ESG REPORT 2024

Environmental
Social
Governance

CPC Corporation
Taiwan

Published in 2025

CPC's Sustainability Vision

Special Coverage

01 Integrity and Sustainability

02 CPC and Green Contributions

03 CPC and Social Co-prosperity Happy Enterprise CPC

Appendix

CPC's Sustainability Vision

Introduction

Report Profile

CPC Corporation (referred to as CPC throughout the report) has always valued interaction and communication with stakeholders and considers them to be the foundation for business continuity. CPC has been preparing sustainability reports voluntarily since 2007; the 2025 report marks the 17th issue, and it is intended not only to disclose CPC's sustainability goals, strategies, and progress, but also to address ESG issues that are of concern to the general public.

Cover story

"Cycle with Nature, Power the Future — Creating a New Chapter of Sustainability for CPC"

At the center, lush natural ecology serves as the visual core, conveying CPC's commitment to ecological conservation and environmental friendliness. The bottom features a collage of the Earth and renewable energy imagery, symbolizing the transition from traditional energy toward a green, low-carbon future, with active development of emerging energy sources such as hydrogen, wind power, and geothermal energy, aiming to achieve carbon reduction goals and protect our planet.

The overall design adopts an interwoven and collaged arc composition, symbolizing cross-disciplinary collaboration, energy resource integration, and the connection and continuity of a sustainable vision, showcasing CPC' s firm determination and forward-looking strategy in advancing ESG actions.

Scope of Report and Reporting Period

This report covers the period from January 1 to December 31, 2024; data from periods before January 1, 2024 and after December 31, 2024 may be mentioned to complete performance disclosure for various projects and campaigns. The previous report was published in August 2024, and there have been no restatements of information or material changes to report boundaries. This report provides information regarding the activities of CPC headquarters and affiliates. For matters and data not disclosed in this report, please visit our corporate website (https://www.cpc.com.tw/).

Note: Starting from 2025, in order to align the sustainability report with financial statements and the company' s annual report, the publication name has been changed to "Disclosure Year."

CPC website

Sustainability disclosure framework and indicators

We have prepared this report in accordance with the GRI Sustainability Reporting Standards (GRI Standards) published by the Global Sustainability Standards Board (GSSB), and disclosed information on CPC's current ESG practices as well as domestic and foreign trends using GRI 11: Oil and Gas Sector Disclosures 2021. Standards of the Sustainability Accounting Standards Board (SASB) and indicators of the Task Force on Climate-related Financial Disclosures (TCFD) were used as reference for the disclosure of CPC' s current practices and domestic/foreign ESG trends for 2024. The following guidelines and initiatives were also taken into consideration:

- The Global Compact's Ten Principles
- AA1000 Accountability Stakeholder Engagement Standard (AA1000SES)
- United Nations Sustainable Development Goals (SDGs)
- ISO 26000 Social Responsibility Guidance
- GRI Sustainability Reporting Standards version 2021
- GRI 11 sector standard: Oil and Gas version 2021
- Standards of Sustainability Accounting Standards Board (SASB)
- Task Force on Climate-related Financial Disclosures (TCFD)
- TWSE sustainability disclosure standards Appendix 1-7 – Oil and Gas Sector
- Taskforce on Nature-related Financial Disclosures (TNFD)

Note: The report is prepared based on the eight principles of GRI Sustainability Reporting Standards (version 2021), namely: accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness, and verifiability. Data was sourced from internal departments that had been reviewed by senior managers, and the report has been published following the review and approval of the Sustainable Operations Promotion Committee.

Report Quality Control Workflow and Data Calculation Basis

Report Editing

The "Sustainability Report Editing Panel" was established, with the Chief Sustainability Officer (Vice President supervising the Department of Planning) serving as the convener, and the Director of the Department of Planning (DoP) serving as the executive secretary, responsible for supervising and promoting the preparation of the report. The team members include representatives from various departments.

Report Content Review

After consolidating and editing, the DoP sent the first draft to panel members to review the contents in relation to their functions and duties. After verification by an independent third-party organization, the DoP revised the draft with respect to the verification comments before finalization. Lastly, the DoP submitted the Report for approval according to the administrative procedure prior to publication.

External Assurance of the Report

This Report has been verified and assured by the British Standards Institution (BSI) and Ernst & Young to comply with,
•BSI：GRI Standards 2021, AA1000 AS v3 (with 2018 addendum) and Type 1 Moderate Assurance Standard
•EY：ISAE 3000 assurance (3 aspects)

All financial data contained in this Report is extracted from CPA-certified financial statements, and all values are expressed in New Taiwan dollars. Some statistical data are sourced from publicly available information provided by government agencies (such as the Ministry of Environment). ISO 14064-1 (Organizational Greenhouse Gas Inventory) and ISO 14067 (Product Carbon Footprint) have been verified by third-party organizations; ISO 9001, ISO 14001, and ISO 45001 are subject to annual verification to maintain their validity.

Contact

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Opinions and feedbacks

Message from the Management

Steadfast Progress Toward Building Sustainable Resilience

As climate change risks intensify, the pace of global energy transition is accelerating, presenting profound challenges and transformations across policy, technology, and industrial structures worldwide. In 2024, the Russia–Ukraine war and Middle East conflicts remain unresolved. The volatility of international crude oil prices, combined with high global inflation, economic slowdown, and ongoing supply chain restructuring, continues to pose uncertainties that challenge both Taiwan's economy and energy supply.

In this context, CPC has steadfastly upheld its core responsibility of ensuring stable domestic energy supply and pricing. Despite facing ongoing losses, CPC actively undertakes the government's policy objectives of price stability and public welfare, demonstrating its resilience and sense of mission as a state-owned enterprise. At the same time, we view challenges as opportunities for transformation, continually deepening corporate governance, promoting operational transformation, and adjusting the energy structure to lay a solid foundation for achieving a "Sustainable Taiwan and Net-Zero Future."

Strategic Focus: Deepening Three Core Sustainability Pillars

In response to global sustainability trends and Taiwan' s 2050 net-zero policy, CPC remains focused on its ESG strategy of "High-value Petrochemical," "Low-Carbon Emission," and "Lean-Renewable Energy." The Company continues to build a sustainable management system to enhance industrial resilience and green competitiveness.

In terms of "High-value Petrochemical," CPC is optimizing refining systems and product structures, advancing R&D for high-value and differentiated products, and promoting petrochemical industry transformation. In 2024, CPC completed the construction of a pilot plant for lithium titanate oxide (LTO) anode materials with an annual capacity of one metric ton, becoming the only domestic supplier of commercialized LTO materials. CPC is also actively advancing the development of sustainable aviation fuel (SAF), obtaining ISCC EU and CORSIA certifications, laying the foundation for SAF supply in Taiwan.

In terms of "Low-Carbon Emission," CPC has expanded carbon footprint accounting and deepened management practices. In 2024, it completed carbon footprint assessments for 554 key products, conducted a comprehensive inventory of carbon reduction potential, and mapped out decarbonization pathways. The Company is also continuing to assess the potential integration of carbon capture, utilization, and storage (CCUS) technologies.

In terms of "Lean-Renewable Energy," CPC is actively expanding its clean energy portfolio. In 2024, the Company completed drilling for Taiwan's first deep geothermal exploratory well, advancing geothermal potential assessment technology. It also signed a long-term LNG procurement agreement with QatarEnergy to ensure stable LNG supply through 2052, and completed the equity transaction for the Hai Sheng offshore wind farm, marking its initial entry into the offshore wind sector. Furthermore, CPC continues to develop hydrogen applications and supply chains. The Company launched its "Hydrogen Living Circle" concept and partnered with Mawudu in Hsinchu to establish Taiwan' s first "Hydrogen Café" demonstration site, showcasing the integration of clean energy technologies and local innovation.

Sustainable Governance: From Cultural Internalization to Institutional Deepening

CPC fully understands that corporate sustainability is not merely a matter of technical or institutional construction—it also requires a shift in values and cultural implementation. The Company continues to strengthen corporate governance, optimize organizational efficiency, and refine regulatory frameworks, while actively incorporating ESG risk management, enhancing board functionality, increasing transparency, and improving stakeholder communication.

Through cross-unit collaboration, CPC has enhanced risk prevention and rapid response capabilities. In response to significant environmental penalties received by individual units in recent years, the Company has conducted comprehensive reviews, strengthened systems, and established auditing and reward/penalty mechanisms to ensure compliance from the source. CPC has also introduced AI-based smart safety monitoring systems, electronic perimeters, and anomaly detection mechanisms to boost on-site real-time identification capabilities, empowering sustainable governance through technology. We also place strong emphasis on talent sustainability and knowledge transfer, building diverse learning platforms, conducting competency mapping, and developing succession planning to cultivate an organization with resilience and an innovation-driven culture.

Rooted in Society, Expanding Shared Impact

As a state-owned enterprise, CPC is committed to responding to social concerns and public welfare expectations. In 2024, CPC allocated NT$436 million to local community donations and public welfare programs, organizing charity concerts, love stations, scholarship programs, Indigenous collaboration, and community integration activities. The Company also focused on supporting disadvantaged groups, Indigenous peoples, remote education, and elderly care. CPC continues to promote sustainable campus programs, energy-saving education, volunteer services, blood donation drives, and refurbished computer donation projects, fostering both environmental sustainability and equitable educational opportunities. Through corporate influence and cross-sector collaboration, CPC is amplifying positive societal impact and fulfilling its commitment to shared prosperity.

Steady Transformation, Deepening Sustainability

CPC' s persistent efforts have been recognized and praised externally. Looking ahead, we will remain steadfast in advancing ESG, aligning with sustainable development, and following our three-pronged net-zero transition strategy of "High-value Petrochemical," "Low-Carbon Emission," and "Lean-Renewable Energy." Upholding the management philosophy of "Quality First, Service Foremost, and Maximum Contribution," CPC is actively transforming into a net-zero clean energy provider. We are dedicated to realizing our new vision of becoming a "diverse, innovative, and sustainable international energy company," while balancing the interests of all stakeholders to ensure fairness and justice across all fronts, and continuing to fuel Taiwan' s economic growth, environmental preservation, and social well-being.

Chairman

President

Sustainability Outcome and Recognition – 2024

Organizer	Award/certification	Description
Asia Responsible Enterprise Awards (AREA)	Silver Emblem of Sustainability	The highest distinction specially awarded by the organizer for receiving ten major awards for five consecutive years
	Circular economy leadership	
	Green leadership	
	Corporate Sustainability Report Awards	
Asia Pacific Enterprise Awards (APEA)	Inspirational Brand Award	
	Entrepreneur of The Year Award	
Asia Corporate Excellence & Sustainability Awards (ACES)	Top Green Companies in Asia	
Taiwan Corporate Sustainability Awards (TCSA)	Comprehensive Performance Award	Taiwan Corporate Sustainability Excellence Award
	Sustainability Report Award	Energy Industry – Category 1 Gold Level
	Sustainability Individual Performance Awards	Human Rights Practice and Development Leadership Award, Gender Equality Leadership Award, Creative Communication Leadership Award, Innovative Growth Leadership Award
Asia-Pacific Sustainability Action Awards (APSAA)	Gold Award	"Returning to Algal Roots, Gathering Reefs for the Future"
	Silver Award	• "Safeguarding the Ecology：Conservation Efforts for Rare Birds and Algal Reefs" • "Circular Economic: The LNG Cool Energy Utilizations" • "Marine Gem: Algae Essence"
	Bronze Medal	"Turning Oil Pollution into Green Soil Protection"
Reader's Digest	Trusted Brand Platinum Award	• CPC Gas Stations - 24 consecutive years winner of the "Trusted Brand Platinum Award" • CPC Lubricants - 3 consecutive years winner of the "Trusted Brand Platinum Award"
21st The National Brand Yushan Award	Outstanding Enterprise Category	CPC Corporation
	Best Product Category – National First Prize	Power supply life prognostics and health management (PHM) technology
	Most Popular Brand Category – National First Prize	CPC scooter battery charging and swapping 1,000 station nationwide service
	Best Product Category	Smart disaster prevention system for aviation fuel centers, eco-friendly thermal insulation coating, No.1 water-resistant extreme pressure grease, filter-free magnetic filtration device, advanced oxidation system for high-difficulty wastewater/liquid treatment, regenerated spent deNOx catalysts, 5G high-frequency substrate resin, lithium titanate-lithium battery anode material, low-VOC high-corrosion resistant coating, mobile CCUS interactive multimedia display platform, oil pollution detection mobile lab, sea mushroom essence
	Most Popular Brand	CPC Diesel Exhaust Fluid

Organizer	Award/certification	Description
Invention challenge of 2024 Taiwan Innotech Expo	Gold Medal	Electrolyte for lithium-ion batteries and lithium-ion batteries, natural N-Acetylglucosamine production method
	Silver Medal	Defect image recognition system for solar panels, manufacturing method of lithium-ion capacitors, rapid screening vehicle for oil-contaminated soil
	Bronze Medal	Preparation method for soft carbon and lithium-ion secondary battery, isolates of streptomyces and their compositionsand uses, lithium nickel manganese oxide core-shell material and preparation method
Intellectual Property Office, Ministry of Economic Affairs	National Invention and Creation Award – Invention Award	Silver Medal – preparation method of artificial graphite
Chinese Petroleum InstituteOutstanding Thesis Awards	Chinese Petroleum Institute Outstanding Thesis Awards	• Gold Award – application of temperature-programmed thermal desorption/pyrolysis techniques to the study of oil shale characteristics; circular economy: extracting high-purity vanadium pentoxide from petrochemical spent catalysts; novel high-efficiency ambient temperature deodorizing and cleaning technology applied to high-sulfur process maintenance and open inspection in refineries; development of API SP-grade energy-saving motor oil for vehicles • Silver Award – evaluation of miscible gas drive mechanisms in near-critical fluid reservoirs; surface modification research on high-voltage lithium nickel manganese oxide cathode materials; impact of commercial catalyst cracking unit regeneration mode on catalyst iron poisoning • Honorable Mention – analysis of seismic facies to explore sedimentary environment and exploration potential in the deepwater area offshore southwestern Taiwan; assessment and stress monitoring case sharing of quenching hydrogen pipeline in heavy oil desulfurization unit reactors; establishment and application of DeNOx catalyst regeneration technology; development of plant-based cutting oil
Public Construction Commission, Executive Yuan	The 24th Public Construction Golden Quality Awards	Public Facilities Maintenance and Management Award - Taichung LNG Refinery, Natural Gas Business Division
Ministry of Environment	6th National Enterprise Environmental Protection Award	Finalist
	2024 Outstanding Public Toilet Evaluation	Enterprise Category Excellence – Dazhi station, Anshun station
Ministry of Economic Affairs	2024 Ministry of Economic Affairs Occupational Safety Model Enterprises	Taichung Operations Office, Petroleum Marketing Division; Taichung Taichung LNG Plant, Natural Gas Business Division; Solvents and Chemicals Division; Exploration and Production Research Institute
Ministry of Labor	22nd Golden Award for Talent Development – Government Model Category	
Workforce Development Agency, Ministry of Labor	Talent Quality Management System (TTQS)	Silver Level
Sports Administration, Ministry of Education	2024 Sports Activist Awards	Sponsorship Category Gold Medal
Taiwan Accreditation Foundation	Recognized as an organization-level greenhouse gas verification and validation body	Green Technology Research Institute
Architecture and Building Research Institute, Ministry of the Interior	2024 Net Zero Architecture Design Award	Industry Category Net Zero Building Excellence Award – CPC Green Energy R&D Building
2024 Taipei Golden Eagle Micro-movie Festival	Sustainability Micro-movie Silver Award	"Slowly Flying," micro-movie about children with developmental delays
Taipei Computer Association	2024 Smart City Innovation Application Award – Central and Related Agencies Category Smart Energy Award	AI-based diagnostic feature mapping for machinery faults

CPC's sustainability roadmap

Vision
Dedication to becoming a diverse, innovative, and sustainable international energy company

Mission
- Consistent energy supply
- Diverse service
- Sustainable development

Operational philosophy
- No. 1 in Quality
- No. 1 in Service
- No. 1 in Contribution

Sustainability Strategies and Goals

CPC was founded in 1946, and for more than 70 years, it has shouldered the responsibility of a state-owned enterprise and stabilized oil and gas prices while ensuring adequate supply of oil and gas to domestic users, thereby helping mid-stream and downstream participants of the petrochemical industry grow. CPC is also dedicated to improving the quality of the environment, and fulfills its corporate social responsibilities to cater for the interests of all members of the society. CPC first established its sustainability management policy back in 2003; the policy has since been reviewed and adjusted time and time again to conform with environmental protection trends around the world, and below is the 2022 amendment last amended and approved by the board of directors.

Sustainability Management Policy and SDGs	Strategic goals and value creation	CPC's sustainability role
E Environmental **Make efficient use of resources and reduce water and energy on an ongoing basis** **Adopt total clean production and protect the ecosystem**	• Commit to climate actions and support greenhouse gas reduction • Supply low carbon, green energy and enforce preservation of the ecosystem	· Climate Protection Company · Clean Power Company
S Social **CSR Emphasis and Service Expansion**	• Create a happy, friendly workplace and train a group of professional employees • Give back to the community; implement environmental/energy education • Embrace energy transformation challenges; create a net zero and sustainable future	· Caring Personal Career · Cultivating Prosperity for Community · Committing a Premium Century
G Governance **Environmental Indicators and Information Transparency** **Proactive R&D and Domain Cultivation** **Legal Compliance and Abidance with International Conventions**	• Contribute to treasury income; stabilize energy and consumer prices • Strive to deliver top-notch quality and the best service	· Creating Profit to Country · Customer's Perfect Choice · Coexistence Partnership & Co-glory

Facilitating net zero transformation and sustainable management

Being a state-owned enterprise and a leader of the petrochemical/energy industry, CPC has adopted three transformation strategies with different emphases on "Fuel Upgrade, Carbon Reduction, and Clean Energy." Meanwhile, CPC actively directs attention to the latest low carbon trends, and takes pragmatic actions to reduce emission, improve fuel quality, develop renewable energy sources and carbon negative technologies, and work with all stakeholders toward exploring new business opportunities for a sustainable, net zero future.

Fuel Upgrade

Short-term	Medium-term	Long term
Convert oil to petrochemical products	Convert petrochemical products to high value materials	New materials industry

Growth of electric vehicles will eventually lessen demand for oil products, and CPC will aim to adapt to the change from both the production and sale perspectives. Research and development will be the key to driving corporate transformation, as it allows timely adjustments to the refining/production structure and facilitates transition into "crude oil to chemicals" (COTC). Through adoption of COTC, CPC hopes to reduce production of fuel in favor of petrochemical products, and take this opportunity to develop advanced new materials needed for the domestic semiconductors, aerospace, or biomedicine industries.

