counties and cities. Reading with children not only improves parent-child relationships, but also stimulates reflection on how to put environmental protection into practice in daily life.

There are environment-friendly ways to travel during the Chinese New Year holidays. For example, the exploration map provided by the “Environmental Education Discovery Center” for preparing a travel itinerary is helps reduce the resource consumption that comes with traveling. Whether one brings their family to visit a certified environmental education facility, explore a local community

with friends and see cultural landscapes, or find an environment-friendly restaurant for some good cuisine, all help to improve bonding between family members during the Chinese New Year holidays, while putting the net-zero green life in practice.

The MOENV has prepared 247 environmental education films packed with rich contents, which can be accessed by going online to the “Environmental Education Discovery Center,” and clicking on “Lifetime Learning”. There are many films to choose from to raise environmental awareness and stimulate discussion on how to care for and play one’s part in environmental protection.

Apart from exploration activities offered by the “Environmental Education Discovery Center,” there are Chinese New Year themed games that allow visitors to earn green credits while having fun during the holidays. Members of the Environmental Education Discovery Center are advised to check that the mobile phone number in their personal account has been linked to collect green credits before playing the games. A correct answer wins an opportunity for up to 5,000 green credits, and everyone has a chance to win every day. The Chinese New Year holidays are the perfect time to have some fun while increasing environmental knowledge.



■ Online games for green credits

International Cooperation

Minister of Environment Visits the 3D Air Quality Experiment of Cooperation with NASA in Kaohsiung and Pingtung

The MOENV joined hands with 15 government agencies, 20 academic and research institutes and more than 40 professors and experts in Taiwan and around the world to launch a 3D air quality experiment in Kaohsiung and Pingtung on 1 February 2024, analyzing the correlation between topography, atmospheric circulation and air pollutants, as well as international joint observation of changes in 3D space over time. At the same time, the US National Aeronautics and Space Administration (NASA) are working with Taiwan, South Korea, Thailand, the Philippines and Malaysia on the Asian air quality experiments on flights. Two NASA scientific aircrafts conducted a four-hour air quality observation over central, southern and eastern Taiwan on their way from the Philippines to South Korea on 15 February 2024, providing high-resolution, precise data. This is the MOENV's first large-scale experiment that is essentially an international collaboration involving multiple government agencies and experts. It was an upgrade from ground-based air quality monitoring to integrated 3D observation, a new page for future collaborative monitoring of the atmospheric environment and an outstanding example for scientific study and international cooperation.

The MOENV said that the precision air quality monitoring instruments on board of the DC8 measured changes in air pollutants from 46 feet (15 meters) up to 11,000 feet (3,300 meters) above Yunlin, Chiayi, Tainan, Kaohsiung and Pingtung. The GIII cruised between Taichung and Pingtung at the altitude of 28,500 feet (8,600 meters), using onboard lidar to measure regional air quality. The 3D air quality experiment in Kaohsiung and Pingtung monitors simultaneously the physical properties, chemical compositions and 3D distribution of air pollutants. Advanced and sophisticated instruments or methods were utilized, such as intensive ground sampling from several local departments, drones, wind profilers, wind lidar, sounding balloons, solar photometers, and satellite telemetry, in addition to two advanced ground-based air quality monitoring supersites jointly operated by NASA and Taiwan and also a vertical spectrometer station from the US National Oceanic Atmospheric Administration (NOAA). Scientific data, such as ozone (O₃), volatile organic compounds (VOCs), particulate matters (PM_{2.5}), their

concentrations, particle sizes and chemical compositions were collected for 3D scientific research, and will be used for satellite calibrations, air quality model improvement, pollution source analysis and design of air pollution control strategies. The MOENV appreciated the cooperative efforts from agencies at home and abroad including NASA, the Central Weather Administration, the Civil Aviation Administration, Academia Sinica, the Air Force Weather Wing, Air Force Institute of Technology, and local environmental protection bureaus, as well as 45 professors and experts led by Dr. Lin, Neng-Hui of National Central University. It was their supports and participation that made this large experiment of international collaboration successful.

