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Ministry of Environment

Implementation of a Carbon Fee System: Officially Entering the Era of Carbon Pricing

October 11, 2024

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Master Shi is about to start the lecture!

Dedicated Web Page for Environmental Express Podcast

01 Foreword

The necessity of implementing a carbon fee system

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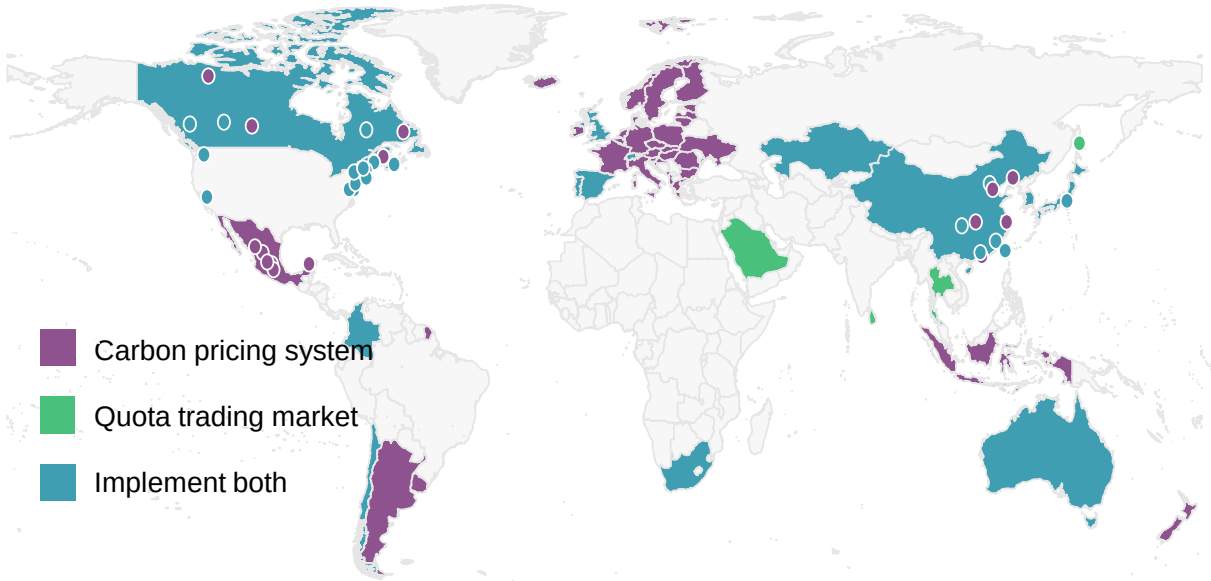
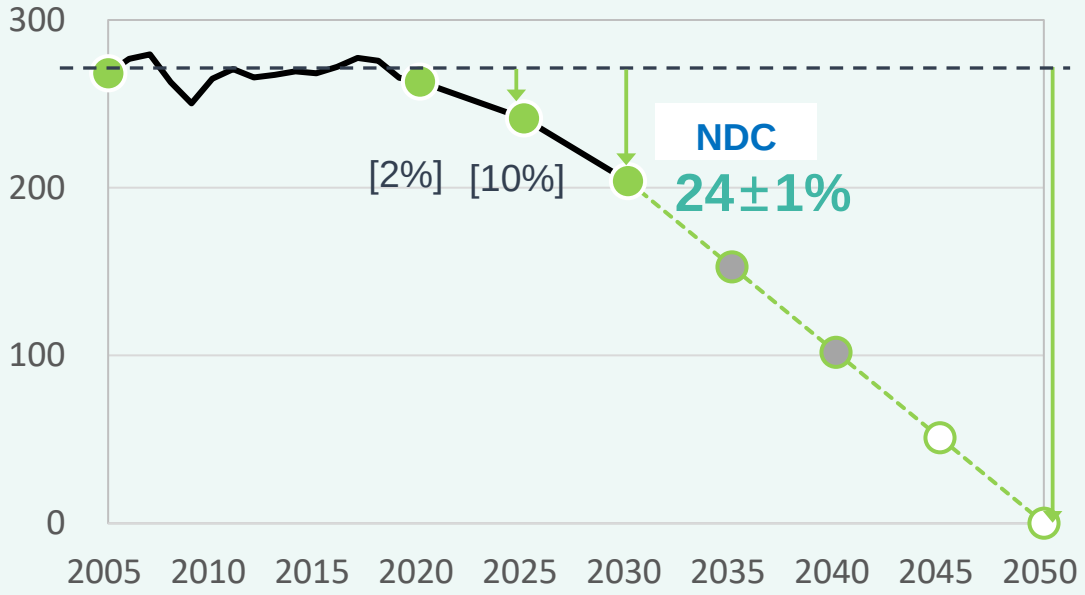
Carbon pricing system

- Carbon pricing is recognized globally as the most important tool to address climate change. Currently, 75 countries around the world have implemented carbon pricing.
- Neighboring Asian countries including Singapore, Japan, China, South Korea and Indonesia have all implemented carbon pricing systems.



Source: World Bank, carbon pricing instruments around the world, 2024

After more than a year of discussions on achieving Taiwan's greenhouse gas reduction goals, all sectors of society have reached a consensus on prioritizing the implementation of carbon fees.



Key Explanations of the Carbon Fee Collection System Sub-Laws

Article 28, Paragraphs 1 and 3, of the Climate Change Response Act

In order to achieve the national long-term greenhouse gas reduction goals and the control goals of each phase, the central competent authority will in stages levy carbon fees on the following emission sources that emit greenhouse gases. 1. Direct emission sources; 2. Indirect emission sources: levied based on the amount of indirect emissions from electricity used.

The carbon fee collection rate in Paragraph 1 shall be reviewed by the rate review committee established by the central competent authority, shall be submitted to the central competent authority for approval and announcement, and shall be reviewed regularly.

Article 29, Paragraph 1, of the Climate Change Response Act

Carbon fee levy targets who can effectively reduce greenhouse gas emissions and achieve the goals designated by the central competent authority due to greenhouse gas reduction measures such as switching to low-carbon fuels, adopting negative emission technologies, improving energy efficiency, using renewable energy or improving processes may be eligible to propose autonomous reduction plans and apply to the central competent authority for approval of preferential rates.

Three sub-laws of the carbon fee collection system

1. Carbon fee charging method
2. Greenhouse gas reduction targets specified for entities subject to carbon fees
3. Measures for the Management of Autonomous Reduction Plans
4. Carbon fee collection rate

Communication in society regarding the carbon fee collection system

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Communication with stakeholders