Performance highlight

- Application of amorphous carbon anode materials, lithium-titanium oxide materials, and battery system technologies
- Developed CO_2 hydrogenation for the production of methanol catalyst
- Built 4 smart green energy stations

Carbon Reduction

Short-term	Medium-term	Long term
Improve energy efficiency Carbon neutral oil/gas	Carbon capture Carbon storage	Carbon utilization

CPC have the ability to reduce carbon emissions at the source by improving the energy efficiency of its production process. Through the adoption of carbon-neutral oil and gas products and the development of carbon capture, utilization, and storage (CCUS) technologies, CPC hopes to create new opportunities from carbon cycling.

Performance highlight

- The first in the nation to introduce trading of carbon neutral oil/gas products (natural gas, ethylene, and crude oil)
- Pioneer of carbon neutral fuel station in Taiwan
- Implemented internal carbon pricing and set carbon price at NT$1,500 per MT
- As of 2024, a total of 554 major products have undergone carbon footprint inventory.
- Development of small test equipment for CO_2 capture and utilization

Clean Energy

Short-term	Medium-term	Long term
Increased use of low carbon natural gas	Development of renewable energy infrastructure Photovoltaic/geothermal / cold energy	Hydrogen power

Ongoing investments are being made to the development of photovoltaic systems, geothermal power, and natural gas and cold energy supply. CPC has also ventured into hydrogen power, and will explore viable business models given the domestic demand, regulations, and supply chain availability to transform into a supplier of clean energy. Success of the clean energy transformation will make each CPC fuel station a supply center for diverse energy sources.

Performance highlight

- Development of photovoltaic maintenance system
- Establishment and evaluation of 5.4MW geothermal power plant
- Hydrogen refueling station construction and assessment
- Cold drainage algae and aquaculture
- Outcomes of low carbon natural gas

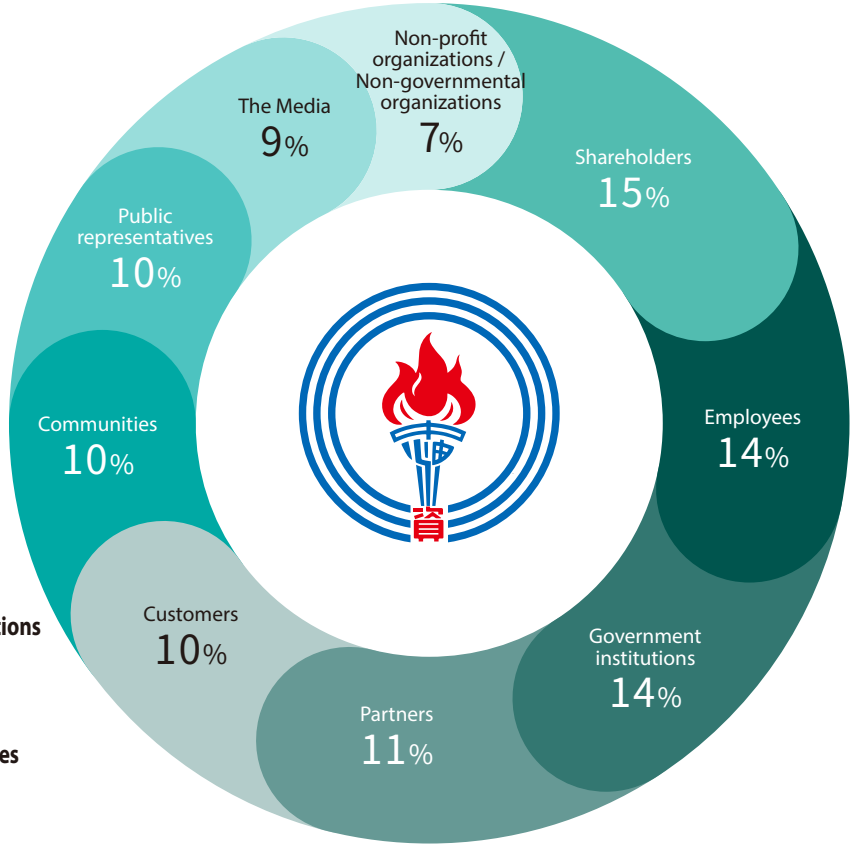
Material topics of sustainability for the year

As a state-owned enterprise, CPC exercises significant influence as an industry leader. Its products, services and operations are constantly under public scrutiny; therefore, it is of utmost priority to meet expectations and address the interests of all its stakeholders. CPC values and keeps track of stakeholders' suggestions regarding sustainability management. Through a well-established and systematic process for material topic identification, we identify topics that either concern stakeholders or have a greater impact on sustainable management, which become the subject matter of the Sustainability Report. Identification procedures for stakeholders and material topics and the outcome:

step 1	step 2	step 3	step 4	step 5
Impact identification and assessment			Material topics determined for reporting	
Understand the organization	Identify actual and potential impacts	Evaluate the significance of impact	Rank reporting priority by significance of impact	Ranking of material topics
Learn industry characteristics using industry standards	9 main stakeholders	28 sustainability issues	660 questionnaires	10 critical topics

❶ Identification of stakeholders

Through reference to the stakeholder groups identified by the energy industry at home and abroad, and referring to the attributes of stakeholders as specified in AA1000SES:2015 (Stakeholder Engagement Standards): dependency, responsibility, tension, influence, and diverse perspectives, we identified nine stakeholder groups: shareholder (MOEA), government agencies, public representatives, employees, customers, partners, communities, non-profit organizations (NPOs) and non-governmental organizations (NGOs), and the media. Stakeholders that CPC had identified through an internal questionnaire in 2024 were assigned the following weights:



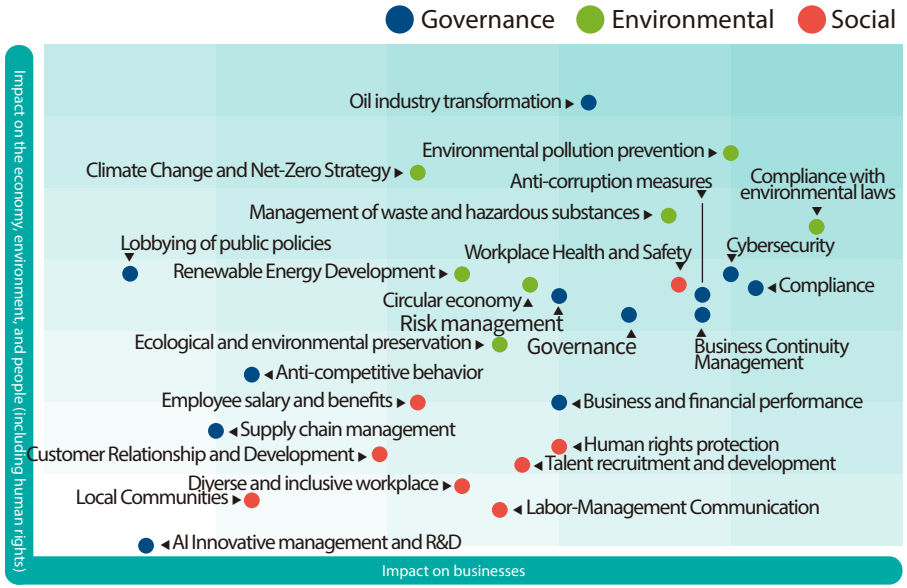
Remark: A higher weight means that CPC considers the stakeholder to be more influential over various aspects of company operations.

❷ Gathering material topics of sustainability

CPC utilizes a multitude of internal and external channels to gather issues of concern, and observes applicable global guidelines and standards (e.g. Global Risks Report, United Nations SDGs, TCFD, TNFD, CDP, and SASB), industry guidelines, peer and non-peer benchmarks, annual organizational targets, etc., to identify issues that are important to sustainability. This year, CPC compiled 28 sustainability issues covering multiple aspects from environmental, social, economic to governance, and designed and distributed "Stakeholder Concern Questionnaire" and "Material Topic Impact Questionnaire" to gather responses.

❸ Analysis and discussion for materiality ranking of sustainability issues

After taking governance, environmental, and social impacts into consideration, CPC used questionnaires to survey issues that were of concern to the 9 main stakeholders, and managed to recover a total of 660 responses. In the internal survey, in addition to assessing both positive and negative impacts, the likelihood of each sustainability issue occurring was also evaluated. Through rigorous analysis and prioritization, the results of the 2024 sustainability issue analysis are shown in the matrix below. The closer a topic is to the upper-right corner of the matrix, the greater its impact on CPC's sustainable operations and the higher the level of stakeholder concern.



Out of a total of 28 sustainability issues, CPC has identified 10 material topics for communication with stakeholders in this report. For each of the topics identified, CPC has disclosed its performance highlights, management approach, and actions for the year to address stakeholders' concerns. Based on the answers provided in the questionnaires, the level of positive impact and negative impact is rated on a scale of 1 to 5 for each material topic, as shown in the following chart.

Overall ranking	Material topic	Internal stakeholders		External stakeholders	
		Positive impact	Negative impact	Positive impact	Negative impact
1	Environmental pollution prevention	4.1	4.0	3.6	3.8
2	Compliance with environmental laws	3.8	3.6	4.0	3.6
3	Oil industry transformation	3.5	3.7	3.2	2.9
4	Management of waste and hazardous substances	2.9	3.3	3.2	3.2
5	Compliance	3.1	2.8	3.3	3.0
6	Cybersecurity	2.8	2.9	3.1	2.8
7	Anti-corruption measures	2.8	3.0	2.8	2.9
8	Workplace Health and Safety	2.9	3.3	2.6	2.7
9	Business continuity management	2.7	2.9	2.5	2.7
10	Corporate governance	2.5	2.6	2.9	2.6

Governance Environmental Social

Note: ☆Indicates that the material topic poses substantive risk.

Although some of the sustainability topics were not considered material, CPC still applied GRI 11: Oil and Gas Sector Disclosures and disclosed information accordingly. These topics include: management of waste and hazardous substances, energy and resources management, ecological and environmental preservation, employee compensation and protection, employee human rights protection, diverse and inclusive workplace, supply chain management, anti-competitive behaviors, management of payments to the government, and local community.

Analysis of changes in material topics

By analyzing and understanding the material topics, CPC is able to enforce integrity and eliminate corruption to a greater extent and thereby secure the foundation for future business success. While facilitating business growth, CPC invests in the development of advanced technologies so that it can better accommodate global trends of the industry, such as carbon reduction, protection of the ecosystem, and lowering of air pollution. Internally, CPC creates a working environment that is friendly to employees; externally, CPC places significant emphasis on protecting customers' interests and maintaining product quality. CPC looks forward to hearing opinions from more diverse sources in the future, and envisions itself becoming the role model business in the energy and petrochemical industries.

Ranking	Material topics – 2024	Change
1	Environmental pollution prevention	▲6
2	Compliance with environmental laws	▲3
3	Oil industry transformation	New
4	Management of waste and hazardous substances	▲9
5	Compliance	▼3
6	Cybersecurity	—
7	Anti-corruption measures	▼3
8	Workplace Health and Safety	▲7
9	Business continuity management	—
10	Corporate governance	▼2

Note 1: New – denotes material topic of sustainability newly identified for 2024.
Note 2: ▼1 – Means that the issue is one place down from 2023.
Note 3: ▲1 – Means that the issue is one place up from 2023.
Note 4: – Means that ranking was unchanged from 2023.

Confirming material topics of sustainability

Based on the outcomes of the analysis and after taking into consideration the emphasis of previous efforts, CPC has identified 10 material topics that are critical to the organization. This year's material topics and impact boundaries are shown in the following chart; refer to corresponding chapters for more information.

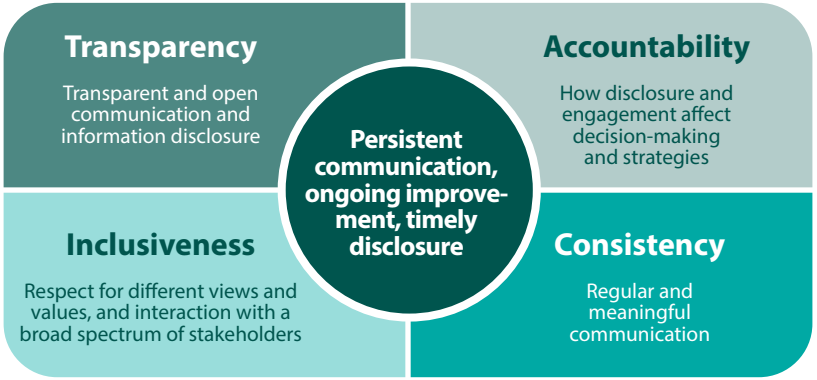
Aspect	Prioritization of	Material topic	Corresponding GRI disclosure	Impact	Value chain impact boundary: Own operations	Supply chain	Products/ services	Society and community	Assessment system	Corresponding chapter
Environmental	1	**Environmental pollution prevention**	GRI 305	Continue to strengthen improvements in equipment component leakage. By setting management targets and regularly holding meetings to track implementation results, various pollutant emissions are reduced year by year to mitigate negative environmental impacts.	●	●		○	• Air pollution prevention action plan • Management objectives for equipment components	**2.3.5** Air Pollution Management and Environmental Regulatory Compliance
Environmental	2	**Compliance with environmental laws**	–	Compliance, robust corporate governance, and the establishment, enforcement, and adherence of related guidelines not only reduce business risk and penalty risk, but also contribute favorably to the improvement of business performance.	●	●		○	• Establish departmental penalty management KPIs • Environmental awards, and performance • Number of training sessions, environmental protection meetings, and plant inspections	**2.3.5** Air Pollution Management and Environmental Regulatory Compliance
Governance	3	**Oil industry transformation**	–	Continuously pursue industrial innovation by actively introducing smart technologies, integrating digital technology with existing R&D capabilities, and accelerating petrochemical industry transformation. Committed to expanding positive impacts and reducing negative ones.	●	●	○	○	• Revenue performance of diversified business segments • AI training courses • AI technology application projects	**1.5.3** No. 1 in contribution

Aspect	Prioritization of	Material topic	Corresponding GRI disclosure	Impact	Value chain impact boundary: Own operations	Supply chain	Products/ services	Society and community	Assessment system	Corresponding chapter
Environmental	4	**Management of waste and hazardous substances**	GRI 306	Enhance the tracking and management of waste disposal. In accordance with regulations and current implementation status, regularly hold meetings for rolling reviews and revisions to ensure effective waste management and reduce environmental negative impacts.	●	●	●	●	• Waste treatment and reuse rate • Number and amount of environmental regulation violations and penalties	**2.3.3** Discharge and management of effluents and waste
Governance	5	**Compliance**	–	Compliance, robust corporate governance, and the establishment, enforcement, and adherence of related guidelines not only reduce business risk and penalty risk, but also contribute favorably to the improvement of business performance.	●	●		●	• Operational overview and performance review report	**1.4.1** Compliance
Governance	6	**Cybersecurity**	–	Enhancing cybersecurity awareness among employees is vital for maintaining customer data and establishing a cybersecurity framework that meet regulatory and customers' requirements.	●	●	●		• Cybersecurity maintenance plan • ISO 27001 – Information Security Management System • Cybersecurity and personal data management procedures for customer service centers	**1.5.2** No. 1 in service
Governance	7	**Anti-corruption measures☆**	GRI 205	Taking the initiative to identify corruption risks at various locations helps promote anti-corruption awareness and brings positive effects to corporate governance over the long term.	●	●			• Corruption risk assessment at business locations • Anti-corruption training	**1.4.2** Anti-corruption
Social	8	**Workplace Health and Safety**	GRI 403	• Workplace hazards reduce employees' and stakeholders' trust for CPC and negatively impact CPC's reputation as an employer. • njury and illness affect employees' attendance and increase personnel cost.	●	●	●		• Outcome of optimizations to the production procedure safety management system • Number of safety and health training sessions • Number of disaster prevention and rescue drills	**3.3.1** Workplace safety management **3.3.2** Employee safety protection **3.3.3** Workplace health protection
Governance	9	**Business continuity management**	GRI 402 GRI 404 GRI 306	Being able to equip employees with risk awareness and risk management ability and improve supply chain crisis handling capacity helps accomplish CPC's medium- and long-term plans and sustainable management goals for the protection of stakeholders' interests.	●	●	●	●	• Risk management and crisis handling principles • Overall risk measurement principles • Supply chain self-assessment questionnaire	**1.3.4** Risk control **3.2.3** Talent development **2.3.3** Discharge and management of effluents and waste
Governance	10	**Governance**	–	Empowerment of the board of directors, improvement to the leadership of the management team, protection of shareholders' interest, and accurate and transparent disclosure of information help improve corporate reputation and facilitate review of internal processes; all of which are favorable to commercial activities.	●	●	●	●	• Outcome of corporate governance evaluation • Corporate governance refinement program	**1.1.3** Corporate governance

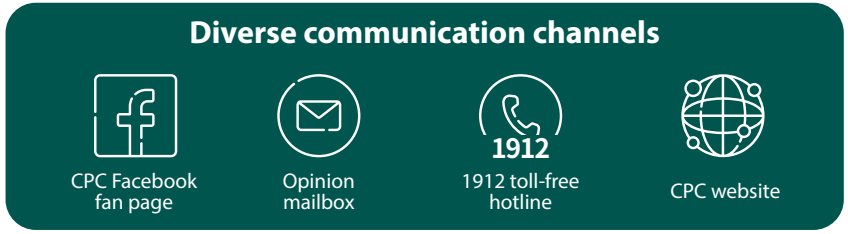
Stakeholder Communication

Communication strategies and goals

CPC persistently improves the ways it interacts with stakeholders, and takes responsive actions, exerts influence, and adopts responsible business management. With "continuous communication, ongoing improvement, and timely disclosure" as the core objectives, while also ensuring transparency, accountability, inclusiveness, and consistency in the communication process with all stakeholders.



CPC's stakeholders include: shareholders (MOEA), business partners, public representatives, communities, non-profit/non-governmental organizations, customers, government agencies, employees, and the media. CPC holds itself responsible to stakeholders, and communicates with them using a variety of methods and channels to learn their needs and expectations. This knowledge also provides useful reference to the Company when devising sustainability-related policies in the future.