The MOENV Minister Shieu Fuh-Sheng visited the large-scale experiment in this international scientific research project with NASA on 28 February 2024. He expressed his gratitude to the staff of approximately 200 people from many schools, government agencies and local bureaus. They worked tirelessly even during the Chinese New Year Holiday, conducting intensive 3D

observation with sounding balloons and drones as well as coordinating NASA flights. Minister Shieu encouraged the participating experts and staff to keep analyzing pollution sources and assisting in design of control strategies through important scientific data from international cooperation, enhancing

Taiwan's air pollution control and improve air quality.

Check out the film of Asian air quality experiment by NASA and the MOENV on 15 February 2024 at <https://youtu.be/I8YU7xxERdl>.



- MOENV Minister Shieu Fuh-Sheng went to the observation station in Kaohsiung and visited the experts in charge of the Kaohsiung-Pingtung Region

Environmental Impact Assessment

"Directions for the Preliminary Review of Environmental Impact Assessment of Offshore Wind Power System Development" Announced

On 28 March 2024, the Ministry of Environment (MOENV) announced the directions for the preliminary review of offshore wind power environmental impact assessments, and the "Checklist of Environmental Impact Assessment Review for Offshore Wind Power System Development" (風力發電離岸系統開發行為環境影響評估審查事項檢核表). The Directions require that the documents for environmental impact assessment submitted by wind power developers shall be included in the checklist. The stage 1

preliminary review by the review committee shall be completed and eligibility for selection approved by the Ministry of Economic Affairs (MOEA), once all the items in the checklist are verified. Wind power developers who secure the approved power generation capacity will go to the EIA stage 2 substantive review as soon as the MOEA completes the selection. This will not only improve administrative efficiency, but also achieve the win-win objectives of energy transformation and environmental protection.

The MOENV announced on 2 February 2024 the development of the “*Directions for the Preliminary Review of Environmental Impact Assessment of Offshore Wind Power System Development*” (風力發電離岸系統開發行為環境影響評估初審作業要點). On 23 February 2013, local governments, government agencies, NGOs and offshore wind power developers were invited to a meeting to discuss the Directions. While the collected comments were taken into consideration, the original version of the Directions indicated that the approval letter issued by the stage 1 preliminary review committee would be valid for one year. Considering the business selection schedule of the MOEA, the validity has now been extended to two years in the revised version, and may be extended for an additional year, if necessary, as approved by the MOENV.

Considering that during the second phase of preliminary review, offshore power developers, on the other hand, will submit the EIA documents, now revised based on the power generation capacity approved by the MOEA, for stage 2 preliminary review (but the actual development scope may not be located in sensitive areas, such as the important/sensitive wildlife habitat of the Indo-Pacific hump-backed dolphin or leopard tiger) Article 6 of the Direction adds that the results of stage 1 preliminary review checklist may be adjusted for those with special development conditions with the approval of stage 2 preliminary review.

After examining the checklist published, NGO representatives pointed out that there was no citizen group present at the stage 1 preliminary review for the cetacean preservation in the checklist. The stakeholders will be denied of the development schedule if the information is not made available, and there is the issue with the information representativeness. The MOENV promises that the electronic files of the environmental impact assessment documents for stage 1 preliminary review will be simultaneously disclosed in the MOENV's environmental impact assessment document inquiry system. Once a developer is selected, the stage 2 preliminary review will be the preliminary review process for the task force composed of current environmental assessment members. Therefore, there will be no restrictions or changes to the public's rights to participate and speak.