Communication with NGOs

7 Sessions

Communication with Industries

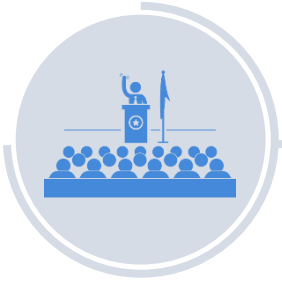
26 Sessions

Experts and Scholars

4 Sessions

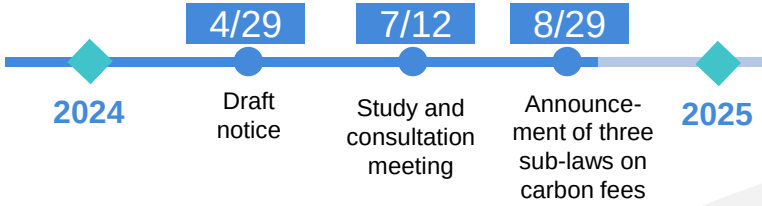
Two Deputy Minister meetings

7 Sessions

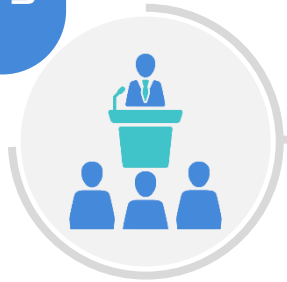


Study and consultation meeting

1Sessions



- Number of communication sessions: at least 47 sessions



Press conferences

2 Sessions

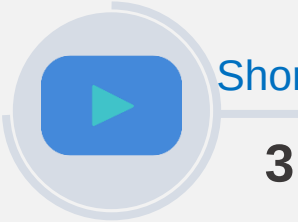
External communications

Press releases

29 chapters

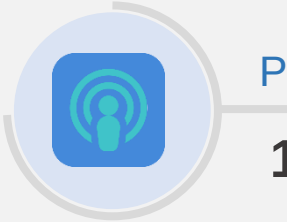
Facebook

15 posts



Short videos

3 posts



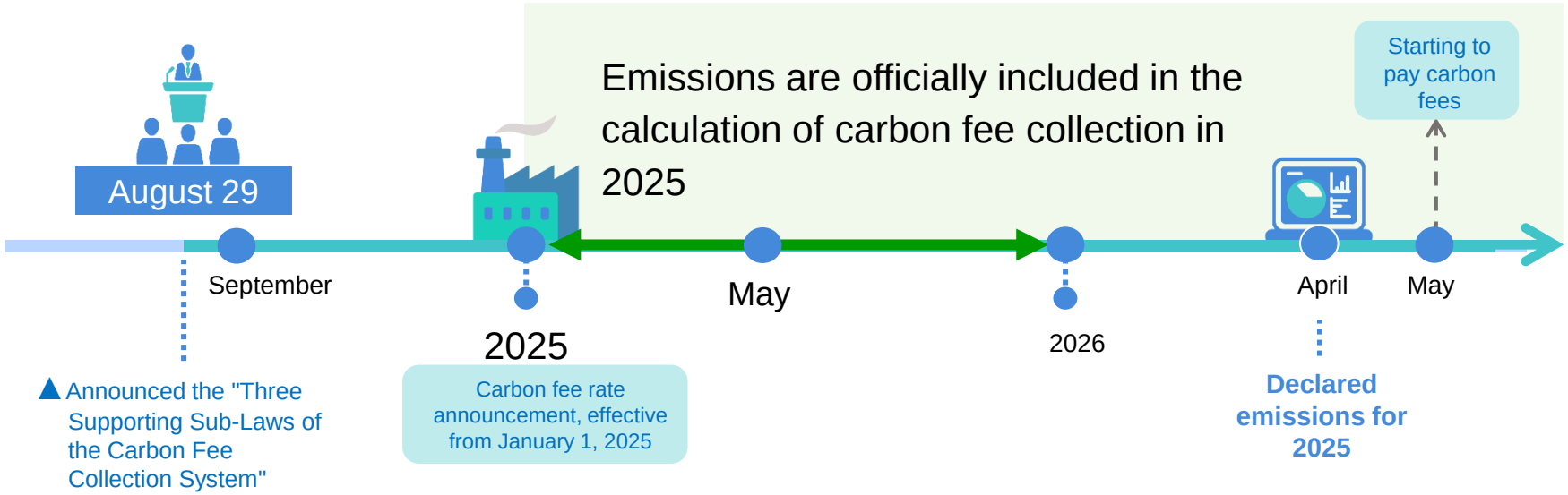
Podcasts

19 sets

Data period: from August 22, 2023 to September 10, 2024

Carbon fees are officially implemented and will be levied next year

- **Collection rate**: Effective from January 1, 2025
- **Payment time**: Carbon fees will be levied starting from 2025. Business operators will declare and pay the carbon fee in May 2026 based on their annual emissions.



02 Key points of the three sub-laws on carbon fees

- Carbon fee charging method
- Measures for the management of autonomous reduction plans
- Specified greenhouse gas reduction targets for carbon fee collection targets

Carbon fees are a tool for reduction, not a financial tool

Volume reduction taken as the starting point and transition and transformation needs considered

Enterprises

Proposal of autonomous reduction plans that meet specified goals

Enterprises with high carbon leakage risk

Review and certification based on industry-specific emission intensity and trade intensity

Carbon fee = emissions X emission adjustment coefficient value X preferential rate

Phase 1: 0.2
Phase 2: 0.4
Phase 3: 0.6

Enterprises without high carbon leakage risk

Carbon fee = (emissions - 25,000 metric tons CO_2e) X preferential rate

No proposal of autonomous reduction plans

The carbon fee will only be levied on emissions over 25,000 metric tons CO_2e, and the general rate will apply.

Key points for regulating carbon fee charging methods

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- Subject to charges: Electricity, gas supply and manufacturing industries with annual greenhouse gas emissions exceeding 25,000 metric tons CO2e

- Payment schedule: Starting from the year after the rate announcement takes effect, before the end of May each year, the entire emissions of the previous year will be paid according to the announced rate.
  (If the fee rate is announced to take effect on January 1, 2025, the carbon fee for the annual emissions of 2025 will be paid in May of 2026)

- Carbon fee calculation: Carbon fee = Charged emissions × Collection rate

- Transitional supporting mechanism: Charged emissions = (annual emissions – K value) × emission adjustment coefficient value

  1. If it is an industry with high carbon leakage risk (referring to international assessment methods, considering trade intensity and emission intensity, and proposing autonomous reduction plans after review and approval). The initial emission adjustment coefficient is 0.2; in the future, the second and third phases will be 0.4 and 0.6 respectively.
  2. Non-high carbon leakage risk industries, the annual emissions are deducted from the carbon fee threshold K value (25,000 metric tons, adjusted in phases in the future)
  3. Use of reduction quota: For the domestic reduction quota, up to 10% of chargeable emissions can be deducted;
     Foreign reduction credits must be approved by the Ministry of Environment and can only be used in non-high-carbon leakage industries, for deductions up to 5% of chargeable emissions.

Autonomous reduction plans and designated targets

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- Those who can effectively reduce greenhouse gas emissions and meet the targets designated by the central competent authority may propose autonomous reduction plans and apply to the central competent authority for approval of preferential rates.
- The target year of the specified target is 2030; two calculation methods are provided for enterprises to choose.

Select specific target	Propose autonomous reduction plans	Goal achievement results	Applicable rates
 Industry-specific reduction rate (refer to SBT)	 Propose autonomous reduction plans • Switch to low-carbon fuels • Adopt negative emission technology • Improve energy efficiency • Use renewable energy • Process improvement	 Achieve designated goals • Target year specified goals • Annual designated goals	 Preferential rate A
 Technical benchmark designated reduction rate (set by Taiwan's 2030 NDC)			 Preferential rate B

Autonomous reduction plans and designated targets (continued)

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2 Measures for the Management of Autonomous Reduction Plans

- Carbon fee collection targets that can effectively reduce greenhouse gas emissions and achieve designated targets via measures such as switching to low-carbon fuels, adopting negative emission technologies, improving energy efficiency, using renewable energy, or improving processes may propose autonomous reduction plans for applying approved preferential rates.
- Submit the implementation progress report of the previous year to the Ministry of Environment for review before April 30 of each year, and provide a deadline for improvement and abolition. After verification, the annual rate will be changed to the general rate if the specified target is not reached.

3 Specified greenhouse gas reduction targets for carbon fee collection targets

- Taking 2030 as the target year, two designated reduction rates are applicable to different preferential rates:
  - ① **A-**Industry-specific reduction rate: Taking 2021 as the base year, this target is set with reference to the international science-based reduction target (SBT), and preferential rate A is applicable
  - ② **B-**Technical benchmark designated reduction rate: Taking 2018 to 2022 as the base period, the reduction target is set by considering the emission patterns of each emission source, including fuel type, manufacturing processes, electricity use, etc., and preferential rate B is applicable

Specified reduction targets

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Appendix 1. Industry-specific reduction rates

25.2%

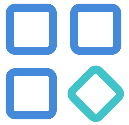
Steel industry

Limited to industries of continuous steelmaking and steel billet production, electric arc furnace carbon steel billets, stainless steel billet production and steel rolling.

22.3%

Cement industry

Industry engaged in cement clinker manufacturing



42%

Other industries

Note 1: The target year is 2020
Note 2: The base year is 2021.

Appendix 2. Designated reduction rates for technical benchmarks

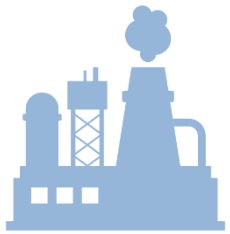
Emission pattern		Reduction rate
Direct emissions: Stationary combustion emission sources		[(Emissions per unit calorific value of fuel in the base year - Target annual fuel emission benchmarks for each industry) ÷ Emissions per unit calorific value of fuel in the base year] ×100%
Direct emissions: process emissions	Fluorine-containing gases (HFCs, PFCs, SF6 and NF3)	For emission sources established after 2005, the average removal rate of the entire plant in the target year is 95%.
		For emission sources established before 2005, the average removal rate of the entire plant in the target year is 85%.
	Nitrous oxide	The target annual plant-wide average removal rate is 50%.
	Continuous casting of steel billets production processes	The target annual emissions reduction rate should reach 13%.
	Cement clinker production process	The target annual emissions reduction rate should reach 7%.
	Other processes	The target annual emissions reduction rate should reach 3%.
Indirect emissions from the use of electricity		The target annual emissions reduction rate should reach 6%.

Appendix 3. Target annual fuel emission benchmarks for various industries

Industry	Definition	(gCO_2e/Kcal) Emissions per unit calorific value of fuel (gCO_2e/Kcal)
Steel industry	Engaged in steel smelting, rolling and extrusion industries	0.235
Cement industry	Industry engaged in cement clinker manufacturing	0.395
Refining and petro-chemical industry	Industries that use cracking, distillation and other technologies to separate crude oil into fuel gas, gasoline, light oil (naphtha), kerosene, diesel and other petroleum derived products, or engage in the manufacturing of chemical raw materials, plastic and synthetic rubber raw materials, and man-made fibers.	0.360
Textile industry	Engaged in the textile industry, such as spinning, weaving, dyeing and finishing, and textile manufacturing, etc.	0.336
Paper industry	Industries engaged in the manufacturing of pulp, paper, cardboard and their products	0.349
Other industries		0.235

Note 1: Enterprises should calculate their annual greenhouse gas emissions in the target year based on the sum of the reduction rates of the emission types listed in Table 2, and include them in their autonomous reduction plans to select reduction measures based on actual needs.
Note 2: The base year value is the arithmetic average of 2018 to 2022.