Creative communication through online video

The CPC Media webpage houses an extensive collection of online videos on brand promotion, business introduction, CSR activities etc.

Communication with internal stakeholders

CPC upholds principles of integrity, transparency, timeliness, and positive response to protect employees' legal rights. The Company has established grievance procedures for staff. Employees who disagree with disciplinary decisions, or whose rights have been infringed due to inappropriate company regulations, administrative measures, illegal acts, abuse of power, or misconduct, may seek relief in accordance with these procedures.

Grievance Handling Committee

CPC has established the Employee Grievance Handling Committee with nine seats held by the spokesperson, heads of related departments and offices, and the Chairperson and representatives of the labor union.

Labor–management Meeting

CPC convenes labor–management meetings at least once a month. The minutes of previous labor–management meetings are disclosed on the Intranet. Communication between labor and management has been transparent and open; no losses have arisen from employment dispute as due to the harmonious labor–management relationship.

Collective bargaining agreements

CPC has been engaging Taiwan Petroleum Workers' Union for the establishment of a collective bargaining agreement since 2019, and after 12 negotiations, a collective bargaining agreement was signed with Taiwan Petroleum Workers' Union in December 2021. The agreement comprises 55 articles across 9 chapters in total; it outlines the rights and obligations between labor and the management, and provides foundation for the optimal labor–management relationship and employment terms for business growth, employee welfare, corporate profits, and continuity.

Communication with External Stakeholders

CPC maintains communication with the outside world, and actively gathers and responds to queries or suggestions through the corporate website, department websites, opinion mailbox, official Facebook page, CPC PAY APP, meetings, campaigns, and the media. CPC also has a 24-hour customer hotline ("1912") available to gather voices from the outside and respond to queries or suggestions. CPC also takes the initiative to communicate with the public, and has Neighborhood Engagement Guidelines and Neighborhood Engagement Review Committee in place to serve as guidance. Through active communication and visits and by holding monthly or ad-hoc meetings to discuss the needs of local communities, CPC looks forward to building a culture of sustainability with local organizations, individuals, and the community.

Stakeholders	Significance to Us	Key Focus Topics	Communication Channels and Frequency	Engagement Performance	2024 Highlight Achievements
Shareholders (MOEA)	We are a state-owned enterprises (SOE) wholly owned by the Ministry of Economic Affairs (MOEA). Our integrity and sustainable management represent our commitment and mission for Taiwan.	• Governance • Environmental pollution prevention • Compliance with environmental laws • Anti-corruption measures • Business continuity management • Oil industry transformation	• ESG questionnaire (once a year) • Shareholder meetings and extraordinary shareholder meetings (currently convened on behalf of the board of directors) (at least once a year) • Public policy meetings (at least 24 sessions a year) • Official correspondence (at least 3,000 a year) • Shareholders' meeting annual report (once a year) • Market Observation Post System (at least once a month)	• Questionnaire: 1 • Board of Directors: 15 meetings (including extraordinary board meetings) • Investment Review Team: 11 meetings • Shareholders' meeting annual report: 1 • MOPS information is updated on a monthly basis	• The Board of Directors visited the newly completed pilot production plant for lithium titanate materials to gain a better understanding of the production processes and applications of lithium titanate. • The Board attended the groundbreaking ceremony for the geothermal well drilling project in Yuanshan, Yilan, where they conducted an on-site visit to learn about the company's progress in geothermal energy development in alignment with the government's net-zero policy. • The Board visited the Miaoli Tiezhanshan injection and production area to review the implementation and progress of CPC's "Tiezhanshan Inter-Ministerial Carbon Capture and Storage Pilot Project." • Directors attended "R&D Progress Report of the Three Research Institutions – 2024"
Partners	CPC and partners (including contractors, suppliers, and distributors) create value and stabilize the energy supply in Taiwan to build a sustainable value chain.	• Compliance • Workplace Health and Safety • Environmental pollution prevention • Compliance with environmental laws • Anti-corruption measures • Cybersecurity	• ESG questionnaire (once a year) • Contractor meetings (at least 10,000 sessions a year) • Training/drill (at least 400 sessions a year) • Distributor evaluation/meetings (unscheduled/at least once a year) • Counseling/service/inspection and oil quality management for franchise stations (generally once a month) • Supplier evaluation/meetings (unscheduled/at least once a year) • Awareness promotion activities (at least 210,000 attempts a year, carried out by various units) • Performance evaluation/e-mail/telephone (unscheduled)	• Questionnaire: 56 • A total of 345 disaster prevention and emergency drills conducted, including 4 large-scale emergency response drills and 5 unannounced emergency response drills. • One large-scale corporate integrity promotion campaigns was held	• Organized one large-scale campaigns to promote business integrity, during which CPC invited suppliers to attend and engage in cross-field exchange of opinions for consensus toward integrity and ethics. • Continuing to collaborate with domestic and international industry, government, academia, and research sectors, in 2024, the Company signed a memorandum of understanding with National Central University and Academia Sinica on geothermal research, exploration, and development technologies to further promote geothermal R&D and exploration.
Public representatives	CPC engages public representatives in active communication in order to learn the opinions of local residents, so that projects and works can be carried out in conformity with the public's needs and expectations.	• Anti-corruption measures • Compliance • Governance • Management of waste and hazardous substances • Environmental pollution prevention • Compliance with environmental laws	• ESG questionnaire (once a year) • Special reports (92 total) • On-site inspections (12 total) • Coordination meetings (173 total) • Personal visits (at least 150 visits a year) • Official correspondence (at least 200 a year) • Communication meetings of various form (at least 500 sessions a year)	• Questionnaire: 13 • A total of 15 official replies were made to written inquisitions, verbal inquisitions, and correspondences of the Legislative Yuan • 602 responses were made on matters that were of concern to legislators, including inquisition, coordination, grievance, and personnel arrangement	• CPC communicates with public representatives through various meetings, and invites them to project meetings to update them on the progress of various projects. • Information relating to issues that were of concern to public representatives was consolidated and provided in a timely manner; this solid communication ensured satisfactory completion of CPC's 2024 budget review.

Stakeholders	Significance to Us	Key Focus Topics	Communication Channels and Frequency	Engagement Performance	2024 Highlight Achievements
Communities	In addition to having petrol stations that provide service at the frontline, CPC also operates refineries and petrochemical plants, and maintains good relations with local communities while making the commitment to uphold their quality of life.	• Compliance with environmental laws • Environmental pollution prevention • Compliance with environmental laws • Management of waste and hazardous substances • Compliance	• ESG questionnaire (once a year) • Neighborhood engagement (unscheduled) • Community or tribal communication meetings (unscheduled) • Charity activities (more than 200 a year)	• Questionnaire: 57 • 12 Neighborhood Engagement Review Committee meetings • 6 on-site visits were arranged to assist local units with their neighborhood engagement efforts • CPC subsidized neighborhood charity events, scholarships, emergency aid, and welfare for elders and persons with disabilities for a total of 6,831 cases and NT$436 million	• CPC maintains good communication with its neighbors, and takes part in charity activities, public constructions, and various programs aimed at promoting culture, education, health awareness, care for elders, energy conservation, and carbon reduction. • CPC listens to the opinions of local residents when developing geothermal power in Yilan; six residents from nearby locations were recruited to work on the geothermal well. • Held seminars to communicate with local residents on carbon storage at Tiezhenshan in Miaoli. • As of 2024, the CCUS interactive model has participated in a total of 11 exhibitions, using interaction and explanation to deepen public understanding of and support for the technology.
NPOs/ NGOs	CPC engages non-profit/non-governmental organizations (including the Fossil Fuel Industry Association) in ongoing communication to learn the opinions and needs of outside parties.	• Compliance with environmental laws • Environmental pollution prevention • Management of waste and hazardous substances • Oil industry transformation • Compliance	• ESG questionnaire (once a year) • CPC website and CPC Facebook page (timely communication) • Outsourced ecological survey of little terns involving the Taoyuan City Wild Bird Association (task meetings are convened on an unscheduled basis) • Outsourced ecological survey of algal reef involving National Taiwan Ocean University (at least 9 attempts)	• Questionnaire: 21 • CPC provides the latest updates on its official website and Facebook page • Joined academic, charity, and other organizations of non-profit nature	• After the first discovery of little tern nests in the Datan G3 area in 2023, a total of 178 nests were monitored in the same area in 2024, with an overall breeding success rate of 60%, and the 2024 little tern census recorded as many as 194 adult birds.
Customers	Based on the management philosophy "Quality, Service, and Contribution to Society," we engage with customers and pave way for sustainable management with an appropriate amount of profit.	• Compliance with environmental laws • Cybersecurity • Oil industry transformation • Workplace health and safety • Business continuity management	• ESG questionnaire (once a year) • Customer satisfaction survey (once a year per business division) • Grievance/opinion mailbox (unscheduled) • Education and training (unscheduled) • Customer complaint service hotline (unscheduled) • Visits/interactions (unscheduled) • Website information (unscheduled)	• Questionnaire: 104 • Continued promotion of product and service satisfaction surveys	• CPC achieved a customer experience management (CEM) score of 95.8 in 2024 • A total of 161,676 customer service requests were received iin 2024; 94% of which were resolved in a timely manner, and all customer service requests were resolved in an appropriate manner. • Won "Trusted Brand Platinum Award - Petrol Station Category" for 24 consecutive years.

Stakeholders	Significance to Us	Key Focus Topics	Communication Channels and Frequency	Engagement Performance	2024 Highlight Achievements
Government institutions	As a state-owned enterprise, CPC continues to support government policies and contribute to sustainability development in Taiwan.	• Compliance • Compliance with environmental laws • Governance • Anti-corruption measures • Oil industry transformation	• ESG questionnaire (once a year) • Training courses organized by the authority (at least 12 sessions a year) • Charity campaigns (unscheduled) • Labor inspections/audits (at least 100 a year) • E-mail/telephone (unscheduled) • Official correspondence (at least 3,000 a year)	• Questionnaire: 31 • A total of 212 internal audits have been conducted in relation to the labor inspection; CPC will continue tracking progress until all required improvements have been made	• CPC responds pro-actively to national policies on energy transformation and stable energy supply. • At the Industrial Development Administration's request and with the assistance of Institution for Information Industry, CPC optimized and established an intellectual property management system that is linked to its operating strategies, and passed certification for Taiwan Intellectual Property Management System (TIPS) – Grade A.
Employees	CPC persistently explores ways to create a friendly workplace and introduces competitive human resource policies; a comprehensive talent training program has been implemented to ensure the quality of employees' work performance and lifestyles.	• Workplace Health and Safety • Business continuity management • Governance • Compliance • Cybersecurity	• ESG questionnaire (once a year) • Grievance (employees may raise grievances as needed) • Internal meeting: worker director meetings (once a month) • Internal meeting: labor–management meetings (generally once a month) • External meeting: collective bargaining meetings (convened as needed) • CPC Monthly (published monthly) • Worker education seminars (generally once a month) • Training/drill (unscheduled)	• Questionnaire: 340; manager questionnaire: 25 • Number of employee grievances resolved: 2 • 24 labor–management meetings were convened • 12 issues of CPC Monthly were published • 9 sessions of worker education seminar and 3 sessions of educational tour were organized • Approximately NT$146 million of budget was allocated to training; employees averaged about 48.74 hours of training	• 3,552 training sessions were organized in 2024, which received approximately 125,000 enrollments. • In 2024, a variety of training programs were offered, including certification classes for future senior executives, professional managers, reserve management staff, assistant-level professional training, and junior management trainees. The educational training adopted a hybrid E+C (e-learning + classroom) model that integrates digital and in-person learning, with a total of 1,015 participants. • In 2024, two sessions of orientation training programs for newly assigned personnel were conducted. The training adopted a hybrid E+C (e-learning + classroom) model, incorporating interactive group activities to enhance training effectiveness and foster interaction among new employees. This approach aimed to help new staff members better understand business operations and support them in becoming competent in their roles. A total of 163 participants attended the training.
The Media	CPC sees media as an important partner for external communication, and strives to maintain a relationship through information sharing, seminars, etc., so that CPC's mission, philosophy, and performance can be properly conveyed to the public.	• Anti-corruption measures • Compliance • Compliance with environmental laws • Environmental pollution prevention • Management of waste and hazardous substances	• ESG questionnaire (once a year) • News release (response in a timely manner) • Press conference (unscheduled) • Company visit (unscheduled) • News coverage (at least 500 a year)	• Questionnaire: 11 • Press conference: 12 sessions; press release: 117 issues • CPC organized 4 on-site visit and 19 media interviews and forums to promote the media's knowledge toward CPC	• The media were invited to visit the Chuhuangkeng Oil Mine Exhibition Hall in Miaoli to enhance their understanding of oil mining history. • The media were invited to attend events such as the CPC Battery Swap Service Launch and the groundbreaking ceremony for the geothermal exploration well in Yuanshan, Yilan, and to participate in related site visits. • CPC received 571 favorable news coverages that reinforced the organization's reputation as a corporate citizen.

Note: Please see 1.1.2 – Directors overview for more details on board of directors' engagement with stakeholders in 2024.

Special Coverage 1:

Blue Guardians: CPC's Coral Conservation Arks from the South through North

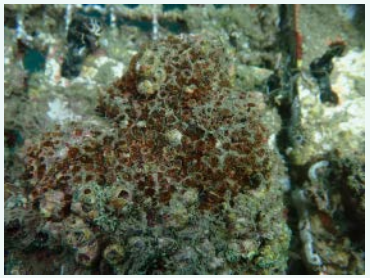
CPC' s plants are distributed throughout Taiwan. In addition to onshore plants and oil depots, marine receiving terminals are also included to meet the need for unloading imported liquefied natural gas (LNG) and liquefied petroleum gas (LPG) from overseas. From land to sea, every site coexists and thrives alongside its surrounding ecosystem. Upholding a deep sense of environmental care and responsibility, CPC has launched meaningful coral conservation efforts at two marine facilities with vastly different environmental conditions: the Yongan LNG Terminal and the Shen'ao Port Supply and Transport Service Center.

Yongan LNG Terminal: A Natural Coral Ark

Located in Yongan District, Kaohsiung City, the Yongan LNG Terminal is Taiwan' s first LNG receiving terminal. More than a decade ago, employees patrolling the port area unexpectedly discovered coral growing on wave-dissipating concrete blocks. A detailed investigation revealed with great surprise that the Yongan LNG Terminal had fostered a sizeable and diverse coral population, marking the beginning of CPC's coral conservation project.

To better understand the unique marine environment of the Yongan LNG Terminal, CPC invited ecological experts to form an investigative team to conduct a comprehensive survey of natural and artificial habitats along Taiwan' s western coast. **Within the waters of the Yongan LNG Terminal, as many as 130 species of corals were identified, including the precious, protected wildlife species Polycyathus chaishanensis—a discovery considered extremely rare along Taiwan's western coastline.**

In 2023, CPC launched the "Yongan Coral Ark Conservation Project." Without affecting LNG unloading operations, **CPC successfully installed two sets of coral cultivation equipment inside the port in 2024, cultivating a total of 220 coral specimens across 74 species.** Additionally, with approval from the Ocean Conservation Administration and Taoyuan City Government, CPC successfully transplanted three specimens of the protected Polycyathus chaishanensis, hoping to leverage the unique environmental conditions of the Yongan LNG Terminal waters to contribute to coral conservation efforts.



Polycyathus chaishanensis transplanted to the Yongan Coral Ark

CPC is not only committed to coral conservation but also conducts research on how environmental factors such as light and water temperature affect coral bleaching. The Company also regularly monitors the survival of 130 coral species in the waters of the receiving terminal to ensure that terminal operations do not impact the coral ecosystem. In the future, plans include moving corals from the wild that are vulnerable to temperature changes or that exist in smaller populations into the coral cultivation equipment to conserve more coral species. Through these efforts, CPC is gradually realizing the vision of transforming the Yongan LNG Terminal port area into an important coral conservation base in Taiwan.

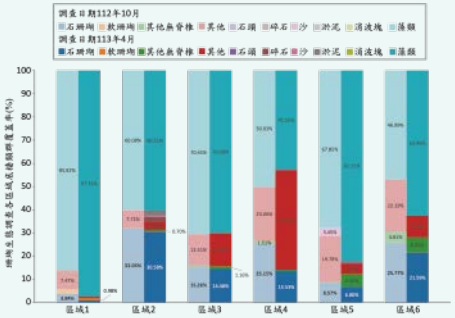

Coral Cultivation Equipment - Underwater Suspension Racks

Shen'ao Port Supply and Transport Service Center: Using Technology to Shape the Future of Coral Restoration

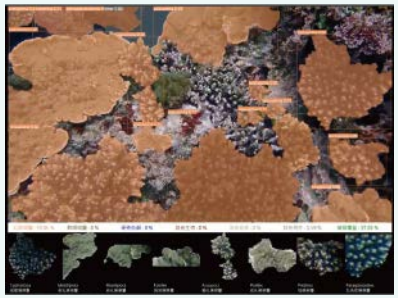
Nestled between mountains and sea in Ruifang District, New Taipei City, Shen' ao Port stands quietly as another important site for ecological conservation. Due to operational safety requirements, human activity in Shen' ao Port has long been restricted, inadvertently creating a sanctuary for corals. However, because it was previously difficult to conduct field investigations, the marine ecology of this area remained largely undocumented. To address this, CPC invited a professional marine research team to launch a systematic coral ecology survey starting in 2023.

CPC used AI-based automated substrate group recognition technology and coral species identification technology to conduct diving photography and image analysis in six key areas inside and outside the port. This successfully documented 132 coral species across 14 families and 37 genera, and even recorded for the first time the reproductive cycle of the critically endangered Acropora japonica. Through six sexual reproduction cycle surveys and ten spawning observations, it was confirmed that 12 tagged coral colonies within the port possess high reproductive potential, with coral diversity and coverage within the port exceeding those outside the port.

The Shen' ao Port Supply and Transport Service Center's coral ecology survey project provides valuable research data and practical applications for coral ecology in northern Taiwan' s waters. By continuously monitoring marine environmental factors to maintain a suitable environment for coral spawning and reproduction, the project promotes coral cultivation and aims to establish a coral conservation base in northern Taiwan.



Coral Ecology Survey — Substrate Group Coverage


Coral Species Identification Technology

Sustaining Life Through Action, Leaving a Blue Legacy for the Future

Yongan and Shen' ao are CPC' s two "North and South Coral Arks," progressing from discovery, research, conservation, and restoration to public education. In the future, we plan to apply for official conservation area designation for the port areas surrounding Yongan LNG Terminal and Shen' ao Supply and Transport Center in accordance with the Ocean Affairs Council' s "Recognition Standards for Other Effective Area-based Conservation Measures (OECMs) outside of Marine Protected Areas" , aiming to become a model of ecological protection.