Offshore wind power developers and NGO groups had much to say about the checklist in the meeting. The MOENV stated that the approval of checklist review in the stage 1 preliminary review by the task force is only the "minimum standard" to for the developers to participate in the selection process of the MOEA. Once a developer is approved for the selection, the EIA members will be able to focus more on reviewing the environmental impacts of offshore wind power development in the second stage. The excuses commonly made by developers at the EIA meetings,

such as “Oh, we will consider that after we are selected,” will not reach their ears.

As a part of marine mammal observation program, it is required that a marine mammal observer shall be present during piling and submarine cable installation. Whether or not the watch is assigned to a secondary job, it is up to the developer to come and provide a reasonable explanation and, therefore, this is left to the EIA members for substantive review in the stage 2 preliminary review. For the qualification of marine mammal observers, on the other hand, it is required that all observers shall meet the qualifications of Taiwan marine mammal observers. The checklist published this time also incorporates the

"Underwater Noise Guidelines" (水下噪音指引) published by the Ocean Conservation Administration of the Ocean Affairs Council, and the peak sound frequency of the porpoise family shall be included in the underwater acoustics.

The MOENV explained that the contents of the checklist will be adjusted on a rolling basis based on subsequent actual review status and needs. The MOENV refined the offshore wind power environmental impact assessment review process this time, in line with the energy transition policy. It is an effective improvement of administrative efficiency, and reduction of resource waste for Taiwan's net-zero emissions goal by 2050.



■ Director General Tsai Meng-Yu of the Ministry of Environment hosted a meeting on 23 February 2024 to hear public comments

Using Electronic Tax Forms to Earn Green Points in Tainan City

This year, for the first time, the Ministry of Environment (MOENV) is cooperating with local tax authorities, and encourages all citizens to participate in net-zero green living and use the environmental protection green point platform. The Tainan City Government's Finance and Local Tax Bureau and its Environmental Protection Bureau are collaborating to launch a campaign that will award environmental protection green points for using electronic tax forms between now and 30 November 2024. All taxpayers are welcome to live a net-zero green life, as the MOENV encourages other local finance and tax bureaus to award green points for using electronic tax forms.

The event targeted "natural persons who have just filed electronic tax returns for property in Tainan City". Participants applying for electronic tax bills for the "vehicle license tax, house tax, and land value tax" regularly levied by Tainan City (paid in April, May, and November, respectively) will enjoy rewards of triple environmental protection points by completing specific tasks during the campaign. Green points can be earned during the campaign by taking the following steps:

1. Download the Environmental Protection Green Points APP, enter the Tainan City Government Finance and Local Tax Bureau's exclusive recommendation code TBTNN9 when registering as a member, and bind the mobile phone barcode or any carrier to get 2,000 green points.

2. Apply for an electronic tax form and get a reward of 1,000 points (ONLY one reward for each applicant).

3. Each applicant who applies for an electronic tax form and pays the tax

by the specified deadline during the campaign period will be rewarded with 500 points from the Finance and Local Tax Bureau and an additional 500 points from the Environmental Protection Bureau for each tax registration (up to 10 tax registrations for each tax category), while points are still available.

The MOENV referred to an analysis of the global energy sector's path to net-zero done by the International Energy Agency, which estimated that 8% of the global energy sector's net-zero emission reductions will need to come from behavioral changes that result in reduced energy demand, as well as improvements in recycling and more efficient use of materials. The net-zero benefits brought about by guiding people through this transition is not something to be ignored. For example, in Tainan City in 2023, there were about 2.12 million paper forms filed for the three major taxes (vehicle license tax, house tax and land value tax), equivalent to 2.68 million kg of carbon emissions. If 10,000 of these forms can be processed electronically per year, an estimated 12,000 kg of carbon emissions can be reduced.

It is just a tiny change in life to switch from tax paperwork to paperless electronic tax bills, but it will have a huge effect in daily life. It is hoped that this campaign will serve

as a catalyst for more local tax authorities to promote paperless tax forms, and that more people will switch to using them. Let's live a net-zero and green life together.