Things to note when enterprises apply for autonomous reduction plans



Enterprises

- May 31 Carbon fee trial declaration (no payment)
- Submit an application for a voluntary reduction plan before June 30

2025 → **2026** → **2027**

- Submit an application for identification of industries with high carbon leakage risk before January 31
- April 30 Prerequisite autonomous reduction plan implementation progress report
- Declare and pay the 2025 carbon fee before May 31

Competent authority

Handle the review and approval of independent reduction plans

§14 Recover the carbon fee in 2025
Difference between general rates and preferential rates

Check that the annual designated target has not been reached in 2025, §12 deadline for improvement

Improvements completed, preferential rates and emission adjustment coefficients continue to apply

If improvements are not completed, the autonomous reduction plan will be abolished in accordance with §13, the emission adjustment coefficient will cease to be eligible, and the rate will return to the normal rate.

03 Carbon fee collection targets and expected reduction results

Analysis of the emission structure of entities subject to carbon fee levies

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- Carbon fee targets: Manufacturing and electric power industries that are subject to inspection as announced by the Ministry of Environment and have annual emissions of more than 25,000 metric tons CO2e
- According to the results of 2022 inventory: 281 companies (500 factories) were charged, excluding the construction industry, residential and commercial departments, and transportation departments.

Emission range (metric tons)	Number of enterprises	Emissions (10,000 tons CO_2e	Proportion of cumulative emissions	Cumulative number of enterprises	Remarks-Main industries
Below 25,000 tons	50	76.6	0.5%	50	Electronic components manufacturing industry (26), textile industry (9), electricity and gas supply industry (8)
25,000 tons~30,000 tons	55	149.7	1.5%	105	Electronic component manufacturing (17), chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (10), textile industry (9)
30,000 tons~40,000 tons	73	251.6	3.1%	178	Electronic component manufacturing (27), chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (10), textile industry (8)
40,000 tons~50,000 tons	55	246.4	4.6%	233	Electronic component manufacturing (28), textile industry (5), chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (4), basic metal manufacturing (4)
50,000 tons~75,000 tons	83	509.8	7.9%	316	Electronic component manufacturing (34), chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (19), non-metallic mineral products manufacturing (5), metal products manufacturing (5)
75,000 tons~100,000 tons	33	284.2	9.7%	349	Chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (12), electronic components manufacturing (10), non-metallic mineral products manufacturing (4)
100,000 tons~500,000 tons	150	3392.9	31.5%	499	Electronic component manufacturing (63), chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (43), basic metal manufacturing (16)
50,000 tons~75,000 tons	28	1923.0	43.8%	527	Electronic component manufacturing (7), chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (6), electricity and gas supply industry (5)
1 million tons~2 million tons	12	1735.8	55.0%	539	Chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (4), electronic components manufacturing (3), electricity and gas supply industry (3)
2 million tons~5 million tons	7	2208.5	69.1%	546	Chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing (4), non-metallic mineral products manufacturing (2), petroleum and coal products manufacturing (1)
More than 5 million tons	4	4814.8	100%	550	Basic metal manufacturing industry (2), chemical raw materials, fertilizers, nitrogen compounds, plastic and rubber raw materials and man-made fiber manufacturing industry (1), petroleum and coal products manufacturing industry (1)

The national greenhouse gas emission inventory is calculated up to 2021. This 54% is calculated based on the CO_2 from fuel combustion announced by the Ministry of Economic Affairs in 2022.

Analysis of industries targeted for carbon fee collection

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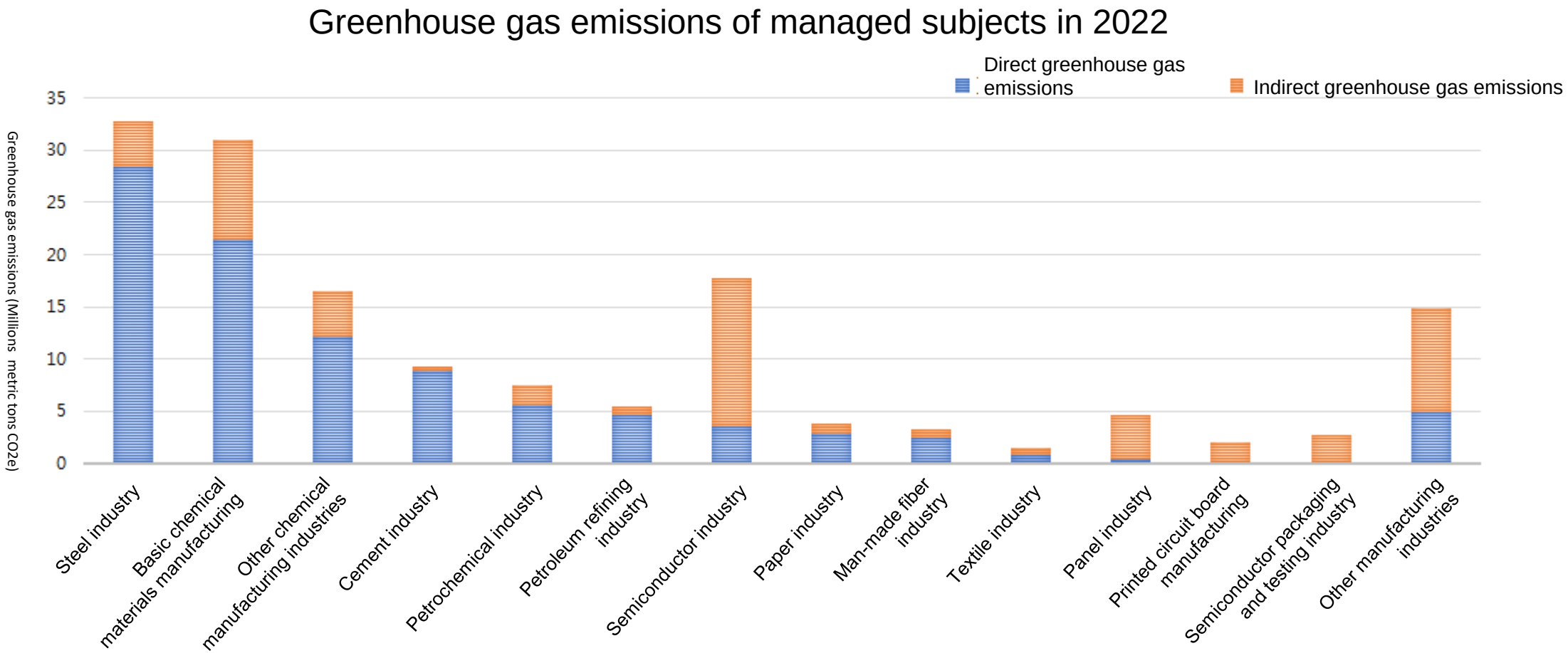
- Based on the 2022 inventory resolution that "Enterprises should inventory, register and inspect emission sources of greenhouse gas emissions", it is estimated that approximately 281 companies (500 factories) will be subject to the charges.
- The greenhouse gas emissions subject to the charges total approximately 155 million metric tons of carbon dioxide equivalent, accounting for approximately 54% of the country's total emissions.



Analysis of the Estimated Effectiveness of the Carbon Fee System for Reducing Emissions

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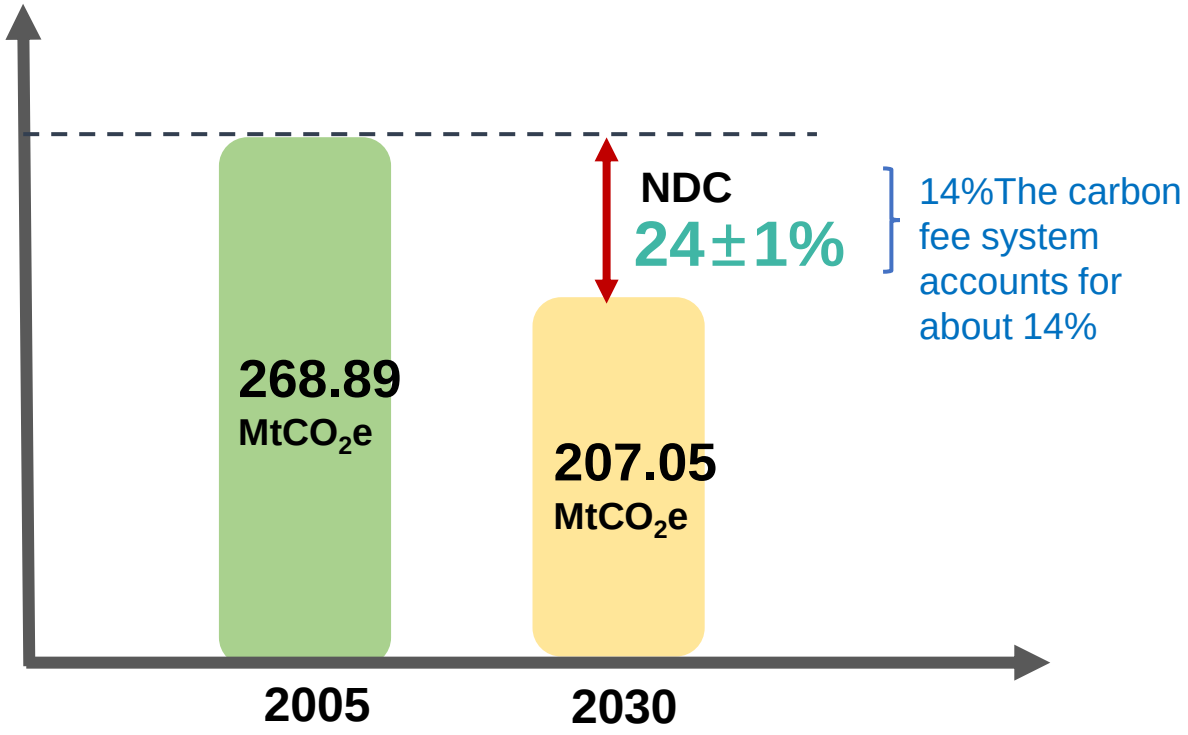
- Carbon fee levy targets must submit autonomous reduction plans that meet designated reduction targets in accordance with the three sub-laws in order to be eligible for preferential rates.
- If all carbon fee levy targets can propose autonomous reduction plans, it is estimated that 37 million metric tons of CO_2e can be reduced in 2030, equivalent to approximately 14% of 2005 emissions.
- The three sub-laws allow enterprises to clearly understand that carbon emissions have a price and how to reduce carbon emissions and carbon fee burdens through autonomous reduction plans.