Short term
Establish baseline coral ecology data for the Shen' ao Port coral survey.
Develop wild coral conservation techniques applicable to the port area under the Yongan Coral Ark Project.

Medium term
Regularly monitor coral ecology within the port areas and transfer wild corals that are vulnerable to temperature changes or that exist in smaller populations into coral cultivation equipment to conserve more coral species.

Long term
Apply for official recognition of marine OECMs in accordance with the "Recognition Standards for Other Effective Area-based Conservation Measures (OECMs) outside of Marine Protected Areas" established by the Ocean Conservation Administration.

Behind all these efforts lies our deep affection for this land of Taiwan, and our commitment to future generations. With each ripple of the sea, we are engaging in dialogue with nature and walking hand in hand with the future.

Special Coverage 2: Sustainable Aviation Fuel

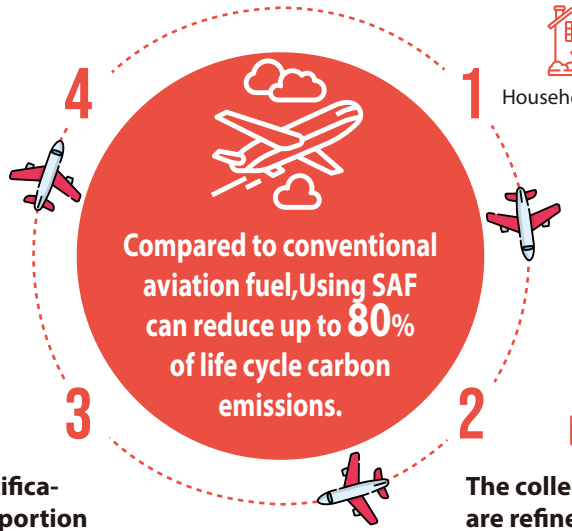
CPC Promotes Sustainable Aviation Fuel to Realize a Net-Zero Flight Future

As the global aviation industry actively moves toward net-zero carbon emissions, Sustainable Aviation Fuel (SAF) has become a key driver of energy transition for many countries. As a key player in the energy sector, CPC has obtained dual international certifications — ISCC CORSIA and ISCC EU — and has become the first supplier in Taiwan qualified to provide SAF with verified carbon reduction benefits in compliance with International Civil Aviation Organization (ICAO) standards. This not only solidifies CPC' s leadership position domestically but also demonstrates CPC' s determination, as a state-owned enterprise, to lead in carbon reduction.

What is SAF

The final blended fuel is transported to the airport and injected into the aircraft's wing fuel tanks for flight use.

To meet aircraft engine specifications, SAF is blended with a portion of conventional aviation fuel.



Collect renewable resources such as household waste, waste oil, etc.

The collected waste resources are refined and converted into aviation-usable fuel.

ISCC EU Certificate　　ISCC CORSIA Certificate

Taking a Key Step Toward Low-Carbon Aviation in Taiwan: First Batch of SAF Arrives

In response to the global net-zero emissions trend and the aviation industry's need for carbon reduction and transformation, CPC has officially completed its first SAF import mission, successfully delivering the first batch to Shen'ao Port this February, marking the official launch of Taiwan's aerospace decarbonization efforts. This batch of SAF, produced at Neste's Singapore plant, was imported from Finland. Not only was the port receiving operation successfully completed, but the SAF also obtained dual international certifications — ISCC CORSIA and ISCC EU — ensuring compliance with international carbon offset standards. This achievement represents a key milestone in implementing Taiwan's sustainable aviation policy.

ISCC CORSIA and ISCC EU Certification Ceremony

During the preparation period prior to certification, CPC identified that the ISCC system differs from the current system in operation. Therefore, internal education and training were launched early, and a new system was built and optimized to enable CPC to obtain certification ahead of schedule and achieve the milestone of "**2025 — the First Year of SAF Supply.**"

10 **months of effort**

14 **units collaborated**

19 **sessions of training and seminars**

Cross-Ministerial Collaboration × International Alignment: Creating a New Paradigm for Zero-Carbon Aviation Fuel

To ensure that SAF import regulations and operational practices align with international standards, CPC collaborated with multiple agencies, including the Customs Administration of the Ministry of Finance, the Energy Administration of the Ministry of Economic Affairs, and the Bureau of Standards, Metrology and Inspection, to complete full-process verification covering import declaration, transportation receipt, storage, and transfer supply. This not only strengthens Taiwan's collaborative position in the global sustainable aviation supply chain but also lays a standardized foundation for future large-scale imports.

Partnering with the Aviation Industry to Reduce Carbon Emissions: Co-Creating a Net-Zero Flight Future

To expand the application scope of SAF, CPC is actively engaging in communications with the Civil Aeronautics Administration of the Ministry of Transportation and Communications, domestic airlines, and airport units, working together to comprehensively plan future flight route supply, safety standards, and storage and transport systems. In the future, CPC will continue to adopt a "parallel import and domestic production" strategy to meet the aviation industry's stable supply needs, ensuring reliable SAF supply and establishing a lasting green aviation foundation.

Planning for Domestic SAF Production: Advancing Toward the Global Carbon Neutrality Vision

CPC's Refining Business Division at the Taoyuan Refinery is currently preparing for SAF co-processing production. Once the catalysts are imported, domestic SAF production is expected to begin in the third quarter of next year. CPC will continue to monitor the progress of the International Civil Aviation Organization's "Carbon Offsetting and Reduction Scheme for International Aviation" (CORSIA) and contribute to carbon reduction in the aviation industry, helping Taiwan build sustainable resilience in aviation fuel to support the nation's 2050 net-zero goal.

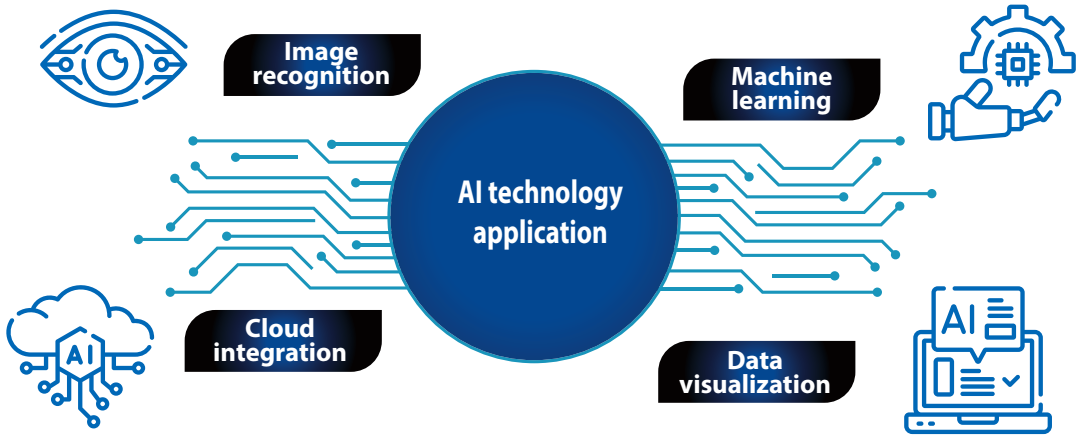
Special Coverage 3:
Smart Transformation, Safeguarding Safety

AI Leads CPC in Creating a New Era of Smart Industrial Safety and Predictive Maintenance

Amid the wave of digital transformation and sustainable governance, CPC is actively applying AI technology to industrial safety and maintenance management, building a smart industrial safety system characterized by "prevention first, intelligent monitoring, and proactive response," thereby strengthening safety protection for employees and equipment from the source. In 2024, CPC's "Power Supply Predictive and Health Management Technology" won the National Brand Yushan Award, demonstrating the innovative strength and practical achievements of AI-powered industrial safety, and becoming a model for smart transformation among state-owned enterprises.

Technology Empowers Industrial Safety: AI Becomes the Guardian of Safety

In 2021, CPC established the 5G AIoT Promotion Project Office to drive the digitalization of industrial safety management based on AI and data-driven approaches. By introducing advanced models and real-time monitoring systems, CPC has significantly enhanced risk identification and response capabilities.



Smart Industrial Safety Evolution: Real-Time Visibility of On-Site Risks

In traditional industrial safety management, some risks rely on manual inspections and experience-based judgment. CPC has introduced AI image recognition technology to perform real-time image analysis of the work site. When the system detects that employees are not properly wearing personal protective equipment or identifies anomalies such as smoke or flames on-site, it can automatically send alerts and trigger rapid intervention, significantly reducing the risk of accidents. In addition, electronic fences have been installed in plant areas. Through the integration of sensors and AI models, real-time monitoring of personnel and vehicle entry and exit is enabled. Combined with an AI-based contractor identity verification mechanism, this enhances the efficiency and security of access control.

Aerial Inspection Tool: Drones Equipped with AI for Smart Inspections

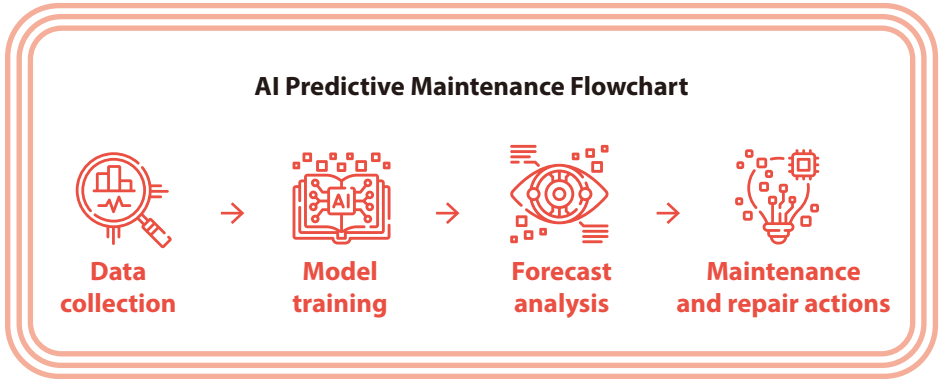
To address the challenges of inspecting natural gas pipeline bridges, CPC's Southern District Office has implemented a smart drone inspection system. Equipped with an AI object recognition model (YOLOv4), the system can automatically detect anomalies such as corrosion, PE damage, and exposed pipelines. The captured images and positioning information are transmitted to the Azure cloud database and integrated with GIS geographic data, enabling highly efficient, comprehensive inspection management. This innovative model not only enhances inspection efficiency but also ensures personnel safety, injecting new energy into the traditional manual inspection approach.

Drone inspection operations

A New Paradigm for Predictive Maintenance: Seeing Future Risks Through Data

Industrial safety requires not only real-time response but also proactive prediction. CPC applies motor current spectrum imaging combined with AI image recognition. After building a dataset, the system successfully detected an abnormal spectrum in a sulfur plant compressor. Although no vibration symptoms were present, the AI model detected 46 broken rotor bars, successfully preventing a potential failure and avoiding the risk of an unscheduled shutdown.

CPC is also promoting a power supply unit life prediction system and has developed a graphical interface diagnostic tool to enhance maintenance decision-making efficiency.



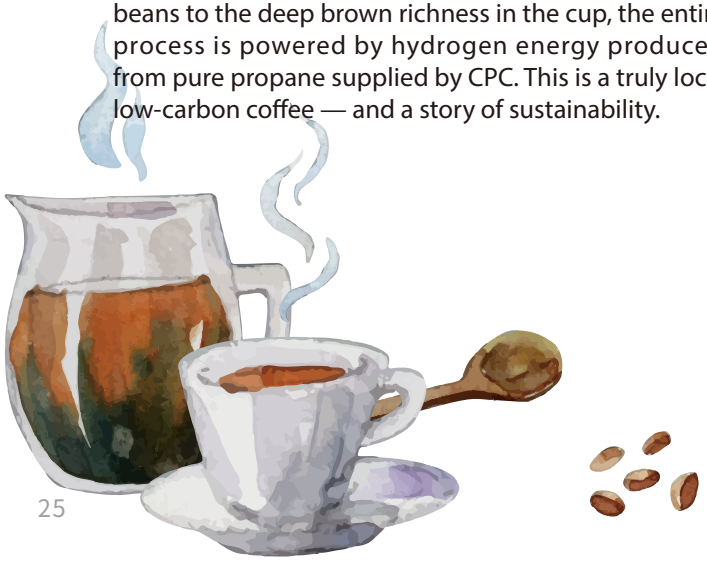
AI Smart Applications × ESG Sustainable Governance

The introduction of AI technology is not only a symbol of digital transformation but also a core pillar of corporate sustainable governance. Through the development of smart industrial safety systems and predictive maintenance mechanisms, CPC achieves multiple objectives, including accident prevention, energy conservation and carbon reduction, cost control, and employee well-being. These efforts also align with international sustainable development goals such as SDG 8, 9, 12, and 13, demonstrating the resilience and responsibility expected of a sustainable enterprise. In the future, CPC will continue to optimize AI model applications, extend them to more operational areas, deepen the construction of the industrial safety data platform, and strengthen integration with internal systems, realizing the three-in-one vision of "smart industrial safety, smart inspections, and smart decision-making." With technology as its backing, CPC will make safety a core competitive strength of the Company, creating a more stable and trustworthy sustainable enterprise for all stakeholders.

Special Coverage 4:
Hydrogen Energy × Coffee × Local Co-Prosperity

CPC Partners with Mawudu to Brew a Cup of Low-Carbon Hydrogen Coffee

In the Mawudu Valley of Guanxi, Hsinchu, surrounded by mountains, the birth of a cup of coffee is no longer just an aromatic morning ritual — it is now the beginning of a dialogue between technology and the land. From de-pulping, fermenting, and roasting the coffee beans to the deep brown richness in the cup, the entire process is powered by hydrogen energy produced from pure propane supplied by CPC. This is a truly local low-carbon coffee — and a story of sustainability.



A Coffee Revolution Rising from the Valley

On the eve of the 2024 Spring Equinox, a signing ceremony for the "Low-Carbon Coffee Hydrogen Energy Innovation Cooperation Memorandum of Understanding (MOU)" was held in Guanxi Township, Hsinchu. CPC' s Liquefied Petroleum Gas Business Division built a bridge between technology and the land, joining forces with Panasonic Taiwan, Asia Hydrogen Energy, Holy Stars, and the Mawudu Coffee Production Cooperative. This collaboration is not just about supplying energy — it is about co-creating value. Through the Panasonic ENE-FARM hydrogen fuel cell system, CPC provides high-purity propane (with purity reaching 98%, surpassing international standards), which is reformed to produce hydrogen used to heat water and supply electricity for the coffee-making process. This significantly improves energy efficiency and reduces carbon emissions by 50%, making Mawudu Coffee the first "hydrogen-powered coffee" in Taiwan.

Signing of the MOU

Hydrogen fuel cells

The Temperature of Every Cup of Coffee Comes from the Convergence of Forests and Technology

Traditional coffee processing consumes a high amount of energy, and balancing efficiency with low carbon emissions for both electricity and heat sources is difficult. The hydrogen system used for hydrogen coffee achieves an energy efficiency of up to 97%, not only improving the stability of the coffee-making process but also creating fermentation temperatures more suitable for fully expressing the flavor of the coffee beans. It has even led to local shared applications such as "excess hot water provided for elderly tribe members to wash their hair" and "surplus electricity supporting power supply for communication base stations."

For CPC, energy is not merely a business model — it is a practice of social responsibility. Delivering high-purity propane to remote mountainous villages, overcoming geographical and transportation challenges, is an invisible yet powerful supply journey. All this effort is so that behind each cup of coffee lies not only great taste, but also sustainability.

Enjoying Mawudu coffee

Community × Low-Carbon Energy × Branding: Sustainability Is Not Just About the Environment — It Is Also About Local Revitalization

The Mawudu Coffee Production Cooperative is composed of 34 farmers who cultivate this land and tell their own stories through coffee. Through gas supply and technical support, CPC not only helps establish a stable production process but also enables the Mawudu brand to take root locally and grow sustainably. "From energy to farming, from processing to daily life," this hydrogen coffee revolution connects not only technology and business, but also serves as a model for local revitalization. Every partner — from farmers, technicians, equipment suppliers to local government — is a co-fermenter of this low-carbon revolution.

A Cleaner Future Begins with a Cup of Coffee

Hydrogen coffee is not just an innovation in flavor. It is a practice of a new way of life, a new energy, and a new relationship with the land. By linking communities, localities, and climate action through energy technology, CPC is brewing a sustainable future for the entire mountain town — with the warmth of a single cup of coffee. From the forest to the cup, from propane to hydrogen, to the aroma of coffee beans — every step is a tangible footprint of CPC' s pursuit of sustainability. This is an energy transition and a lifestyle revolution. And we believe that true sustainability does not lie in slogans shouted aloud, but in a cup of coffee that you and I can both enjoy.

Planting coffee saplings together

01 Integrity and Sustainability

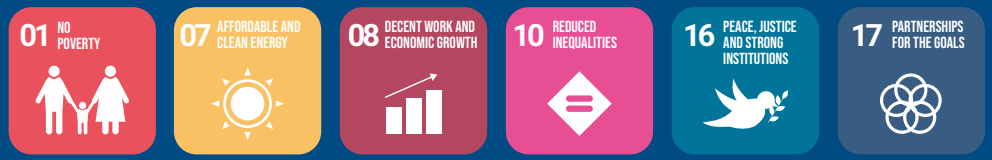
Chapter summary

Despite challenges such as international politics and worldwide inflation that caused oil and gas prices to surge in recent years, CPC held its ground and absorbed much of the cost of oil and gas imported to stabilize domestic oil prices. This article explains the fundamental information concerning CPC' s operations in the current year, including business locations, facilities, and equipment, and provides an in-depth analysis on the challenges faced by CPC given the current environment as well as its responses and progress.

Reader Priorities

• Shareholder (MOEA) • Partners • Public • representatives • Customers Government institutions

Corresponding SDGs:



CPC's performance highlights

Satisfaction score by petrol station customers: 96.9

Satisfaction with customer service center's suggestion/grievance handling: 4.96/5

The average monthly number of transactions via mobile payment reached 2.947 million; the average monthly number of transactions via CPC Pay reached 1.432 million.