■ Director-General of the MOENV Wu Pei-Yu spoke to promote electronic tax forms for environmental protection green points



■ Tainan City Mayor Huang Wei-Che spoke to promote electronic tax forms for environmental protection green points



■ Tainan City makes joint efforts to promote electronic tax forms for environmental protection green points

Water Quality

Yunlin River Pollution Remediation Completed Thanks to Central Government Funding

The Yunlin River Landscape Improvement Project has been completed and launched under the witness of Vice Premier Cheng Wen-tsan of the Executive Yuan, the MOENV Minister Shieu Fuh-sheng, Magistrate Chang Li-shan of Yunlin County, and Legislators Liu Chien-kuo and Chang Chia-chun. A new chapter has begun in the history of Yunlin River in Douliu.

Yunlin River, known for its beautiful green riverbanks in early days, was later covered and turned into a parking lot. The foul smell was gone, but so were the shared memories of the locals. As an effort to bring the good memories back and revitalize the river, Legislator Liu Chien-kuo invited the MOENV for several field surveys and worked hard to secure project funding. Starting from 2016, the MOENV had subsidized the Yunlin County Government in project development, and in 2018

approved the pollution remediation project for Yunlin River as a part of the Nationwide Water Environment Improvement Program under the Forward-looking Infrastructure Development Program. The approved total project budget was NT\$1.8542 billion, and NT\$890,044,000 (82% of the budget) came from the MOENV subsidies. For the entire project, NT\$158,047,143 was allocated for landscape improvement, and 82% (NT\$129,598,656) was subsidized by the MOENV. The project was designed

based on the nature and location along the upstream and downstream. The part of sewage interception and purification mainly collects domestic sewage from the upstream along Daxue Road and directs it to the gravel water purification plant capable of processing 15,000 metric tons every day, and the treated clean water is discharged to Yunlin River. Catch basins and box culverts are installed at the sewage outlets along the banks of Yunlin River to direct the sewage on sunny days to the Douliu Water Resources Center at downstream for treatment, ensuring clean water for all river sections in the city center and water quality improvement.

President Tsai Ing-wen had a visit in person to Yunlin River in January 2018 and promised to stand by Yunlin in its development, helping tackle its problems. The project started on 26 March 2019. Thanks to the efforts of Yunlin County Government and all sectors, the beauty of Yunlin River was once again presented in front of the public as the concrete covers were removed. It is now a dream come

true for local citizens and an environmental landmark for the city.

As an active effort to improve the water environment, the MOENV has been subsidizing the Yunlin County Government in recent years in inspections and controls of water pollution sources, river patrols, total pollution source controls, and multiple water quality improvement works for Beigang River, Yunlin River, Huwei Drainage and Lunbei Drainage. The MOENV will continue to assist the Yunlin County Government in river remediation and water quality improvement in the days to come.

Minister Shieu said that MOENV will keep working with local governments to gradually turn the water quality of urban rivers for the better through in-situ water purification treatment, building them into areas for water quality improvement, environmental education, recreation and ecological conservation, and creating a new look of clean, safe and comfortable river environment.




■ Completion and opening ceremony of the Yunlin River Landscape Improvement Project



■ Yunlin River view 1: Creation of ecological habitats

Final piece of puzzle for Yunlin River Remediation Project - “Yunlin River Landscape Improvement Project”

- ◆ Sewage interception at downstream – done in Jan 2022
- ◆ Recreation and sports area
Creation of waterfront corridor and activities areas stringing up water resource park, baseball field and residential areas.
- ◆ Sewage interception at open section – done in Jun 2021
- ◆ Cultural story walkaround
Creation of historic space along Seed Park, Taiping old street and Yunzhong Street
- ◆ Sewage interception at upstream – done in Jan 2022
- ◆ Art and living area
Creation of waterfront corridor and activity areas along waterfront art park and residential areas


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 Ministry of Environment

■ Yunlin River Landscape Improvement Project