04 Carbon fee rate review and impact assessment

Carbon fee rate review committee

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Basis of composition

1. According to Article 28, Paragraph 3 of the Climate Law, the carbon fee rate shall be reviewed by the rate review committee established by the Ministry of Environment, and shall be submitted to the Ministry of Environment for approval and announcement, and reviewed regularly.
2. The Ministry of Environment formulated and released the "Key Points for the Establishment of the Carbon Fee Rate Review Committee" on Dec 1, 2023, comprising 19 to 23 members, and no less than 2/3 of the members should be from outside government agencies.

Tasks of the Review Committee

1. Review of the setting and adjustment of carbon fee rates and preferential rates.
2. Other matters related to the assessment, review, research and consultation of carbon fee rates.

Important resolutions of previous review meetings

March 15, 2024, the first rate review meeting

1. The minutes of resolutions are published for the public in order to satisfy the principles of information disclosure, openness and transparency.
2. The next review meeting will report on the implementation of international carbon pricing and economic impact assessment methods.

March 26, 2024, the second rate review meeting

1. Starting from 2030, it is planned to increase the rates in phases to give industry a clear price signal.
2. The next review meeting will report on the "Carbon Pricing Policy Cases of Japan, South Korea and Singapore" and the "Carbon Fee-related Draft Sub-Law Planning and Supporting Measures".

May 7, 2024, the third rate review meeting

1. The next review meeting will present the reduction targets and impact assessments of different rate scenarios, including affected industries, overall economic impact and consumer price index impact, etc.
2. The meeting agenda, information on deliberations and meeting minutes are made public, and the minutes are disclosed anonymously with the key points of the members' comments.

July 5, 2024, the Fourth Rate Review Meeting

1. Under each rate scenario (NT$100 to NT$1,000 per metric ton), the impact of carbon fees on GDP and CPI is not significant.
2. Rates should be adjusted in phases, and medium- and long-term (such as 2030) target rates should be considered.
3. The next review meeting will propose impact assessments of different rate scenarios for individual industries subject to carbon fee collection.

Sept 9, 2024, the fifth rate review meeting

1. It is initially recommended that the starting price of the general rate be set between NT$300 and NT$500 per metric ton, and it is recommended that the subsequent review can be carried out in a phased manner within a period of two years.
2. The recommended long-term carbon fee rate (after 2030) can refer to the international carbon price level and be set between NT$1,200 and NT$1,800 per metric ton.
3. The next review meeting will review the recommended range of general rates and preferential rates for the year of taxation, which will serve as the basis for the Ministry of Environment's subsequent legal work on rate announcements.

Conclusions of the fifth rate review meeting:

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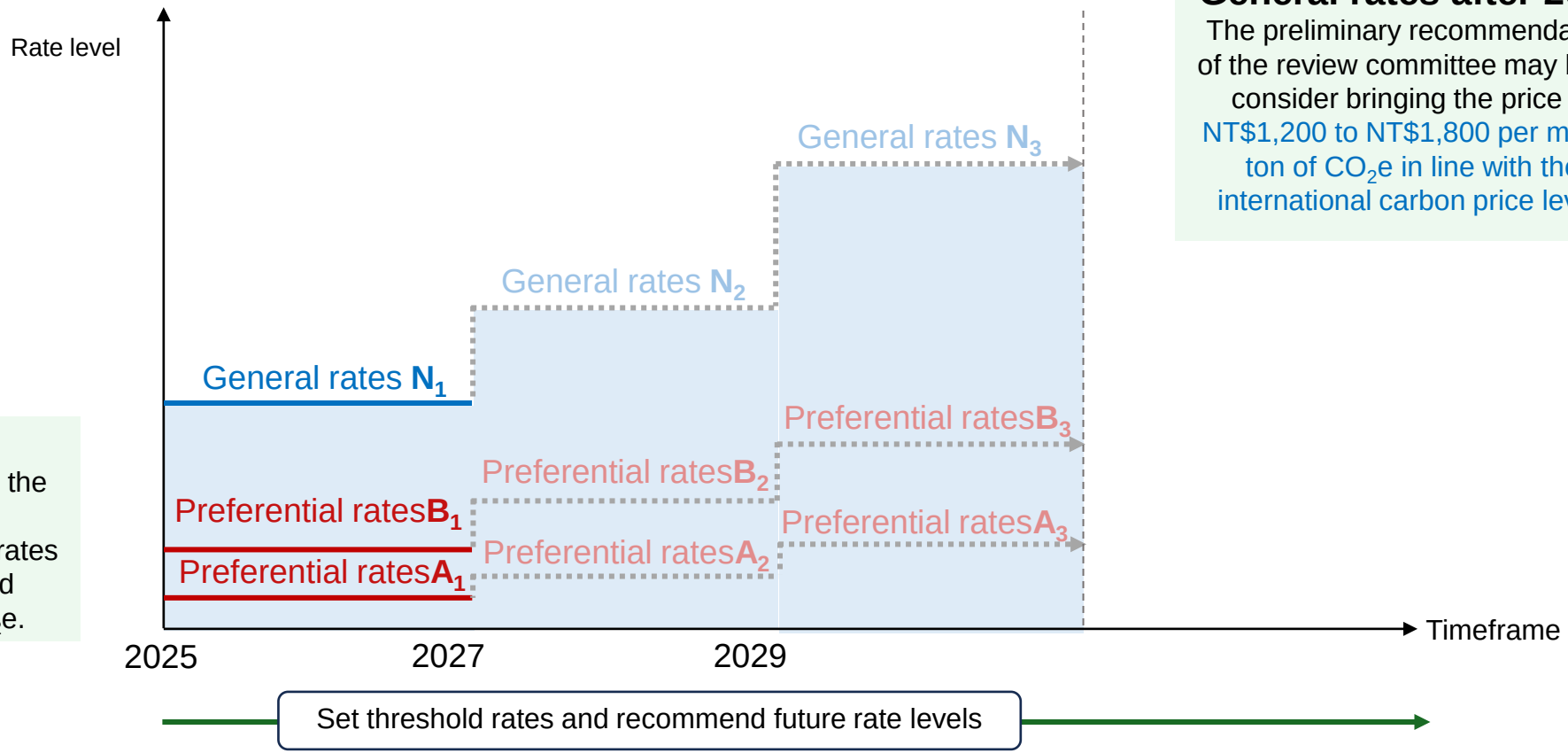
General rates after 2030
The preliminary recommendation of the review committee may be to consider bringing the price of NT$1,200 to NT$1,800 per metric ton of CO_2e in line with the international carbon price level.

General rates
Initial recommendations from the review committee
The starting price for general rates is set between NT$300 and NT$500 per metric ton CO_2e.



Rate increase plan: It is recommended that rates can be increased in phases, one phase every two years.

Note: Preferential rate A is applicable to designated targets in the industry. Preferential rate B is applicable to designated targets in technical benchmarks.

Conclusions of the Sixth Rate Review Meeting:

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Oct 7, 2024, the sixth rate review meeting

1. Comprehensively consider the current status of Taiwan's greenhouse gas reduction, emission source types, greenhouse gas emission types, and emission scales, as well as the current status of international carbon tax and fee systems and price levels, and the impact of different carbon fee rates on Taiwan's overall economy, price levels, and considering the impact on each industry and other related factors, most committee members reached a consensus and recommended that the carbon fee rate for 2025 be as follows:
   - The general carbon fee rate is recommended to be NT$300/metric ton of carbon dioxide equivalent.
   - If the carbon fee levy subjects implement the autonomous reduction plan approved by the central competent authority and comply with the provisions of “Annex 1, Industry-Specified Specified Reduction Rates" of the "Specified Greenhouse Gas Reduction Targets for Charging Subjects", the applicable rates (preferential fees Rate A), it is recommended to set it at NT$50 /metric tons of carbon dioxide equivalent.
   - Carbon fee collection subjects implement autonomous reduction plans approved by the central competent authority, and comply with the provisions of “Annex 2, Technical Benchmark Designated Reduction Rates" of the "Designated Greenhouse Gas Reduction Targets for Collection Subjects" announcement, the applicable rates (preferential Rate B), it is recommended to set it at NT$100 /metric tons of carbon dioxide equivalent.
2. Regarding other rate suggestions put forward by some members at this meeting, this review will take them into consideration when reviewing the rates for 2025 and 2026 based on the application status of autonomous reduction plans and the reduction plan.