1.1 Our CPC

For more than 79 years, CPC has supported the growth and transformation of industries and supplied them with essential energy sources. As a state-owned enterprise, CPC supports the nation' s policies and carries the responsibility to ensure the stability of society and the economy. Motivated by principles of integrity and compliance, CPC strives to operate in stakeholders' best interest, evaluate and control risks of the business environment, and incorporate sustainable governance into the corporate DNA while adhering to its missions on energy supply, diverse service, and sustainable growth. There had been no major change in the organization or supply chain, whether in terms of capital structure or supply chain location/structure, etc., in the current year. The scope of the report covers all entities included in the consolidated financial statements or equivalent documents, and no entity was omitted or excluded.

1.1.1 Introduction to CPC

CPC' s operations span from the upstream import of petrochemical raw materials to the downstream supply of consumer products, developing various production and sales models for different petroleum products. CPC' s operational and sales locations are distributed across Taiwan and have also extended into key international petroleum development markets. Through a vertically integrated supply chain, CPC meets the diverse demands for petroleum products, serving as a driving force for the nation's infrastructure and public livelihood.

Company Profile

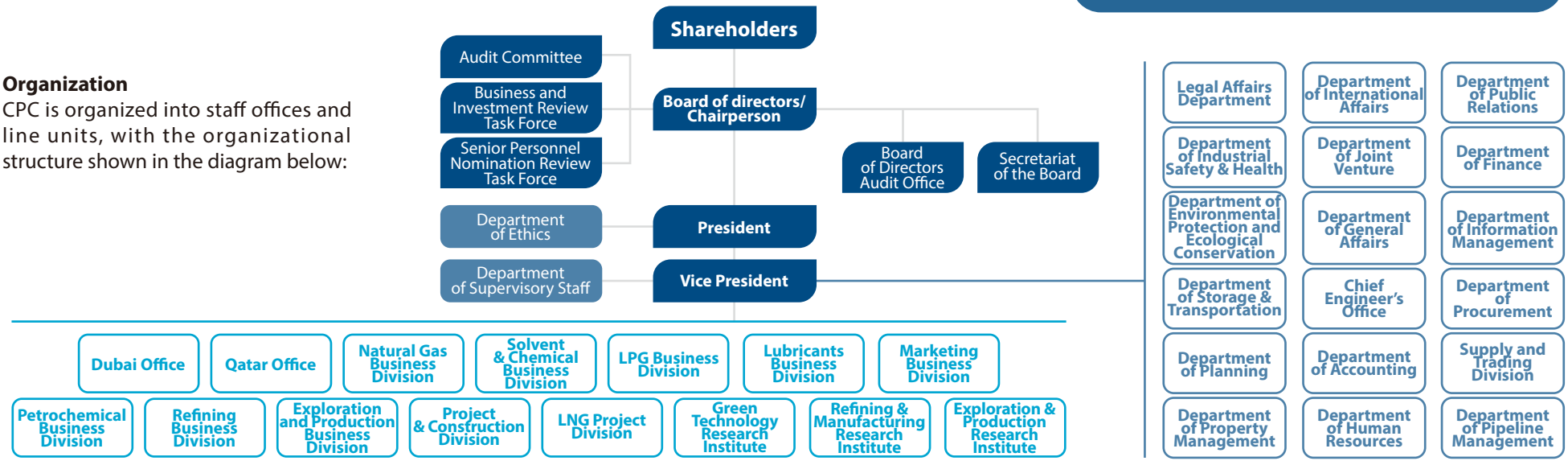
Company Name	CPC Corporation
Establishment Date	June 1, 1946
Ownership	State-owned Enterprise (MOEA 100%)
Authorized Capital	NT$130.1 billion.
Sales Volume (2024)	NT$1,097.3 billion
Chairperson	Jeng-Zen Fang
President	Min Chang
Employee count (December 31, 2024)	16,637 Persons (including contract employees)
Headquarters Address	No. 2, Tso-Nan Road, Nan-Tzu District, Kaohsiung City, Taiwan 811 (R.O.C)
Credit Rating	AAA (twn) by Fitch Ratings

Main business avities

- Exploration, mining, and operation of oil, natural gas, geothermal energy (steam), and other related energy sources or minerals
- Establishment and operation of oil refineries and hydrocarbon compound production plants
- Import, storage, transportation, and sale of crude oil, natural gas, steam, hot water, and oil products, and rendering of related services

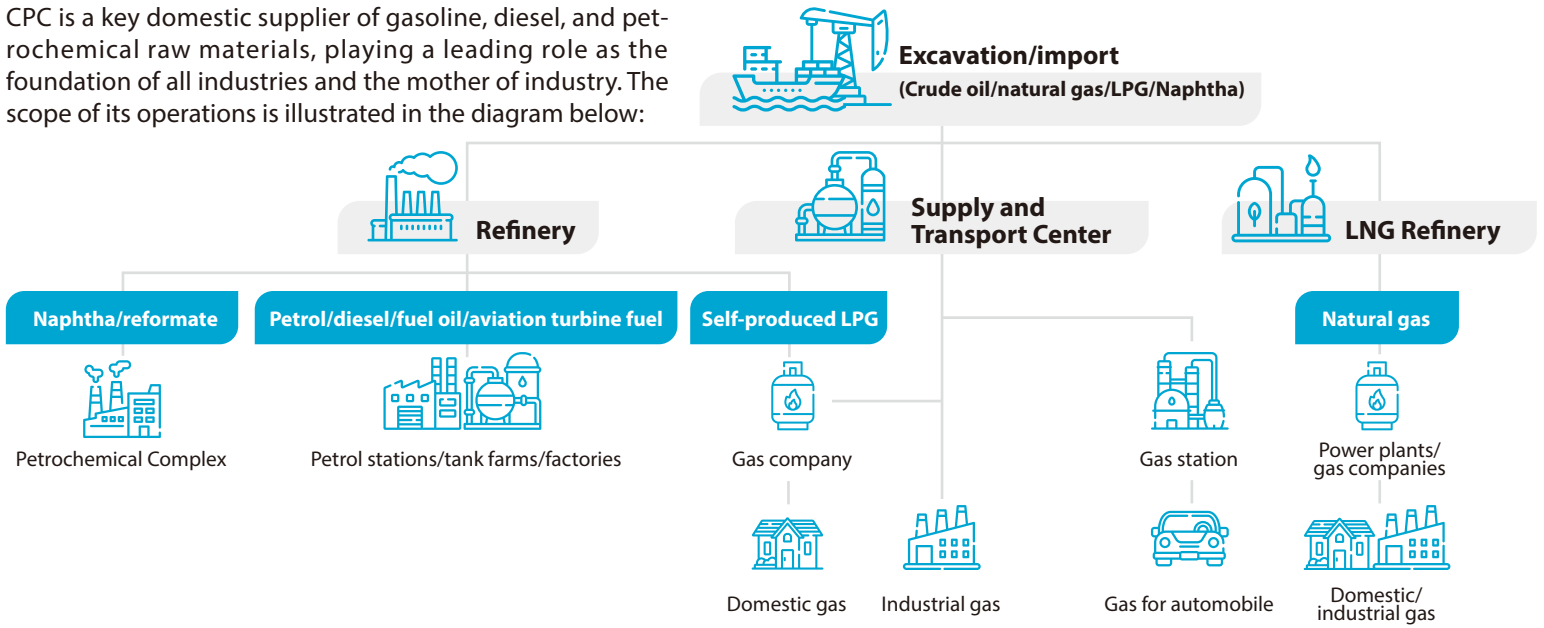
Organization

CPC is organized into staff offices and line units, with the organizational structure shown in the diagram below:



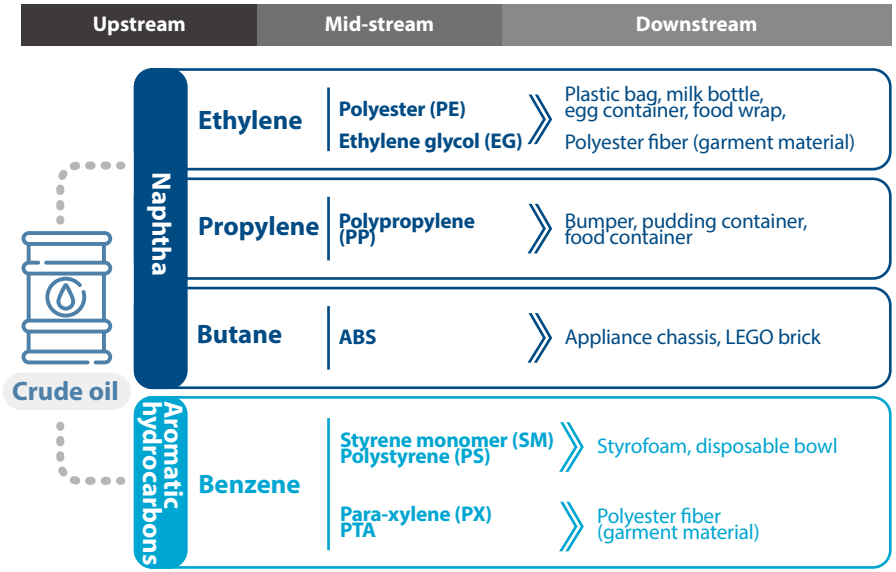
Business activities

CPC is a key domestic supplier of gasoline, diesel, and petrochemical raw materials, playing a leading role as the foundation of all industries and the mother of industry. The scope of its operations is illustrated in the diagram below:



The petrochemical industry holds a significant position in terms of daily life, industrial development, and international trade. Its upstream and midstream sectors include petrochemical raw materials, chemical fertilizers, man-made fibers, synthetic resins, and plastics. The downstream sectors—such as paints, cleaning products, man-made fiber textiles, knitting, and rubber products—are all closely tied to everyday life.

CPC devotes great attention to the environmental, social, and governance (ESG) impacts of the petrochemical industry, and evaluates and examines each decision in stakeholders' best interest while taking actions to minimize the negative impacts of its operation, examine risk tolerance, expand positive influence, and explore potential opportunities.



Major Domestic Locations

- Nationwide petrol stations (direct, franchise, and collaborative stations): 1,934
- Refinery: 2 (Taoyuan, Dalin)
- Petrochemical Complex: 1 (Linyuan)
- Fuel Distribution Center: 13
- Oil Product Offices: 10
- Natural Gas Transportation Center: 1
- LNG Terminal: 2 (Taichung, Yongan)
- Natural Gas Service Center: 4
- Natural Gas Supply Center: 8
- Construction Division: 2
- Business Divisions: 8
- Training Institute: 1
- Research Institutes: 3

Global operations

In 2024, CPC's oil product export volume reached approximately 8.343 million kiloliters, with major export destinations including Singapore, the United States, the Philippines, Australia, Malaysia, South Korea, Vietnam, Japan, and Hong Kong, with business operations all over the world.

Overseas offices

1 USA
Overseas oil operation and investment
Opicoil America, Inc.
Opicoil Houston, Inc.

2 Ecuador
Overseas oil operation and investment company
Ecuador Branch, OPIC

3 Niger
Overseas oil operation and investment
OPIC Niger S.A.R.L.

4 Chad
Overseas oil operation and investment
OPIC Africa Corp.

5 Dubai
Dubai Office

6 Qatar
Qatar Office

7 Singapore
CPC International Trading Pte. Ltd.

8 Indonesia
Overseas oil operation and investment company
Indonesia Branch, OPIC
OPIC East Seram Corp.

9 Australia
Overseas oil operation and investment
OPIC Australia Pty. Ltd.
OPIC Ichthys Pty. Ltd.
OPIC LNG Holding Pty. Ltd.

10 Somaliland
Overseas oil operation and investment
OPIC Somaliland Corp.

Locations of business investments

6 Qatar
Qatar Fuel Additives Co. Ltd.
QatarEnergy LNG NFE(3) Company

9 Australia
ICHTHYS LNG Pty Ltd

11 Vietnam
Vietnam Dai Hai Petroleum Corp.
Maxihub Company Limited

12 Liberia
Faraway Maritime Shipping Co.

13 Cayman Islands
NIMIC Ship Holding Co., Ltd.
NIMIC Ship Management Co., Ltd.

14 Taiwan
China American Petrochemical Co., Ltd.
CPC Shell Lubricants Company Ltd.
Kuo Kuang Power Co., Ltd.
Chun Pin Enterprise Co., Ltd.
Global Energy Maritime Co., Ltd.
Taiwan Stock Exchange Corporation
CSBC Corporation, Taiwan
Overseas Investment & Development Corp.
Formosa 4 International Investment Co., Ltd.

Overseas mining sites

1 USA
Guardfish site

2 Ecuador
Site No. 17

3 Niger
Agadem site

4 Chad
Oryx oil site

8 Indonesia
East Seram site

9 Australia
Ichthys site,
Prelude site,
WA-285-P site,
WA-533-P site,
Bedout project (including sites WA-64-L, WA-435-P, WA-436-P, WA-437-P, and WA-438)
AC/RL7 site

10 Somaliland
Site SL10B/13

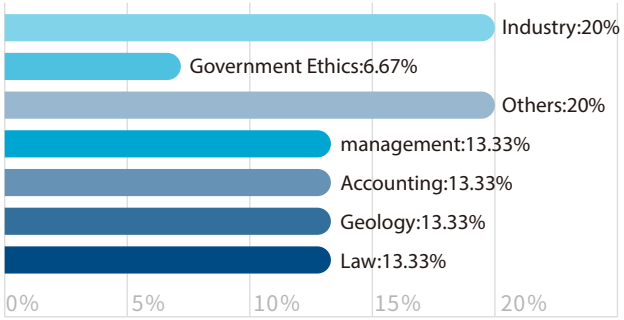
15 Mexico
B15 site

1.1.2 Directors overview

Diverse board composition

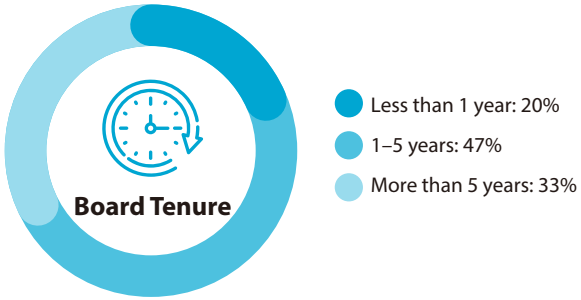
CPC is a state-owned enterprise wholly owned by the Ministry of Economic Affairs. The highest governance body is the Board of Directors, which also exercises the powers of the shareholders' meeting. Starting from the 34th Board of Directors (effective November 15, 2023), the Company established an Audit Committee composed entirely of independent directors, replacing the system of supervisors. The main academic and professional background, remuneration structure, and training of the directors can be found in the 2024 Shareholders' Meeting Annual Report (Section III: Corporate Governance Report; II: Information on Directors, Supervisors, President, Executive Vice Presidents, Department and Branch Managers; III: Remuneration paid in 2024 to Directors, Supervisors, the President, and Executive Vice Presidents).

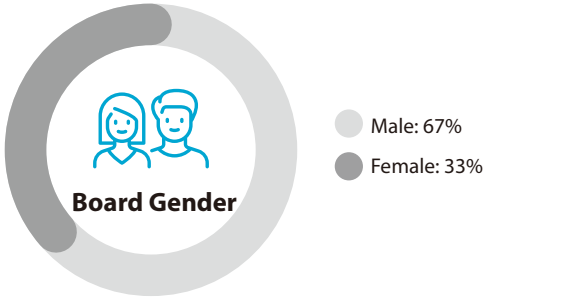
Board Expertise

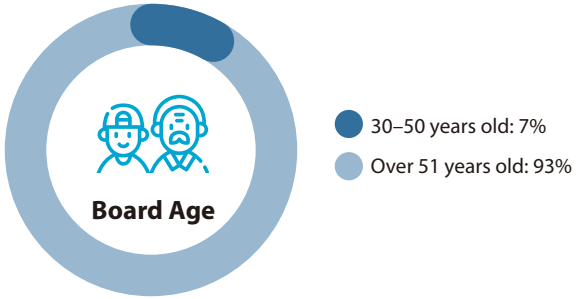


Note: Based on data of the 34th directors currently in active duty (as of the end of December 2024)

Information on the board of directors







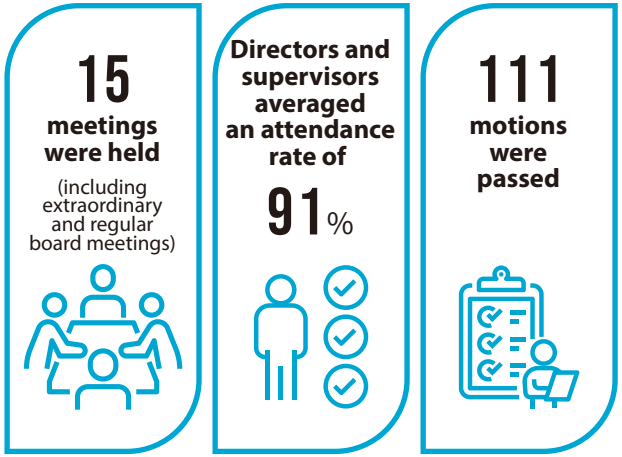
Board operation

CPC convenes board of directors meetings on a monthly basis to review the major operating strategies of each department, examine operational reports, track progress, and evaluate the performance of its management team. The minutes of monthly board meetings are published on CPC's website.

CPC consolidated the original "Business Planning Review Task Force," "Exploration Review Task Force," and "Procurement Review Task Force" into the newly established "Business and Investment Review Task Force," enabling thorough discussion of proposals prior to Board meetings. The review opinions are then provided to the Board of Directors for reference, thereby saving meeting time and enhancing meeting efficiency. In 2024, the "Business and Investment Review Task Force" convened a total of 11 meetings and reviewed 21 proposals.

Starting from the 34th Board of Directors (effective November 15, 2023), CPC established an Audit Committee composed entirely of independent directors to replace the supervisors in exercising their powers and responsibilities. In 2024, the Audit Committee convened 4 meetings and reviewed 18 proposals.

Overview of board meetings – 2024



Diverse engagement between the board and stakeholders

CPC has prescribed in the "Corporate Governance Best-Practice Principles" and the "Rules of Procedure for Meetings of Board of Directors" that: A director having a conflict of interest (COI), either with himself or the corporate investor(s) he represents, shall specify the material contents regarding the COI. When a COI causes threats to the organizational interest, this director shall sidestep from the discussion and voting and their processes of the related proposal, nor shall he represent other directors to exercise such rights.

In addition, proposals in relation to related party trade or board members shall be remarked in the proposal to remind directors of COI avoidance. The board of directors had three motions in 2024 that required recusal from directors. See the 2024 annual report for details.