Comparison with carbon pricing mechanisms in neighboring Asian countries

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			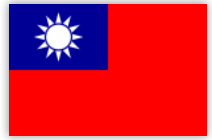
Emissions in 2021 ($MtCO_2e$)	1,168.1	638.9	297.0
Average fossil fuel tax (unit: NT$/metric ton CO_2e)	881	962	331
Changes in emission trends after the implementation of carbon pricing	Emissions dropped by 16.6% from 2012 to 2021, with an average annual decrease of 1.84%	Emissions dropped by 7.87% from 2015 to 2021, with an average annual decrease of 1.31%	--
Conversion of changes in NDCs in 2030 compared to 2005	-44% (1)	-14% (3)	-23% ~ -25% (2)
Carbon price level (unit: NT$/metric ton CO_2e)	64.7	Nominal carbon price in 2021: 439.1 (real carbon price: about 5.7)	**General rate: 300** **Preferential rate A: 50, preferential rate B: 100** **(Real carbon price: estimated to be less than 100)**
The future approach to the carbon pricing system	• In the early days, GX Alliance members participated in ETS voluntarily, and they plan to move towards mandatory regulations in the future. • Plan to impose surcharge on imported fossil fuels (carbon surcharge)	• Including review of emission quotas and several other reform directions	• Launched trial evaluation of carbon trading mechanism in 2028 • After 2030, with reference to the international carbon price level, it will be set between NT$1,200 and NT$1,800 per metric ton.

- Emission data: taken from each country's 2023 greenhouse gas emission inventory report (recording emissions in 2021)
- "Average fossil fuel taxes and fees" are calculated based on 2021 data from the OECD effective carbon price (ECR) database

Review committee resolutions and recommended rates (draft)

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Carbon fee collection rate proposal

General rate: NT$300

- The fifth review meeting recommended that the general rate be set between NT$300 and NT$500 per metric ton CO_2e.
- Referring to the London School of Economics and Political Science's "Taiwan Carbon Pricing Options" research report, it is recommended to set a starting tax rate of NT$300 per metric ton, with a clear trajectory to gradually increase the level of carbon fees.
- The review committee recommended that the carbon fee adopt a low-first-then-high model, based on the principle of increasing it in phases. It is recommended that the starting price of the general rate be set at NT$300 per metric ton. Subsequent adjustments can still be made based on the autonomous reduction situation, industrial competitiveness and international standards. Carbon pricing levels are reviewed annually.

Preferential rate B: NT$100

- Preferential rate B refers to the carbon tax starting price range of Japan (approximately NT$64.7/metric ton CO_2e) and Singapore (NT$116.5/metric ton CO_2e).
- In addition, the industry-level impact assessment is also considered, and the principle is that the impact on the industry's gross profit margin should not exceed 10%.
- According to the impact assessment results, when the rate is NT$100, the impact on the gross profit margin of the optoelectronics industry (32 factories) and the steel industry (33 factories) has reached 10%. The review committee recommended that the preferential rate B be set at NT$100 per metric ton.

Preferential rate A: NT$50

- When considering the applicable preferential rate, the "industry-specific reduction rate" that A must comply with is based on the spirit of SBT. Generally, industries need to achieve a 42% reduction by 2030, which is a challenging target.
- The gap between general rates and preferential rates A should be widened as much as possible, and industries should be encouraged to adopt the specified targets in Annex 1.
- Considering that the reduction rate of the "industry-specific specified reduction rate" is approximately twice that of the "technical benchmark specified reduction rate", the recommended preferential rate A is NT$50 per metric ton (1/2 of the preferential rate B).

The impact on the economy and prices of the carbon fees proposed by the review committee

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- A simulation showed that the imposition of carbon fees will not have a significant impact on the overall economy and prices.
- Under the rate scenario ranging from the general rate of NT$300 per metric ton CO_2e to the Preferential Rate A of NT$50, the impact on the gross domestic product (GDP) would be 0.009~ 0.12%, and the impact on the consumer price index (CPI) would be 0.006~ 0.08%.
- It is estimated based on general rates that the impact on housing prices would be only 0.1~0.2%. The impact of carbon fees on housing prices will be very limited.

Unit: percentage point	General rate: NT$300	Preferential rate B: NT$100	Preferential rate A: NT$50
Impact on GDP	↓ 0.1202	↓ 0.0181	↓ 0.0091
Impact on CPI	↑ 0.0806	↑ 0.0121	↑ 0.0061
House price cost impact	↑ 0.112~0.262	↑ 0.009~0.022	↑ 0.005~0.011

Note: The first phase of the carbon fee is not levied on the construction industry. Construction costs are mainly affected by the cost of upstream raw materials that are levied. The assessment assumes that all costs are passed on and that construction costs account for 15% to 35% of housing prices.

What amount of carbon fees will companies have to pay each year: trial calculation scenario

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Emissions	No carbon reduction (NT$300 per ton)	NT$100 per ton for autonomous reduction plan (meeting technical benchmarks)		NT$50 per ton for voluntary reduction plan (meeting industry targets)	
		Non-high carbon leakage industries	Emissions adjustment for high-carbon leakage industries	Non-high carbon leakage industries	High carbon leakage industries - Emissions adjustment
10 million metric tons CO_2e/year	**2.9925 billion**	**997.5 million**	**200 million**	**498.75 million**	**100 million**
1 million metric tons CO_2e/year	**292.5 million**	**97.5 million**	**20 million**	**48.75 million**	**10 million**
100,000 metric tons CO_2e/year	**22.5 million**	**7.5 million**	**2 million**	**3.75 million**	**1 million**
50,000 metric tons CO_2e/year	**7.5 million**	**2.5 million**	**1 million**	**1.25 million**	**500,000**

Note:

More than 5 million tons, 4 factories in total

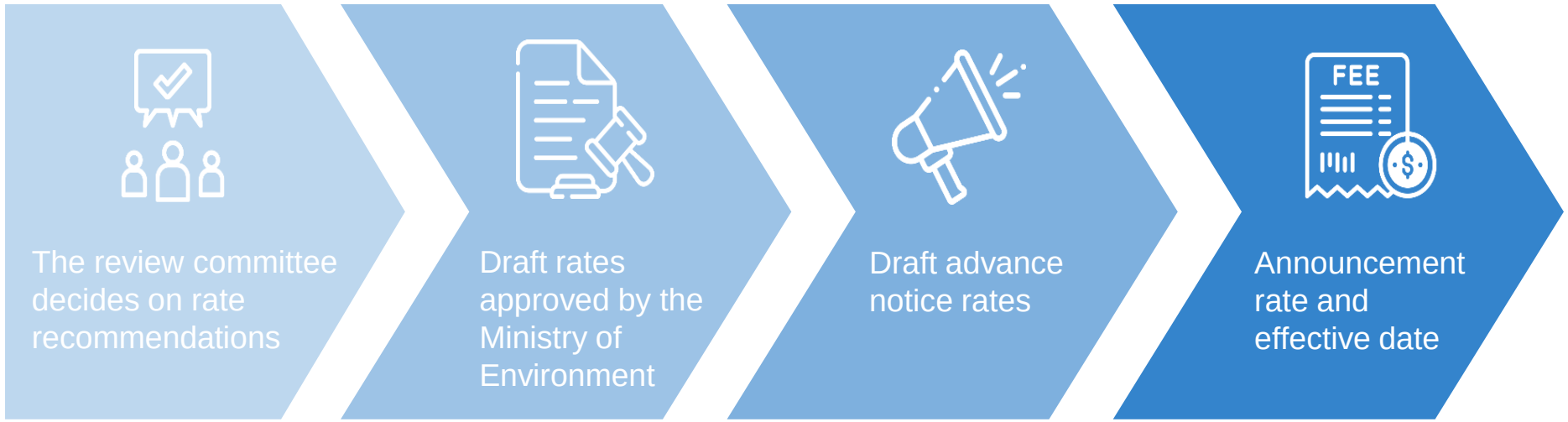
5 to 1 million tons, 19 factories in total

100~100,000 tons, 178 factories in total

100,000~50,000 tons. Total 183 factories

5 to 25,000 tons, 116 factories in total

Follow-up legal procedures



Carbon fees will have no significant impact on prices

環境部
Ministry of Environment

- The 4th Carbon Fee Rate Review Meeting on July 5, 2024 conducted a simulation assessment of the impact of different rates, which showed that the impact of carbon fees on the overall economy and consumer price index is not significant and will not cause inflation.
- In response to recent media reports that some real estate-related businesses claimed that the imposition of carbon fees may cause housing prices to rise, it has been estimated that the impact of carbon fees on construction costs will be less than 1%. The Ministry of Environment has called for assessment of scientific evidence and rational discussion.

If the public hears relevant conflicting information, they can provide the source of the information through the carbon reduction hotline and e-mail set up by the Climate Change Administration, and we will forward it to the relevant units for investigation and handling.

05 Carbon fee payment and government advisory resources

Counselling resources for scaling up efforts to reduce carbon emissions

環境部
Ministry of Environment

Ministry of Economic Affairs

Counseling measures

Carbon fee levy targets

Measures ① Integrate with the carbon fee system

All enterprises

Measures ② Deep energy saving promotion plan
Measures ③ Provide carbon reduction diagnostic counseling
Measures ④ Government subsidy resources
Measures ⑤ Low-interest loans
Measures ⑥ Carbon reduction tax incentives

Ministry of Environment

Carbon fee revenue is earmarked for special use

Execution perspective	Emission source inspection, greenhouse gas reduction implementation, platform account management, carbon footprint management, international affairs and just transition, etc.
Reduction perspective	Subsidy and reward greenhouse gas reduction work and research and development
Adaptation perspective	Coordination, research and promotion of climate change adaptation
Educational perspective	Climate change and greenhouse gas reduction education and promotion
Other	Other related climate change adaptation research and greenhouse gas reduction

Carbon pricing will become a new driving force for Taiwan's green growth

環境部
Ministry of Environment

Governments proactively become integrators and promoters of climate net zero → Industrial restructuring & International sustainable competitiveness ✖ Green finance drives green investments such as insurance and venture capital ✖ Green industry/employment Green collar talents Green jobs

Green Growth Fund

Strive for the National Development Council National Development Fund to establish a "Green Growth Fund" of NT$10 billion. The Ministry of Environment will decide investment targets based on the amount of carbon reduction to promote domestic net-zero related emerging industries and accelerate carbon reduction.

+

Green financial innovation

Cooperate with the Financial Supervisory Commission and the Ministry of Economic Affairs to strive for long-term investment of insurance and financial industry funds in various industries in Taiwan for comprehensive power conservation, net-zero measures and resource recycling industries so as to accelerate Taiwan's net-zero and environmental sustainability.

+

Taiwan Net Zero Fund

Combining domestic and foreign carbon reduction needs, we will cooperate with domestic high-carbon emitters, venture capital investors, financial institutions and energy companies to obtain new international-level carbon reduction technologies and set substantial carbon reduction targets to contribute to the acceleration of carbon reduction globally and in Taiwan.

06 Carbon Fees and the Carbon Border Adjustment Mechanism

International Carbon Border Adjustment Mechanism

環境部 Ministry of Environment

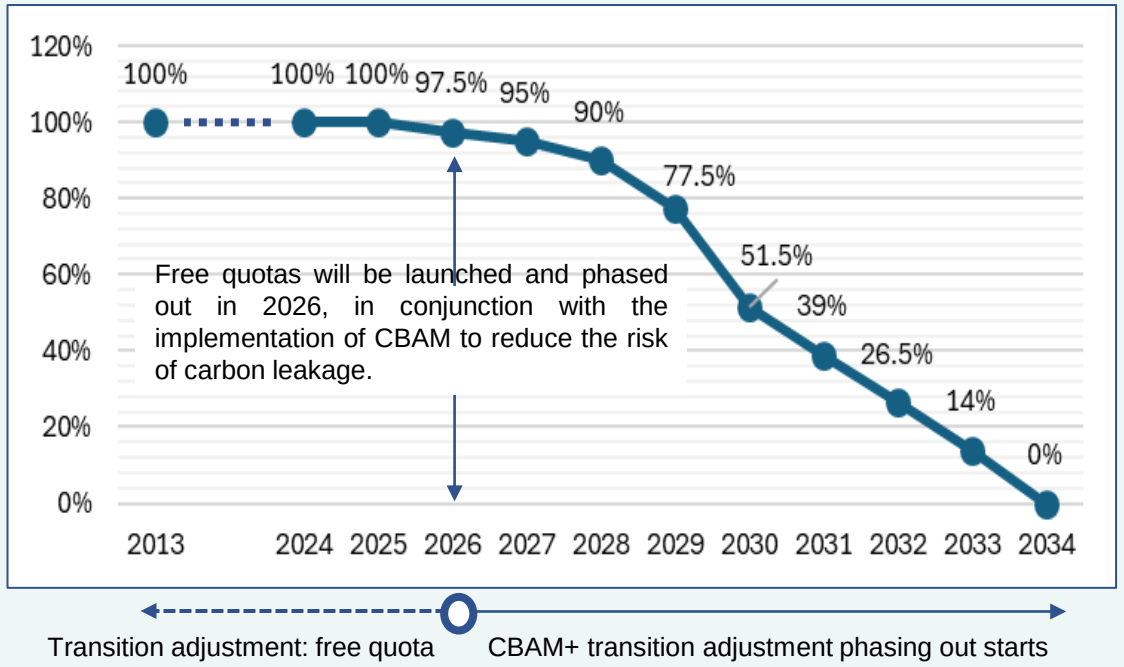
European Union	There will be a transition period starting from October 2023, and importers will declare in accordance with the declaration obligations and regulations. To be officially implemented in 2026, importers must make financial adjustments by purchasing CBAM certificates to balance carbon costs.
U.K.	Public consultation will begin in June this year, and it is expected to be launched in 2027.

EU CBAM voucher deduction rules

1) For products which receive free emission credits in the EU, CBAM certificates will be adjusted accordingly.

2) For products whose carbon prices have already been paid in the country of production (e.g. carbon taxes, carbon fees, ETS), they can receive deductions by providing supporting documents.

- The carbon fee paid for a product in Taiwan is confirmed to be the carbon price paid, and can be deducted. However, the calculation method of deduction adjustment in the European Union has not yet been announced.
- From 2025, the carbon emissions of the entities/products subject to Taiwan's carbon fee collection will be included in the calculation.



Changes in the proportion of free quotas for high carbon leakage risks in EU ETS

EU CBAM implementation practices

環境部
Ministry of Environment

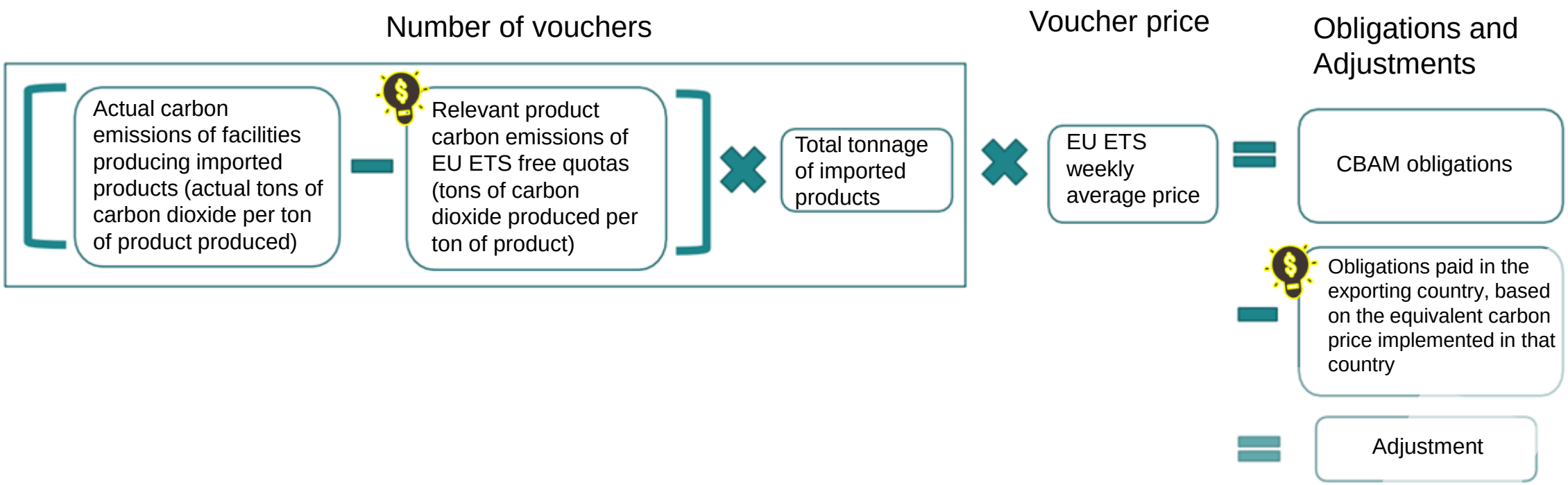
- Listed product categories

Cement　Steel　Aluminum　Fertilizer　Hydrogen　Electricity

  - The EU is Taiwan's fourth largest export market. According to 2022 customs export data, there are 179 CBAM-listed products exported from Taiwan to the EU, mainly steel, aluminum and their products, such as steel materials and fasteners (screws and bolts).