Material bargaining events approved by the board of directors in 2024

- In response to government policy on freezing (or slowing) price increases of oil and gas products, which has led to continued operating losses for the Company, a special report titled "CPC's Proposal to the Ministry of Economic Affairs for Capital Injection/Subsidy" was submitted.
- A total of 22 land parcels located in the Oil Refinery Section and Houjin Section, Nanzi District, Kaohsiung Refinery, are approved for lease to the Kaohsiung City Government for the construction of a semiconductor plant and the Nanzi Water Resource Center, and the necessary urban planning change procedures are being carried out.
- For certain parcels in Linggang Section, Lingya District, Kaohsiung Refinery, the Company has in principle agreed to participate in an urban renewal rights conversion project led by Taiwan International Ports Corporation, and to jointly carry out a public urban renewal rights conversion project with the Kaohsiung City Government.
- Land in the Kaohsiung Chenggong Park managed by the Refining Business Division and the Oil Products Marketing Division was used to sign a burden-sharing and feedback agreement with the Kaohsiung City Government in accordance with urban planning regulations, and public facility land was donated.
- Review and approval of equity investment plans in the power sector.

CPC Mini Column

Diverse education and certified home training for directors

CPC organizes certified home training courses for directors as a way to bring their attention to economic, environmental, and social issues concerning CPC's business activities. These courses are hosted by the Chairman and President, and involve senior managers as well as professional instructors from outside the organization, who will engage directors in bilateral discussions so that issues can be reflected in operating activities and decision making. In 2024, in response to operational trends and regulatory changes, three on-site board training sessions were organized under the themes "Applying Carbon Credits to Gently Promote Net-Zero Innovation," "Improving Bioenergy and Carbon Capture Efficiency through Nature-Based Solutions," and "Creating a Zero-Waste Town Miracle." The sessions were also open to mid-level managers from relevant departments, with a total participation of approximately 145attendees.

Performance of the board of directors

CPC has established a set of "Directives for Performance Assessment of the Board of Directors" in accordance with "Corporate Governance Best-Practice Principles for TWSE/TPEX Listed Companies," and evaluates the board of directors' performance by having the board conduct self-assessments internally. Furthermore, individual directors are required to conduct self-assessments in line with "Notes on Appointment of Directors, Supervisors and Key Staff in State-owned Enterprises, Private Businesses and Non-profit Organizations by Ministry of Economic Affairs and Subordinates" and "Notes on Implementation of Independent Director System by Ministry of Economic Affairs and Subordinates" and set performance targets accordingly to enhance board efficiency. CPC also adopts the use of "Review Panel Performance Evaluation Worksheet" to help board members evaluate the performance of various review panels. Performance of the board of directors was rated good overall in 2024. Outcomes of the performance evaluation have been disclosed in the Corporate Governance section of the CPC website.

Board performance evaluation

Performance Evaluation Results

- **Evaluation Indicators**
  Including aspects such as participation level, decision-making quality, board composition, ongoing training for directors, and internal control, with evaluations also conducted specifically on corporate governance aspects.
- **Description of the evaluation**
  Each director would offer improvement suggestions with regard to directors' duties, and present the outcome of performance assessment to the board of directors at the end of each year. The outcome of an individual director's preliminary self-assessment, in particular, is forwarded to the Ministry of Economic Affairs for secondary review.
- **Performance evaluation averaged a score of**

93.85

Performance evaluation of review panels

- **Evaluation Indicators**
  Include level of participation, decision quality, composition of review panel, and scope of proposal.
- **Description of the evaluation**
  Every October, board directors conduct evaluations based on the execution of the Audit Committee, Board of Directors, Operating Investment Review Task Force, and Senior Personnel Nomination Review Task Force meetings over the past year. The evaluation results are also disclosed on CPC's official website under the Corporate Governance section.
- **Performance evaluation averaged a score of**

94.25

Director and supervisor compensation policy

As a state-owned enterprise held by the Ministry of Economic Affairs (MOEA), CPC compensates its directors and employees according to the "Monthly Compensation Sheet for Directors and Supervisors of MOEA Subordinates" and "Recruitment Policy and Notes on Compensation for Employees of MOEA Subordinates." Performance bonuses are paid according to "Implementation Guidelines on Performance Bonus for MOEA Subordinates. Performance evaluation for senior managers covers ESG goals.

1.1.3 Corporate governance

Material Topic: Corporate Governance

Policy

Make honest and transparent disclosure of information according to laws or instructions of the authority.

Management Approach

- Enhance the quality of the internal control system based on the "Regulations Governing Establishment of Internal Control Systems by Public Companies."
- Implement corporate governance and enhance management transparency, while upholding the principles of integrity and professional ethics. Promote sustainable development policies and risk management measures, while also enhancing employees' risk awareness and corporate resilience, thereby comprehensively increasing the overall value of the enterprise.

Action Plan

- Based on the review comments from last year's corporate governance evaluation, propose follow-up governance enhancement plans.
- Formulate an intellectual property management plan to meet corporate governance compliance requirements.

2024 Actual Performance

- Received an "Excellence" rating in the 2024 corporate governance evaluation.
- ESG-related indicators have been incorporated into senior executives' performance evaluations, and ESG is also included as a criterion in supplier selection for procurement projects.
- Strengthened training on patents and copyrights.

Goals

- Submitted requests to the government for capital injection/subsidies to strengthen capital and improve the financial structure.
- Sought to enhance compensation design to facilitate talent recruitment and development.

For the purpose of improving corporate governance, CPC not only conducts board of directors performance evaluation, but is also subject to correspondence review and on-site inspection by the State-owned Enterprise Commission, Ministry of Economic Affairs, for corporate governance evaluation, during which the Chairman, independent directors, worker directors, the corporate governance officer, chief internal auditor, and head of finance/accounting are interviewed separately to establish a more in-depth understanding of corporate governance practices and how the board functions. Recommendations raised in the previous year's evaluation and CPC's actions taken in 2024 are explained below:

Outcomes of corporate governance enhancements – 2024

CPC has reported poor financial position and shown deterioration in long-term and short-term solvency. In addition to reducing the cost of funding, the Company should consider adopting measures that strengthen the capital structure, and take the initiative to suggest reasonable oil price adjustments to the Ministry of Economic Affairs at an appropriate time for the continuity of the Company's operations.

1. Continue to study measures to reduce the cost of capital raising and maintain high credit ratings to reduce interest expenses.
2. Continued requests for government capital injection/subsidies: Since 2022, CPC has submitted multiple official requests to the government for capital injection and subsidies. The Ministry of Economic Affairs has indicated that, should the Company's operating conditions deteriorate, it will consider providing financial support as appropriate. The Company will continue to petition the government for capital injections/subsidies to strengthen its capital and improve its financial structure.
3. CPC reviews the cost of natural gas and possible adjustments to the domestic natural gas price on a monthly basis. Price adjustment proposals are presented to the authority for review. In the second half of each month, CPC would brief the Ministry of Economic Affairs on gas price scenarios for the following month, and try to seek approval to adjust prices in a way that fully reflects the change in gas cost.

In 2023, CPC allocated a research and development budget accounting for 0.48% of its total expenditures over the most recent five-year period (2018–2022), which was lower than the target ratio of 0.56% for state-owned petroleum enterprises announced by the Ministry of Economic Affairs in 2021. The Company is advised to increase the allocation ratio.

1. The 2024 research and development budget amounts to NT$5,149,090 thousand, accounting for 0.60% of total expenditures over the most recent five years, reflecting an increased allocation ratio and exceeding the Ministry of Economic Affairs' 2024 target ratio (0.56%) for state-owned petroleum enterprises.
2. Continued investment in forward-looking R&D projects to support the Company's transformation.

(1) Exploration and Research Institute: Forward-looking R&D in geothermal energy or geological carbon dioxide storage, with most early-stage work conducted at the laboratory level or through computer simulations, has now gradually transitioned to on-site operations. Considering the anticipated growth of geothermal power generation, a geothermal fluid composition analysis laboratory will be established.
(2) Refining Research Institute: Research on energy conservation and carbon reduction, environmental remediation, and development of biotechnological products.
(3) Green Energy Research Institute: R&D in green energy carbon reduction, high-value materials, and circular economy.

In 2024, the Company received an "Excellent" rating in the Corporate Governance Evaluation. The evaluation highlights are shown in the table below:

1 CPC Corporation has established the "Sustainability Promotion Committee" dedicated to advancing sustainable development. The committee is composed not only of the Chairperson, President, and senior executives, but also includes six external scholars and experts as members. In 2024, three additional board members joined as internal committee members, including one independent director, one labor director, and one director, demonstrating CPC' s strong commitment to reinforcing its sustainability initiatives.

2 Independent directors diligently supervise the audit units, requiring auditors to enhance their efficiency and skills. CPC actively applies AI technologies to on-site occupational safety management, utilizing dynamic image recognition and real-time alerts to enable intelligent, technology-driven safety oversight and prevent industrial safety incidents.

3 The Board Secretariat assists directors with regulatory compliance and continuing education, and proactively communicates and explains major proposals to board members prior to meetings to ensure a thorough understanding, thereby improving the effectiveness and efficiency of discussions and decision-making.

4 CPC actively integrates ESG implementation into its operations. ESG-related indicators have been incorporated into the performance evaluations of senior executives, and ESG criteria are also included in supplier selection for procurement projects. In terms of financing, the Company has signed sustainability index-linked loans and green loans with several banks.

5 In 2024, in response to business needs, CPC held a recruitment examination for PhD-level staff and admitted 11 professionals with expertise in geology, environmental engineering, and chemistry, attracting outstanding talent to enhance the Company's competitiveness.

6 CPC provides a comprehensive procurement professional training mechanism. In 2024, all procurement personnel held professional procurement certifications, and training courses were held annually in both northern and southern Taiwan to help improve professional procurement competencies.

For the purpose of enhancing corporate governance, CPC has proposed a series of improvement plans based on the opinions raised for the 2025 first-half corporate governance evaluation, and implemented accordingly to fulfill CPC's visions.

Corporate governance refinement programs – 2024

In terms of bearing policy-related costs, CPC is required to absorb part of the oil and gas price differentials in response to policy goals, which puts significant pressure on the Company' s financial structure. It is advisable to continue recommending reasonable adjustments to oil and gas prices to the Ministry of Economic Affairs.

CPC also seeks to improve compensation design by petitioning the Ministry of Economic Affairs, such as increasing the salary gap between managerial and non-managerial positions, to facilitate talent recruitment and development.

Implementation Method I: Reasonable Adjustment of Oil and Gas Prices

- CPC reviews the cost of natural gas and possible adjustments to the domestic natural gas price on a monthly basis. Price adjustment proposals are presented to the authority for review. In the second half of each month, CPC would brief the Ministry of Economic Affairs on gas price scenarios for the following month, and try to seek approval to adjust prices in a way that fully reflects the change in gas cost.
- Continue monitoring the implementation of fuel subsidy and tax reduction measures in neighboring Asian countries, compile relevant data, and review fuel pricing in line with policy.

Implementation Method II: Improve Financial Structure

- Continue to study measures to reduce the cost of capital raising and maintain high credit ratings to reduce interest expenses.
- Continued requests for government capital injection/subsidies: Since 2022, CPC has submitted multiple official requests to the government for capital injection and subsidies. The Ministry of Economic Affairs has indicated that, should the Company's operating conditions deteriorate, it will consider providing financial support as appropriate. The Company will continue to petition the government for capital injections/subsidies to strengthen its capital and improve its financial structure.

CPC adopted TIPS and was certified for TIPS_A

CPC, in line with energy policies, is undergoing a transformation to pursue a new vision of "diversification, innovation, and sustainability," and continues to encourage researchers to engage in forward-looking and innovative R&D. To effectively protect the research outcomes of its three research institutes (Exploration & Production Research Institute, Refining & Manufacturing Research Institute, and Green Energy & Technology Research Institute), CPC has formulated an intellectual property (IP) management plan to comply with corporate governance and regulatory requirements.

Intellectual Property Management

Goals

1. To submit six patent applications for technologies that are relevant to the Company's environmental and sustainability businesses in the future.
2. Select trademark rights already applied for or obtained by the Company, such as "Seony" and "SECLEAN," and activate their use for new products or services. Submit a set of product copywriting materials for the usage method.
3. Conduct one full-day (6-hour) training session on copyright practices for personnel from relevant departments at the headquarters and the three research institutes, with a post-training test.
4. Conduct one full-day (6-hour) training session on patents and technical infringement topics for legal and technical research personnel at the three research institutes, with a post-training test.

Current progress

All objectives were accomplished in 2024. A "Report on Intellectual Property Management Plan and Execution" was presented to the board of directors on December 18, 2024 and subsequently disclosed to the public over the CPC website.

2024
Intellectual Property Management Measures

Patent

Patent and technology infringement education and training courses have been held for the legal and technical R&D personnel of each research institute to strengthen employees' patent knowledge and their ability to make preliminary infringement assessments.

Non-compete agreement

Article 2, Paragraph 10 of Annex 6 (Intellectual Property Rights Ownership and Confidentiality Agreement) of the Intellectual Property Management Manual has been updated to include the provision of Article 7 of the Enforcement Rules of the Labor Standards Act, ensuring alignment with relevant domestic laws and regulations.

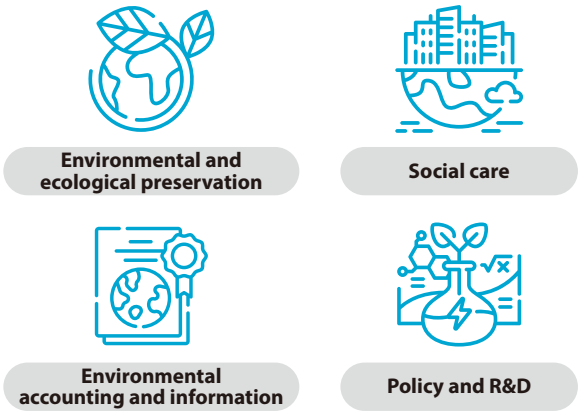
Copyright

Copyright theory and practice training courses have been organized for relevant departments and the three research institutes, incorporating case studies of CPC labor procurement contracts to enhance employees' understanding of copyright and rights ownership.

1.1.4 Sustainable governance

Cornerstone of sustainable governance

CPC is dedicated to integrating operating strategies and sustainable practices as a response to the market's increasing attention to ESG issues. With the assembly of "Sustainable Management Committee" in 2005, CPC divided sustainability management into four main fields, namely:

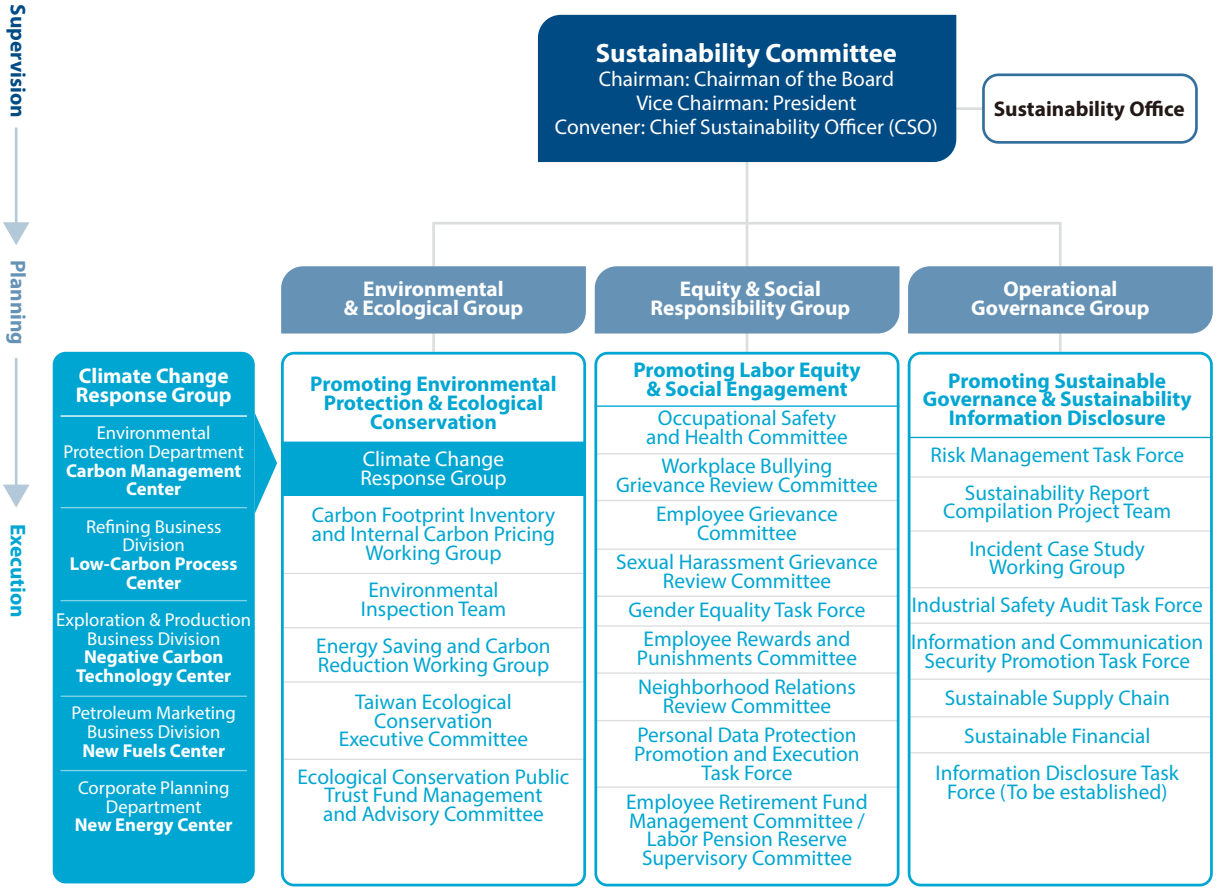


CPC has implemented internal policies including "Corporate Governance Best-Practice Principles," "Code of Ethical Conduct," and "Rules of Procedure for Meetings of Board of Directors" to enforce corporate governance, and observes "Act on Recusal of Public Servants Due to Conflicts of Interest," "Integrity and Ethics Principles for Employees of the Ministry of Economic Affairs," and integrity principles when carrying out business activities. CPC strictly prohibits corruption, bribery, and any attempt to exploit the vested authority for own gains or gains of others, and continues to empower the board of directors. A corporate governance section, an e-publications section, and a news and announcements section have been created on CPC's website to disclose shareholders' meeting annual reports, sustainability reports, and financial as well as non-financial information on a regular basis. With increased information transparency, CPC hopes to better protect shareholders' and stakeholders' interests.

Sustainable Management Committee

CPC's "Sustainable Operations Promotion Committee" is chaired by the Chairman, with the President serving as Vice Chair. The committee includes directors, executive vice presidents, and external experts and scholars as members, and a Chief Sustainability Officer is appointed. Together, they review sustainability issues related to corporate operations and stakeholder concerns, and conduct rolling reviews of CPC's impacts and responsibilities in the economic, environmental, and social dimensions.

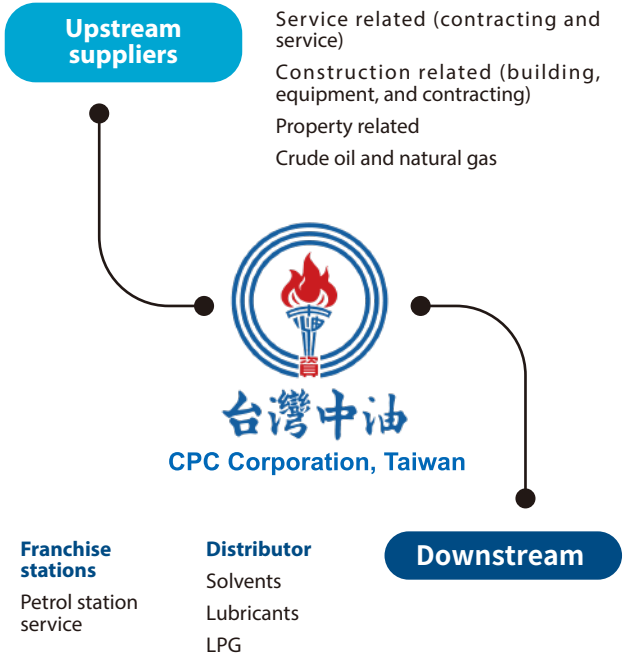
In 2024, three meetings were held. Directors were invited to participate on an ad-hoc basis. Multiple sustainability proposals were completed, and the President provided irregular updates to the Board of Directors on the progress and effectiveness of sustainability efforts. Internal departments were also required to make special reports to the board of directors and examine the impacts of economic, environmental, social, and governance issues as well as responses.

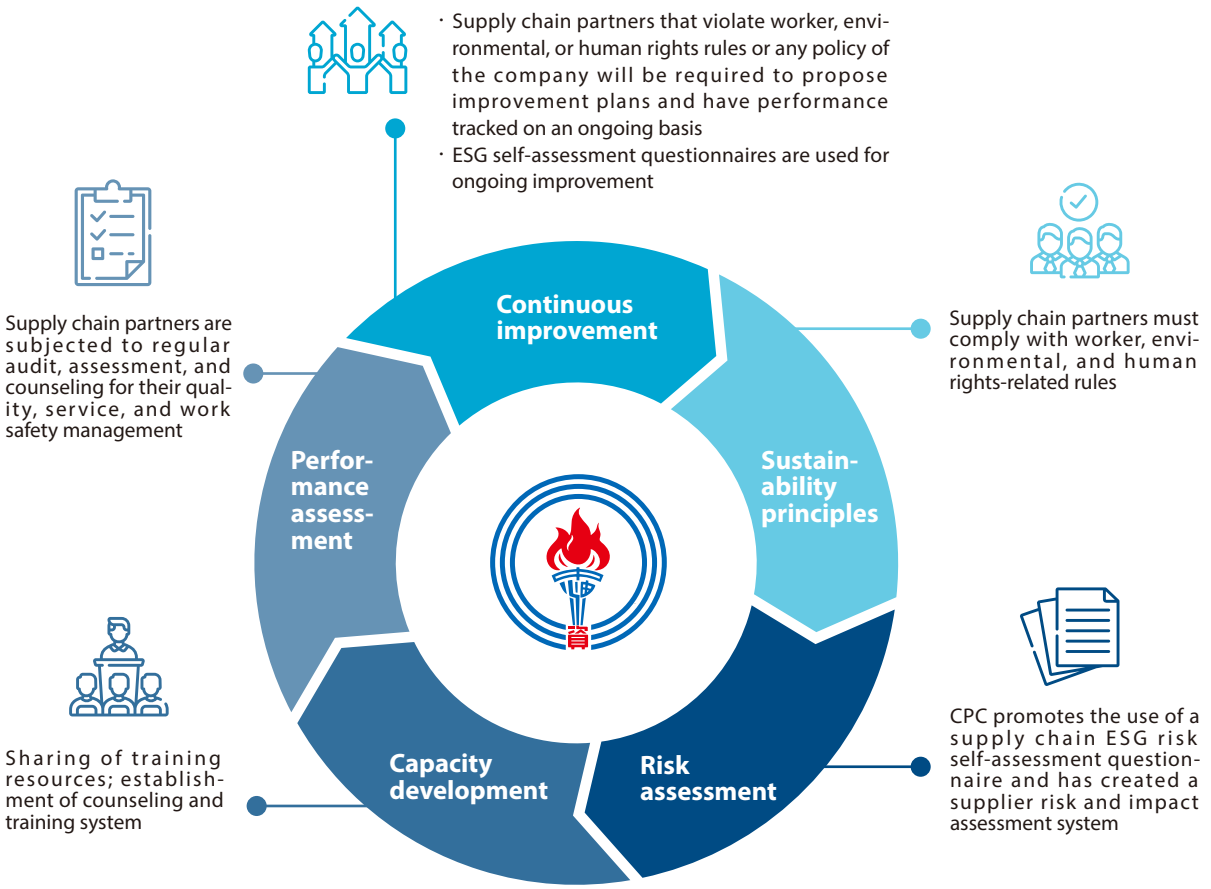


1.2 Sustainable Supply Chain

1.2.1 Supply Chain Sustainability Management

CPC values corporate sustainability. Not only has it imposed strict requirements for its own fulfillment of sustainability responsibilities and commitments, the organization also coordinates with upstream and downstream partners to exert positive influence and spread the sustainability philosophy for the mutual benefit of the supply chain, starting with their own products, services, and operations. Below is a description of CPC's supply chain system:





1.2.2 Supply chain sustainability assessment

CPC continued supply chain sustainability assessments in 2024, asking all supply chain partners to complete a self-assessment questionnaire over the ESG evaluation system. The self-assessment questionnaire covers five dimensions, including integrity governance, information security, environmental protection, occupational safety, and human rights. A total of 280 supply chain partners completed the ESG questionnaire this year, fewer than last year' s 423. This decrease is mainly due to CPC' s reassessment of the survey recipients and targeted distribution of the questionnaire to key supply chain partners.

Identifying subjects of evaluation

A questionnaire was distributed to all 280 supply chain partners of CPC, including: suppliers, franchise stations, and distributors.

Design of evaluation questionnaire

The questionnaire had a total of 58 questions that covered five main aspects, including integrity governance, cybersecurity, environmental protection, occupational safety, and human rights

Analysis of evaluation outcome

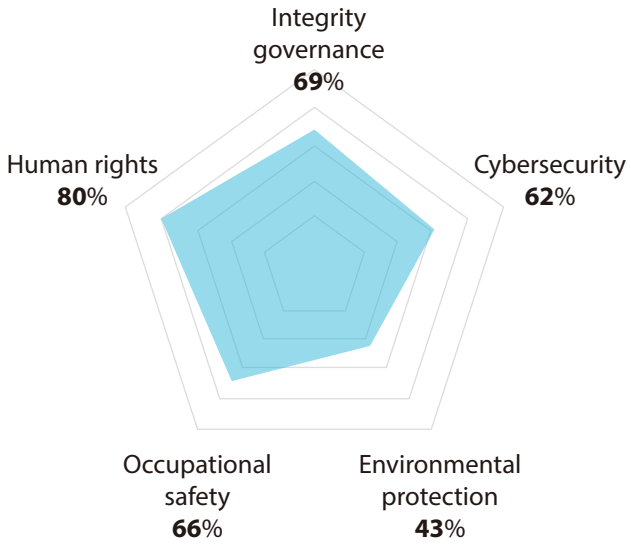
A total of 280 supply chain partners including 82 suppliers, 177 franchise stations, and 21 distributors have completed self-assessment.

Improvements to future practices

CPC adjusts its questionnaires based on the outcome of self-assessment, and will continue evaluating suppliers' performance in the five main aspects. Suppliers with low self-assessment scores will be subjected to enhanced oversight, and the procurement and management systems will be improved to achieve greater efficiency.

Total supply chain score and evaluation outcome – 2024

2024 CPC Supply Chain Sustainability Evaluation



Due to the update of the supply chain sustainability questionnaire items in 2024, the overall evaluation scores for the supply chain generally decreased. The main reason for the lower score in the environmental protection dimension is that only 33% of supply chain partners have initiated greenhouse gas inventories. Although the number of supply chain companies conducting inventories has increased compared to last year, there is still significant room for improvement in carbon management across the entire supply chain. CPC will continue to strengthen the promotion of greenhouse gas-related knowledge to its supply chain partners.

However, CPC values the overall sustainability progress of its supply chain. Therefore, it reassesses the questionnaire every year and revises it based on current regulations and domestic and international trends, in the hope that supply chain partners will prioritize sustainable performance and achieve shared prosperity within the supply chain.

Ethical Governance

CPC evaluates integrity and corporate governance practices of the entire supply chain, including: compliance, ethics, fair trade, risk control, and supplier behavior guidelines.

Cybersecurity

CPC evaluates cybersecurity practices of the entire supply chain, including: cybersecurity policy, backup system, and compliance with cybersecurity regulations.

Environmental protection

CPC evaluates environmental protection practices of the entire supply chain, including: environmental management system, greenhouse gas survey, energy conservation measures, use of renewable materials, waste control, and environmental impact assessment.

Occupational safety

CPC evaluates occupational safety of the entire supply chain, including: occupational safety and health principles or policies, labor/health insurance coverage, pension, major illness or work injury, identification of occupational hazards, and training.

Human rights

CPC evaluates human rights practices of the entire supply chain, including: compliance with labor regulations, communication system, human rights policy, prevention against child labor, sexual harassment, and forced labor, and freedom of association.

Supplier Management

As a state-owned enterprise, CPC' s procurement activities are regulated by the Government Procurement Act and the Company is bound to exercise supply chain management in a fair, just and open manner. The Company treats all suppliers as key business partners, and checks its tenderers for blacklist history using a government database before awarding tender. Suppliers are also required to submit a tax return as proof of integrity. To pursue compliant quality and competitive pricing, while establishing a long-term cooperative relationship of shared prosperity and coexistence with suppliers.

Participation criteria for new suppliers

Comply with Government Procurement Act and related rules; observe fair trade principles, environmental protection laws, the Labor Standards Act, and occupational safety and health regulations.

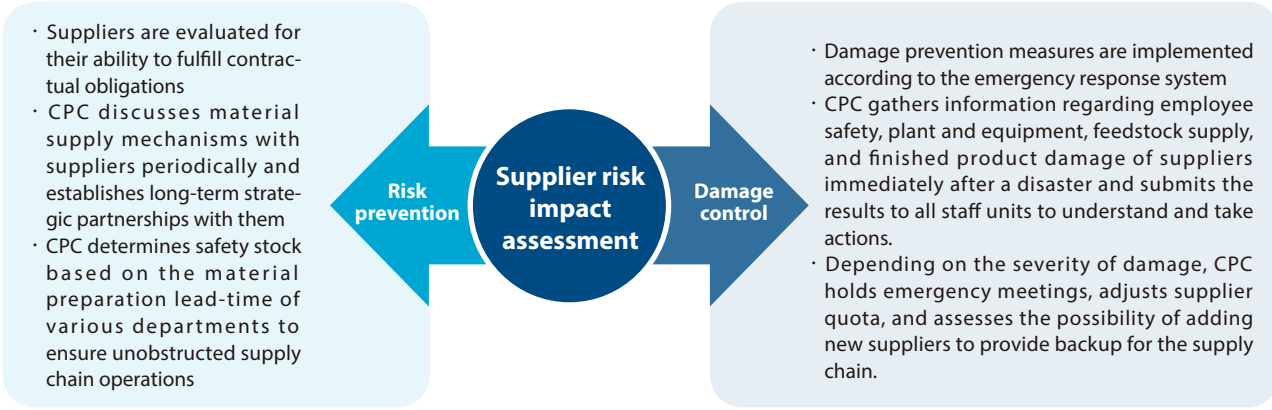
Hire people with disabilities and indigenous peoples according to the People with Disabilities Rights Protection Act, the Indigenous Peoples Employment Rights Protection Act, and the Government Procurement Act.

Management system for new suppliers

Implement a Contractor Safety and Health Management Policy and requires all purchases amounting to NT$1 billion and above to comply with relevant rules.

Require suppliers to meet certain social and safety criteria (such as adopting occupational safety and health management system of equivalent standard to CNS 45001 or above), but also outline reminders, audit practices, penalties, and actions to be taken in the case of social impact. CPC added six new qualified suppliers in 2024, and 100% of suppliers met requirements.

Mechanisms for assessing supplier risks and impacts



Due to the high risks involved with oil refining and petrochemicals, CPC conducts rigorous reviews on suppliers' eligibility as well as their compliance with occupational safety and health laws. Each department would make monthly arrangements to inspect contractors on safety and health issues on-site, and would take the initiative to inspect the factory area daily.

Eligibility of new suppliers (NT$1 billion and above)

6	100%	0
No. of suppliers having completed social impact assessment	Percentage of suppliers having completed social impact assessment	Number of suppliers having material, substantive or potential social impact

Management of existing suppliers (NT$1 billion and above)

21	100%	0%
No. of suppliers having completed social impact assessment	Percentage of suppliers having made improvements after audit	Percentage of suppliers having relationship terminated after audit

Promotion of integrity awareness among suppliers

CPC organized 1 large-scale campaigns to promote business integrity in 2024, during which it invited suppliers to attend and engage in a bilateral exchange of opinions for consensus toward integrity and ethics. The progress of the above campaigns is explained below:

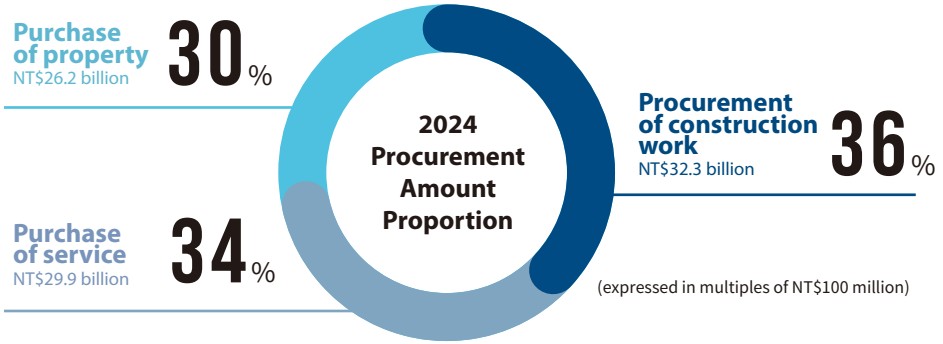
On June 3, 2024, CPC held the "Integrity Fuels the Ocean' s Sustainability" Corporate Integrity Forum under the Corporate Integrity Platform for Enterprise Services. Representatives from various sectors—industry, government, academia, and partner vendors—were invited to attend, including 19 relevant companies such as Formosa Petrochemical Corporation, Evergreen Marine Corporation, CSBC Corporation, Taiwan, Taiwan Navigation Co., Ltd., and Chun Pin Enterprise Co., Ltd. The forum facilitated cross-sector dialogue on topics such as key revisions to the Marine Pollution Control Act, corporate marine pollution prevention, integrity governance, regulatory compliance, and ocean sustainability. A total of eight media reports covered the event, and a 3-minute highlight video was produced and uploaded to the Company' s website to promote corporate reputation and integrity governance. Additionally, CPC continued to promote the integrity platform for procurement related to the major construction work—"Kaohsiung Intercontinental Container Terminal Phase 2 - Dalin Petrochemical Oil Storage Center Project." By establishing a communication platform and introducing external supervision, CPC aims to eliminate improper external interference and facilitate the smooth implementation of this major engineering procurement project.

Corporate Integrity Forum under the Corporate Integrity Platform for Enterprise Services

Procurement Integrity Platform Coordination Meeting

1.2.3 Sustainable purchase

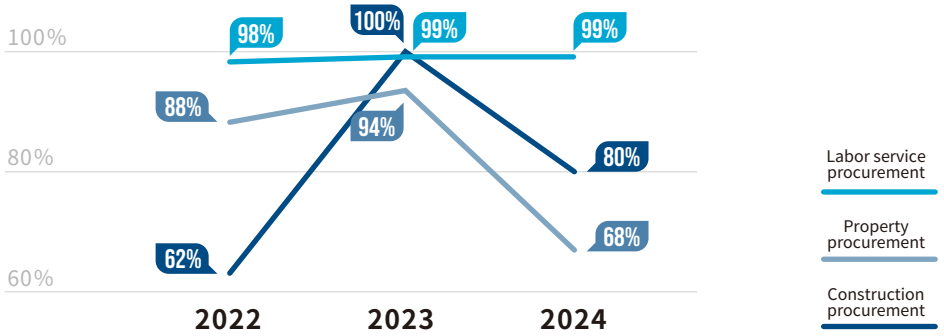
Procurement percentage (excluding crude oil and natural gas)



CPC believes localized purchase to be an important step toward realizing corporate sustainability, and makes up a part of corporate social responsibilities. For many years, CPC has developed long-term and stable relationships with local suppliers through localized purchases. These efforts have proven effective at reducing supply chain risk and securing the supply of energy and resources. CPC also adopts local purchase as a means to create job opportunities, which in turn supports growth of the domestic economy and increases corporate competitiveness.

The decrease in the proportion of local procurement by CPC in 2024 is due to annual fluctuations in the number of development projects and internal investment needs.

Proportion of Local Procurement Amount in the Past Three Years



Note: Overall percentage of local purchases = sum of local purchases (service, property, and construction outsourcing) / total amount of purchases

Crude oil procurement

Over 90% of energy used in Taiwan is imported. Therefore, it is CPC' s responsibility to ensure the security and stability of energy supply by diversifying oil purchase. A crude oil procurement policy has been established based on the Government Procurement Act and internal policies. The United States accounted for the highest percentage (over 50%) of crude oil imports in 2024, while the Middle East and Africa made up the rest.