- There will be a transition period starting from October 1, 2023, and declarations must be made in accordance with the obligations under the CBAM transition period “declaration of implementation” regulations.
  - If the declarer is an EU importer and fails to declare in accordance with the regulations, it will be fined 10 to 50 euros per ton.
  - Information required for declaration and provided by the manufacturer to include: basic factory and product information, manufacturing processes (for example, whether crude steel comes from electric arc furnaces or converters), product carbon content, carbon price paid, etc. [“Process” refers to relevant processes used to produce products. For example, whether the crude steel comes from an electric arc furnace or a converter; detailed manufacturing processes not necessary.]
  - For complex products (such as screws), the quantity of raw materials used in the production process, the carbon content of the raw materials and the carbon price paid must be included in the total calculation.
- CBAM will be officially implemented on January 1, 2026. Importers must declare and pay before May 31 of each year the number of CBAM vouchers corresponding to the carbon emissions associated with products imported in the previous year.
  - The carbon content of the product must be verified by an inspection agency recognized by the EU.
  - CBAM voucher deduction rules: (1) If the product receives free emission quotas in the EU ETS, the CBAM voucher will be adjusted accordingly; (2) If the carbon price for the product has already been paid (e.g. carbon tax, carbon fee, ETS) in the country of production, then a deduction can be made upon providing documentation.

EU CBAM adjustment calculation method



- Detailed regulations on deductions need to be announced in mid-2025 such as "How to deduct carbon pricing paid by third countries" and "Reconciliation of free allocation and CBAM system under EU ETS".

Source: 1. https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en
2. Carbon Border Adjustment Mechanism (CBAM) Questions and Answers

EU CBAM Implementation Timeline

環境部
Ministry of Environment

CBAM

Inventory inspection and carbon fee collection in Taiwan

The transition period begins on Oct 1, 2023

Submit the first report on January 31, 2024 (exemption from inspection)

Quarterly declaration during the transition period

End of transition period

- The official period starts January 1, 2026.
- Amounts must be declared and inspected before May 31 every year.
- Starting from 2027, CBAM vouchers corresponding to the carbon emissions associated with products imported in the previous year (2026) must be paid.

Starting from January 1, 2025, emissions from electricity and gas supply industries and manufacturing industries with annual emissions of more than 25,000 metric tons will be included in the carbon fee.

Complete the 2024 emissions inventory on April 30, 2025

Inspection completed on Oct 31

Starting from 2026, carbon fees for emissions in the previous year (2025) will be paid.

Annual declaration and inspection for manufacturing and power industries with annual emissions of more than 25,000 metric tons

Our strategies in response to EU CBAM

環境部 Ministry of Environment

Strengthen carbon inventory and inspection

- The "Greenhouse Gas Emissions Inventory Registration and Inspection Management Regulations" and "Greenhouse Gas Certification Agencies and Inspection Agencies Management Regulations" have been revised in accordance with the Climate Change Response Act.
- Power generation industry and manufacturing industry entities with annual emissions of more than 25,000 metric tons of CO_2e should undergo inventory checks and be inspected in accordance with regulations.
- The Ministry of Economic Affairs continues to expand its guidance on carbon inventories for small and medium-sized enterprises.
- Capacity of inspection agencies to be increased.

Implement carbon pricing

- "Carbon fees" are one of the deductible carbon prices of the CBAM.
- The Ministry of Environment imposes a carbon fee on electricity, gas supply and manufacturing industries with annual emissions of more than 25,000 metric tons. Starting from 2025, emissions will be included in the calculation of carbon fee collection and will be paid in the following year (2026).

Reduce carbon emissions per product

- Combined with the carbon fee collection mechanism, it is proposed to switch to low-carbon fuels, adopt negative emission technologies, improve energy efficiency, use renewable energy or improve manufacturing processes to accelerate reductions.
- “The big leads the small" principle drives supply chains to accelerate carbon reduction through the 1+N carbon management model.

Promote the Taiwan version of CBAM response practices

環境部
Ministry of Environment

- Of the 75 countries or regions around the world that have implemented carbon pricing, only the European Union has implemented emissions trading before launching CBAM. It is still undergoing trial implementation and will not be officially implemented until 2026.
- Taiwan's carbon fee system will be implemented on January 1, 2025. The emission adjustment coefficient (0.2 for the first period) will be used to adjust the emissions of subjects with high carbon leakage risks in order to maintain the international competitiveness of Taiwan's industry.
- Response strategies for the Taiwan version of CBAM:
  1) With reference to EU practices, the plan will start with the declaration of the carbon emission intensity of high-carbon leakage products.
  2) This topic involves a wide range of aspects, and relevant supporting measures (including declaration methods, subjects, relevant regulations and practices of various countries, etc.) are currently being evaluated and discussed.

Conclusion

環境部
Ministry of Environment

- Carbon pricing systems have been implemented in 75 countries or regions around the world. Due to differences in the challenges and experiences faced by each country in the adoption, implementation and design process of carbon pricing policy tools, the carbon pricing systems implemented vary.
- In order to integrate with the international carbon pricing system, Taiwan’s carbon fee is designed with reference to the carbon pricing systems of the European Union, Japan, South Korea, Singapore and other countries, taking into account the international competitiveness of industries and considering assistance needed by industries to transition to low-carbon.
- Taiwan’s carbon fee system is an economic inducement, not a financial tool. It is based on reduction as the starting point and takes into account transition and transformation. After the carbon fee system is launched, Taiwan will officially enter the era of carbon pricing. In the future, public and private sector funds will be combined to become a new driving force for Taiwan's green growth.

環境部
Ministry of Environment

End of briefing

Carbon fees are economic incentives, not financial tools.

Volume reduction is taken as the starting point and transition and transformation needs are considered.

經濟日報 (10月9日報導)

Environment Minister: Open green finance to drive investment

環長：開啟綠色金融 帶動投資

彭啓明表示碳費收入會放大使用 下一步啓動三大基金 爭取保險、創投等投入

碳費下一步，啓動綠色金融

還原電話內容 強調沒被罵

總統提醒不能只辦倡議

新聞連結https://money.udn.com/money/story/12926/8279317

天下雜誌 (10月8日報導)

General carbon fee level set at NT$300 per ton!

碳費拍板每噸300元！企業與環團都不滿意？三大重點觀察

經過6次開會，審議委員會終於敲定碳費費率，初步建議環境部收取每噸300元，企業如提出自主減碳計劃，可享有每噸100元或50元的優惠費率。然而，為何專家認為，真正的重點，其實是在6年後的目標價：一噸1200元？

▶ 文章語音朗讀・06:30

經過一年多討論、6次馬拉松會議，環境部的碳費審議委員會10月7日上午終於定調，**每噸碳排建議收費300元台幣，預計明年中試申報，2026年起正式收費。業者可透過達成「行業別指定削減率」或「技術標竿指定削減率」，適用每噸100元或50元的優惠費率，會從年碳排2.5萬噸以上約300家公司開始。**

此舉的最大意義就是碳排有價終於成真，但腳步偏穩健，而非躁進。

一、重點在減碳，而非收錢

「其實大家都有共識：碳費就是該收，這毫無疑義，」6次碳費審議會開下來，擔任環境部幕僚的中經院綠色經濟研究中心副主任劉哲良如此定調。

二、關鍵在2030年目標價：1200元

劉哲良也指出，比起開徵價格，更重要的其實是未來目標價，也就是2030年要達到每噸碳價1200到1800元。

三、充分溝通，平衡各方期待

另個策略，則是中道。一位與會委員透露，從這幾次審議，可看出賴政府對碳費的策略，是採取折衷路線：企業界與環團都不滿意，但可以接受。

新聞連結：https://www.cw.com.tw/article/5132190

Three carbon fee rates have been determined: the best preferential rate is NT$50 per metric ton

碳費敲定3費率 最優每噸50元

一般費率300 達減量目標AB優惠價為50、100元 後年起收費

台灣與亞洲鄰國碳定價機制比較

	日本	韓國	新加坡	台灣
碳定價機制	地球溫暖化對策稅	總量管制排放交易機制	碳稅	碳費
起始年份	2012	2015	2019	2025（2026收費）
每公噸碳排價格（新台幣）	64.7	2021年名目碳價439.1（實質碳價約5.7）	2019年 116.5 2024-25年 582.5 （實質碳價139.8~233）	一般費率 300 優惠費率A 50 優惠費率B 100
收費對象	化石燃料業者	年碳排超過12.5萬噸的事業單位，及年碳排量超過2.5萬噸的設備	年碳排量超過2.5萬噸的排放源，約50廠	年碳排量超過2.5萬噸的排放源，約500廠(281家公司)

資料來源：環境部　製表：記者陳嘉怡

圖：中央社資料照

自由時報 Liberty Times Net

〔記者陳嘉怡／台北報導〕碳費價格出爐！環境部昨召開第六次碳費費率審議會，建議一般費率每噸三百元；若企業提出自主減量計畫、達成分別的指定減量目標，優惠費率A每噸五十元、優惠費率B每噸一百元。環境部表示，會儘速完成碳費費率預告，明年一月一日起徵、後年五月開始收費。

環境部政務次長施文真表示，經過六次碳費審議會討論，委員針對我國溫室氣體減量現況、國際碳稅費制度與價格水準，不同碳費費率對於我國總體經濟、物價水準及對個別產業衝擊等因素綜合考量，建議明年碳費一般費率每噸三百元。若提出自主減量計畫，達成較嚴格的「行業別指定削減率」可享優惠費率A每噸五十元；若是達成技術標竿指定削減率，則可享優惠費率B每噸一百元。

環境部氣候變遷署長蔡玲儀說明，依照二〇二二年的碳盤查結果，推估碳費收費對象共計二八一家公司的五百廠，其中有一四一家上市櫃公司；收費對象的溫室氣體排放量約一五五百萬公噸二氧化碳當量，約占全國總排放量的五十四%。徵收對象明年五月底前須試申報碳費（但不繳費），六月卅日前申請自主減量計畫；二〇二六年五月底前依明年的排放量及適用優惠費率繳費。

若採減碳 首年碳費估收60億

根據環境部統計，全台有台塑石化、中鋼等四家事業排放源年碳排量一千萬噸以上；年碳排量以五萬至十萬噸共一八三廠最多，其次為十萬至一百萬噸共一七八廠。環境部估算，若所有排碳大戶都不提自主減量計畫，以每噸一般費率三百元估算，年碳排量達一千萬噸的事業排放源，一年要繳近卅億元的碳費；年碳排量十萬噸的排放源，則要繳二二五〇萬元碳費。但若所有廠商都提出自主減量計畫，並採取較容易達成的減碳目標，以優惠費率B的一百元估算，預估二〇二六年起每年碳費收入約六十億元。

施文真強調，對碳費徵收對象而言，要取得優惠費率，必須先付出減碳成本，因此不能單看政府收到多少碳費，就斷定碳費的減碳效果；對照其他國家的碳定價，並未規定要執行自主減量計畫才能取得優惠，「我們的制度是有條件的優惠

新聞連結：https://ec.ltn.com.tw/article/paper/1670825

聯合新聞網

Peng Chi-Ming: The most important thing is to implement the carbon fees steadily

彭啓明：碳費穩健上路最重要

記者胡瑞玲、李柏澔／台北報導

環境部碳費費率審議會，昨天拍板一般費率每公噸三百元，企業選擇最高標準的自主減量計畫，可適用優惠費率A方案五十元，B方案一百元。環境部長彭啓明表示，全世界碳費制度都是「先低後高」，最重要是穩健上路。

彭啓明昨早赴立法院專案報告，會前受訪指出，雖然他個人偏向市場派，比較認同總量管制碳交易，但仍尊重過去的政策延續性。碳費明年元旦上路，不論是一般費率或優惠費率，他都予以尊重，最後公告是以環境部長署名，因此不論成敗他都會負責；彭啓明強調，所有國家的碳費制度都是「先低後高」、穩健上路，一開始先讓大家習慣比較重要。

被問到這次碳費費率審議會討論氣氛，環境部次長施文真表示，會中委員們討論的氣氛相當好，委員就算站起來，也都是「去上廁所」，現場委員更關心的是，一般費率和優惠費率如何相互搭配，讓收費對象更有利減碳。

審議委員、環境權保障基金會氣候變遷暨公正轉型部主任林彥廷表示，現場委員們的討論都相當積極，工總代表與環保方代表都各自提出不同的建議費率，這次各項費率是各方妥協出來的結果。也有委員說，大家都希望費率能盡快出爐，有些委員雖認為這樣的費率太低，但審議現場已經無法再改變些什麼。

施文真補充說，部份委員所提其他費率建議，審議會將視自主減量計畫申請情況及減量規畫，於二〇二五年檢討二〇二六年費率時一併納入考量。

產業界憂心碳費未與台版CBAM（歐盟碳邊境調整機制）同步及規畫相關配套，將對產業造成重大衝擊，彭啓明承諾，一定會建立台版CBAM，但需通報WTO要花點時間，目前規畫明年起，進口原物料及商品須申報碳排及碳足跡，另也將推動碳交易制度，希望較有競爭力、有能力且希望轉型的企業，可以走到總量管制的碳交易與世界同軌。

新聞連結：https://udn.com/news/story/7238/8276791

今日新聞 NOWnews

Taiwan's carbon fee causes green inflation: Scholars assess it will have little impact on CPI

台灣碳費造成綠色通膨 學者估對CPI影響小

記者鍾泓良 / 台北報導

2024年10月7日 週一 下午9:01

▲學者則分析，進入「碳有價」時代確實會推升廠商成本，但經試算對物價影響微乎其微，更何況距離上路有一定緩衝時間，更加會稀釋綠色通膨衝擊。（圖／擷取自Pixabay）

[NOWnews今日新聞] 碳費今（7）日拍板一般費率為每公噸300元，外界擔心收取碳費將誘發「綠色通膨」，進一步推升物價。學者則分析，進入「碳有價」時代確實會推升廠商成本，但經試算，對物價影響微乎其微，更何況距離上路仍有一定緩衝時間，更加會稀釋衝擊。

碳費費率審議會於今日拍板，碳費一般費率為每公噸300元，對應技術標竿指定目標，享優惠費率B為100元／公噸；進一步選擇國際減碳最高標準行業別指定目標，適用更優惠的費率A為 50元／公噸，將於2026年課徵。

解析台版碳費制度，中華經濟研究院能源與環境研究中心主任劉哲良表示，許多民間團體批政府收每噸300元、100元及50元減排效果有限，應把費率訂得很高，讓廠商感受到壓力才有利轉型。

但其實碳費費率審議會上次已訂定2030年後碳費為每噸1200元至1800元，相當於現在一般費率300元的4倍至6倍，2026年所課徵的300元與2030年的「終點價格」所形成價差，就是促使廠商快速轉型的關鍵。

劉哲良總結，碳費對於我國企業競爭力不至於有太大影響，如果這段期間將預算投入減碳設備及轉型，中長期來看更加符合國際趨勢，台灣產業競爭力將可以「轉骨」，從低階產業晉升到優質綠色產業，而這段期間勢必要經過轉型陣痛的過渡時期。

針對綠色通膨可能性，邱達生表示，碳費徵收時距離現在還有1年緩衝期，相信這段時間產業會積極想要爭取達到優惠費率，降低轉嫁成本可能性；他也補充，國際預測機構預測2026年是全球通膨較和緩的時間點，這兩個原因都讓綠色通膨的可能性顯著降低。

新聞連結：https://reurl.cc/xv803z

聯合新聞網

The public is paying attention to the carbon fee issue. TSMC responds: It will not impact the company.

外界關注碳費議題 台積電回應：不會造成影響

2024-10-07 20:09 經濟日報／記者尹慧中/台北即時報導

+ 台積電

台積電。路透

外界關注碳費議題，台積電（2330）如在9月初曾回覆，台積公司積極厚植綠色管理於日常營運，落實與地球生態共生共榮的堅定信念。我們將持續依淨零路徑積極執行領先業界的各項溫室氣體減量標竿作為，並將遵循法規以及公告的實施辦法，預計不會對財務造成影響。

環境部7日召開第六次碳費費率審議會，歷經半年密集開會討論後，一般費率每公噸300元，企業可選擇最高標準的自主減量計畫，優惠費率A（行業別指定削減率）每公噸為50元，優惠費率B（技術標竿指定削減率）每公噸100元，目標10月預告碳費費率，明年1月1日上路。

新聞連結：https://udn.com/news/story/7238/8276461

自由時報 Liberty Times Net

Carbon fee to be launched! The general rate is NT$300 per ton. The Ministry of Environment estimates revenue of NT$6 billion in the first year.

碳費上路！一般費率每噸300元 環境部估首年進帳60億

環境部日前舉辦第6次碳費費率審議會，確認費率草案為一般費率每公噸300元。（環境部提供）

第6次碳費費率審議會，日前確認費率標準，多數委員建議碳費徵收費率草案為一般費率為每公噸300元，對應技術標竿指定目標之優惠費率B為每公噸100元，若進一步選擇國際減碳最高標準之行業別指定目標，則可適用更優惠的費率A 公噸50元。

依照環境部規劃，首波徵收對象為年排放量2.5萬公噸以上的電力業、燃氣供應業及製造業為主，約500家工廠，明年5月採試申報，2026年正式開始收費。

另外，只要企業提出「自主減量計畫」並經環境部審核通過後，即可申請優惠費率，鼓勵企業自行減碳。

環境不表示，經過與會的機關代表、民間團體及學者專家委員充分討論後，多數委員建議我國碳費徵收費率（草案）中的一般費率可採先低後高的方式，以每公噸300元作為起徵費率；至於各界關心的優惠費率B，最後參考日本(約64.7元/公噸CO2e)及新加坡(116.5元/公噸CO2e)的碳稅起徵價格區間，與考量產業層級衝擊影響評估結果，建議優惠費率B起徵價格訂為每公噸100元。

若碳排大戶都申請適用優惠費率B的自主減量計劃，環計部預估2026年起，每年可收到約60億元碳費。

新聞連結：https://estate.ltn.com.tw/article/22064