Crude Oil Procurement Process Flowchart

Establishment of procurement plan
Monthly planning based on production requirements in the next 3 months

Raise procurement request
Send request to qualified crude oil suppliers

Execute administrative procedures
Evaluation of shipping schedule and price negotiation

Procurement decision
The amount of crude oil needed for current month' s production should be procured 3 months in advance

Management method

Implement management guidelines to ensure that suppliers:
- Timely fulfillment of contracts to ensure that CPC's production and sales planning are not affected
- Stable supply to avoid impacting Taiwan' s energy security and damaging CPC's business reputation
- Apart from requesting suppliers to meet certain standards, we investigate their background and track record to ensure that they are able to make delivery on time; only those that pass review may be accepted as qualified crude oil suppliers

Evaluation system

Apart from requesting suppliers to meet certain standards, we investigate their background and track record to ensure that they are able to make delivery on time; only those that pass review may be accepted as qualified crude oil suppliers

New suppliers
Required to submit documents for review to ensure compliance with requirements and standards

Existing suppliers
Subject to regular review at least once a year; suppliers' dealing with other suppliers are also reviewed during this process

Quality management of crude oil

The following methods are taken to evaluate and ensure the quality of new crude oils purchased:
- Assess and test oil quality according to internal procedures to ensure that the crude oil conforms to requirements
- Take samples of the crude oil for quality confirmation and future tracking

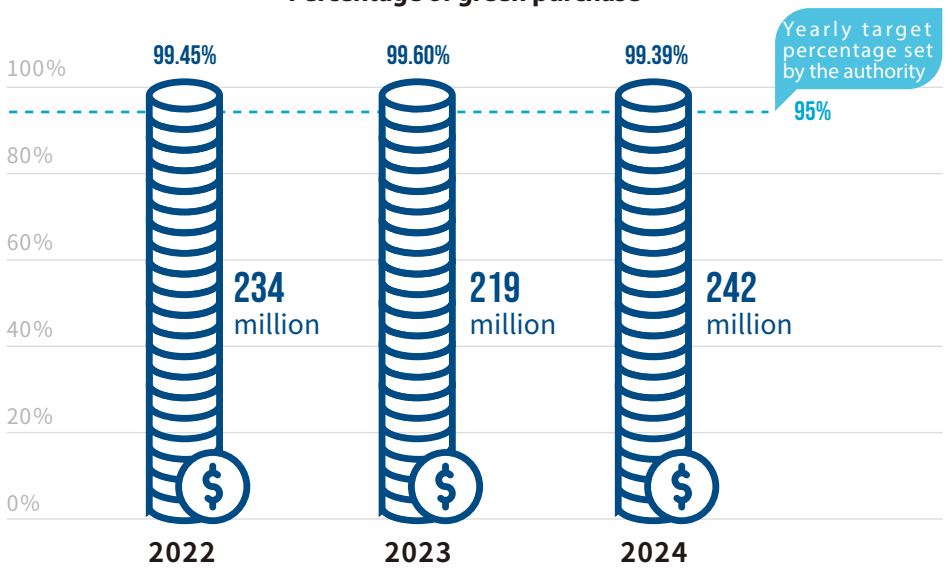
Natura gas procurement

CPC' s LNG sources span the Middle East, Southeast Asia, Australia, Africa, and the United States. To date, CPC has signed 50 Master Agreements for short- and medium-term procurement, enabling the timely purchase of LNG to meet fluctuating gas demand. CPC purchased LNG from a total of 14 countries (out of a total of 20 exporting nations worldwide) in 2024; by sourcing supply from different parts of the world, CPC hopes to diversify the sources of its natural gas. In 2024, CPC added two new long-term contracts, with the main sources being Australia and the United States, to ensure a stable supply of natural gas for domestic demand.

Green purchase

CPC actively engages in green purchasing and prioritizes the purchase of products that offer environmental protection benefits. Green purchases (class 1 environmental protection products) made by CPC in the last 3 years exceeded 97%, which is better the targets imposed by the authority.

Percentage of green purchase



1.2.4 Sustainable Supply Chain Management

CPC upholds the management philosophy of "safety first," treating distributors, contractors, and franchise stations as long-term and vital partners. From station construction planning to operational management, CPC has established a rigorous guidance and supervision mechanism to ensure consistent operational quality and service standards.
At the same time, each site implements a safety management system in accordance with the Occupational Safety and Health Act and related regulations. Through regular communication, license assistance, and professional training, CPC supports its partners in strengthening their professional capabilities and operational efficiency.

2024 distributors conference

CPC maintains productive communication with distributors and hosts regular distributors conferences to report business updates, exchange intelligence and opinions, and make plans that are beneficial to both parties.

Contractors

Compliance with Labor Laws	Compliance with Occupational Safety and Health Regulations: Regular health checkups must be provided for employees, and labor and health insurance must be purchased for workers. Implementation of Occupational Safety and Health Protection: Before contractors enter the site, a construction safety meeting shall be held to communicate hazards, ensuring that contractors understand all safety and health regulations.
Development of professional skills	3-in-1 scaffold training for contractors: 42 sessions, 825 enrollments, and 810 passes. Equipment installation/disassembly training for contractors: 9 sessions, 322 enrollments, and 286 passes.
Evaluation	Continuous promotion of the Occupational Safety and Health Management System (TOSHMS/ISO 45001): Internal and external audits are conducted annually, and continuous improvement is carried out using the PDCA cycle. Establishment of a contractor violation control system: Violations by contractors are recorded and analyzed, and the overall safety and health management capability of contractors is evaluated. Contractors with lower average scores are subject to targeted audits.

Distributor

Improvement of professional knowledge and skills	· CPC pays unscheduled visits, monitors the market and current state of competition, and makes flexible adjustments to operating strategies. · CPC supports product promotion and after-sale technical service. · Annual training courses are arranged for distributors and employees thereof to help increase professional capacity, management experience, and quality of technical service.
Performance	· CPC implements a reward system that caters to both the obligations and incentives of its distributors; distributors that meet performance requirements are rewarded with price discounts. · A distributor evaluation system has been implemented to identify top-performing distributors and support lagging distributors. · Customer satisfaction surveys are conducted each year to gather feedback/opinions and to examine and improve satisfaction with regard to distributors' sales, logistics, and technical services.
Feedback and improvement	· CPC hosts distributor conferences to convey sales strategies and marketing philosophy, gather business intelligence and customers' feedback, and maintain and strengthen a trusted relationship. · Strategies and plans for the next year are adjusted according to the outcome of the satisfaction survey. · Through in-depth interviews with distributors, CPC examines the effectiveness of its current system and adjusts/revises sales targets accordingly and provides individual counseling to unite consensus among distributors toward the common goal.

Franchise stations

Basic capacity development	· Provide guidance to franchisees in planning and obtaining business operation licenses. · Assist franchise stations in operational management by implementing the "Tank Supply Connection System," introducing the "Automated Information Management System" and "CPC Pay," to optimize the overall service process. · Promote the construction of the "New Fuel Station Canopy CIS" at franchise stations, with a total of 153 stations completed as of 2023.
Improvement of professional knowledge and skills	· Manager training: About 1,413 trainees a year. · 3S system training for franchisees: About 50 participants a year. · CPC University – practical training for franchisees: About 90 participants a year. · Foreign observational tours: About 2,096 participants in 2024.
Quality management and evaluation	Regulations are in place for sampling and testing the quality of fuel at franchise stations, with fuel products sampled and tested at all stages from departure to delivery to ensure compliance. In 2024, the number of fuel test samples from each franchise (direct sales) center totaled 40,995, with a testing completion rate of 175%, and all samples met product specifications.
ESG, sustainability, and co-prosperity	· Regular VOC testing is conducted at franchise stations, with subsidies provided for testing and tank cleaning costs, to assist franchise stations in implementing environmental protection testing procedures. · Actively promote smart and green gas stations; as of the end of 2024, a total of 470 franchise stations had responded by installing charging and battery-swapping stations.

1.3 Operating environment and results

1.3.1 Financial performance

Direct economic impact and operating performance

CPC has been entrusted with the mission to stabilize oil and gas prices for the growth of the national economy since the day it was founded. In 2024, CPC generated NT$1,097.3 billion in revenues and contributed NT$114.4 billion in taxes to the national treasury. Please visit the following web pages for CPC' s consolidated financial statements and related financial information.

Annual report information

Government donations

Unit : 100 million NTD		2022	2023	2024
Direct Economic Value	Revenue	12,219	11,035	10,973
	Operating Expense	14,258	11,173	11,230
Economic Value-Allocated	Employee Wages and Benefits	235	237	249
	Payment to Investors	44	87	102
	Financial contribution to governments of various countries and regions	1,020	1,044	1,144
	Community Investment	5.38	5.02	5.05
Others	Pre-tax profit (loss)	(2,144)	(224)	(355)
	Net Income (loss)	(1,862)	(214)	(330)
	Total Assets	9,750	10,524	11,126

2024 business overview

CPC mainly sells oil products, petrochemical products, and natural gas, and has a monopoly in the domestic supply of natural gas. CPC supplies natural gas to power generators, utility service providers, and industrial users; approximately 80% of the natural gas supplied is used for generating electricity.

Key Products

Product types (including multilateral trade)

- Natural gas finished product
- Petrol
- Diesel
- Aviation Turbine Fuel (ATF)
- Fuel oil
- Olefins
- Others

Other products and services

Lifestyle products

- Biotech products
- Festive gifts
- Agricultural Products
- Vehicle fuel

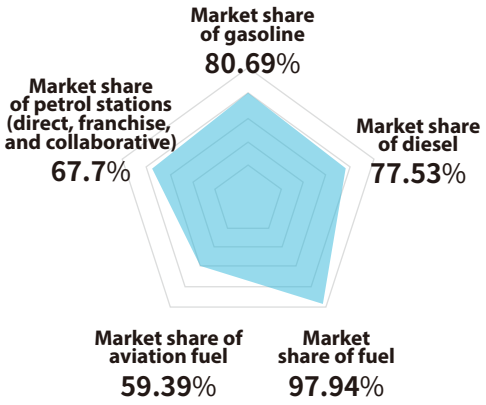
Quality service

- Quick Service and Tire Centers
- Carwash
- Compound stores and excellent public toilets
- Cup & Go Café
- Charging and Battery Replacement Points

Mid-stream and upstream products

- Refinery and supply of petrochemical feedstock

Market share of key oil products – 2024



Production and sales volume of oil and gas products – 2024

Crude Refining Volume
21.62 million kL

Oil products total sales (including petrochemical products and multilateral trade)
28.83 million kL

Sale of natural gas products
28.049 billion cubic meters

Revenues and revenue weight of main products

Product Types (including multilateral trade)	2022	2023	2024
Natural gas finished product	30.38%	35.27%	34.06%
Petrol	20.39%	21.13%	20.59%
Diesel	12.64%	11.64%	12.24%
Aviation Turbine Fuel (ATF)	3.25%	3.95%	4.46%
Fuel oil	5.81%	4.39%	5.23%
Olefins	5.12%	4.53%	5.21%
Others	22.42%	19.09%	18.21%

Indirect Economic Impact

CPC continued increasing commitments to major infrastructure in 2024, using smart, low-carbon, and efficiency enhancement technologies for energy and resource integration while adopting energy creation, utilization, storage, and management systems for enhanced energy control. Meanwhile, the uses of new technologies such as gas liquefaction, pressure energy-based power generation, and diamond water-based aquaculture are being promoted. CPC also supports the government' s electric vehicle and green energy plans by constructing integrated power systems with upgraded energy supply. For more complete explanations, please refer to chapter – CPC and Green Contributions.

1.3.2 Tax governance

CPC has long supported the implementation of tax-related policies, and is dedicated to making transparent disclosure of information and promoting sustainable growth

Tax policy

- All operating activities of the organization are conducted in accordance with relevant tax laws
- The financial statements have made tax disclosures in compliance with relevant rules and requirements, and presented information in a transparent manner
- CPC does not make use of tax heaven or make tax plans with the intention to evade tax
- CPC does not intentionally transfer the profits it generates to countries with a low tax rate
- CPC builds relationship with the tax authority on the basis of mutual trust, transparency and respect

Income tax information

CPC bears the responsibility of stabilizing oil and gas prices for the growth of local industries, and therefore has been making losses in recent years. Considering that calculation of effective interest rate and cash rate was not meaningful in this case, CPC has opted to disclose only its pre-tax profit (loss) and income tax expense (benefit) shown in financial statements for the last 3 years, as shown below.

(Unit: NTD millions)

	2022	2023	2024
Pre-tax profit (loss)	(214,431.24)	(22,411.43)	(35,450.70)
Income tax expense (benefit)	(28,272.22)	(1,048.85)	(2,424.15)

Tax information by country – 2024

CPC's global presence spans across 16 countries in 4 continents, and operates a total of 15 overseas offices. Through coordination between international offices, CPC is able to supply oil products and related services around the world. Tax information for various jurisdictions is explained in the chart below. CPC complies with the tax rules of applicable countries and fulfills its tax obligations. All relevant tax information is duly disclosed for transparency.

Tax jurisdiction	Net sales to non-related parties	Net Income Before Tax (Loss)	Income tax paid	Income tax expense (benefit)	Tangible assets	Employee count
Taiwan (TW)	1,080,090,247	(35,450,695)	0	(2,424,149)	1,110,607,931	16,637
Australia (AU)	5,019,740	1,579,828	0	0	35,967,261	2
United States (US)	250,446	(33,060)	0	0	474,139	7
Ecuador (EC)	1,012,111	80,773	0	18,308	850,100	1
Singapore (SG)	1	1,269	195	162	7,909	4
Niger (NE)	2,605,319	4,724,735	0	246,874	16,764,497	1
Congo (CG)	0	0	0	0	47,416	0
Chad (TD)	0	1,034,449	0	513,375	4,278,509	37
Indonesia (ID)	0	(6,230)	0	0	225,248	3
Panama (PA)	1,101,220	11,780,823	0	3,609,511	9,476	0
Somaliland (XX)	0	(11,814)	0	0	1,133,964	0
Mexico (MX)	0	(702,700)	0	0	0	0

Note 1: Countries from AU to MX was based on 2023 data.
Note 2: If the corporate income tax is a negative number, it will be expressed as 0, similar to the expression in the financial statements.

1.3.3 Response to significant events

Event 1 Description of financial losses incurred in 2024

Impact
In 2023, international oil prices gradually stabilized, and the global natural gas market supply remained secure. However, CPC continued to cooperate with the government's price stabilization policy by freezing (or limiting) price increases on oil and gas products, resulting in operational losses. In addition, the Central Bank of Taiwan' s interest rate hikes drove borrowing costs higher. By the end of 2024, CPC' s interest-bearing debt balance reached NT$738.4 billion, with a debt ratio of 92% and interest expenses amounting to NT$10.2 billion—the highest on record.

Response and subsequent enhanced measures
CPC observes the gas price formula and reviews the cost of natural gas as well as possible adjustments to the domestic natural gas price on a monthly basis. Price adjustment proposals are presented to the authority for review. The Company seeks approval to adjust prices in a way that fully reflects the change in gas cost. In response to operational losses in 2024 and the Central Bank of Taiwan's cumulative interest rate hike of 0.875% (3.5 basis points) from 2022 to 2024—while rates remain at a high level—CPC has adopted the following countermeasures for funding and financing costs:

- Strengthen risk management, secure sufficient credit lines, make good use of diversified financing instruments, and seek project financing from banks to ensure stable funding sources.
- Adjust the allocation of long-term and short-term, as well as fixed and floating rate borrowings in a timely manner, and reduce financing costs through public price comparisons and increasing the frequency of bond issuance.
- Promote sustainability-linked loans and other green finance instruments to secure preferential interest rate terms.
- Maintain strong credit rating to secure borrowing with financial institutions.

CPC's response strategies for improving operating performance
CPC continues to purchase LNG with the priority of providing consistent gas supply for domestic needs. The Company adopts the strategy of "securing purchase primarily using medium-term and long-term contracts, and secondarily using short-term or spot contracts." CPC would evaluate domestic natural gas demand 2 to 4 years before expiry of any contract, and conducts rolling reviews on potential purchases over the medium-term and the long-term in order to negotiate for suitable medium-/long-term contracts. CPC, in response to its losses, will reasonably adjust domestic oil and gas prices to timely reflect the import costs of oil and gas, continue to increase revenue while reducing expenses, and actively seek financial support from the government.

Event 2 Taoyuan Refinery Hydrogen Sulfide Leakage Incident

Impact
On July 5, 2024, a contractor at the Refining Business Division' s Taoyuan Refinery was performing a pipe blinding operation. The gas-supply-type air respirator mask worn by the contractor allegedly fell off for unknown reasons, causing the personnel to inhale hydrogen sulfide contained in the exhaust gas and resulting in unconsciousness and death.

Response and subsequent enhanced measures

1. Strengthen the connection between the work platform and the stairway.
2. Hold a meeting prior to the disassembly and inspection of the exhaust gas flare pipeline blind plate to understand the situation and formulate safety measures.
3. Ensure contractors wear air respirators properly, carry out checks, and retain records.
4. Revise the additional checklist for blind plate disassembly operations.
5. Require full surveillance video monitoring throughout the blind plate disassembly operation.
6. Provide air supply equipment and oxygen rescue devices on-site, and require continuous wearing of four-gas detectors.
7. Promote accident awareness based on this case and concurrently implement all improvement measures.

Event 3 Kaohsiung Linyuan Plant Ethylene Leak and Fire Incident

Impact
On March 16, 2024, the ethylene leak at the Linyuan Plant caused damage to machinery and equipment on-site and operational losses for the Company. The competent authority imposed an occupational safety fine of NT$300,000, and the incident attracted media attention, negatively impacting the Company.

Response and subsequent enhanced measures
After the incident, the Company immediately convened an incident investigation meeting to identify the root cause and formulate improvement measures:

1. Equipment: Implement engineering improvements to reinforce the connection between pipes and sleeves.
2. System: Include regulations on the use of safety tools in the insulation repair work instructions.
3. Management: Before improving the sleeves, complete safety isolation of the equipment to ensure a safe on-site environment; conduct simultaneous inspection and management of similar equipment within the plant; the supervisory department should promote appropriate tool selection for insulation repair contractors; local departments should strengthen the safety awareness of operating personnel in environmental assessment and their understanding of how wind direction may affect measurements.

Note: The above major incidents, along with monthly President's business reports (including environmental protection and occupational safety and health incidents—see 2.3.5 and 3.3.2), are reported to the Board of Directors. A total of xx cases were reported in 2024.

1.3.4 Risk control

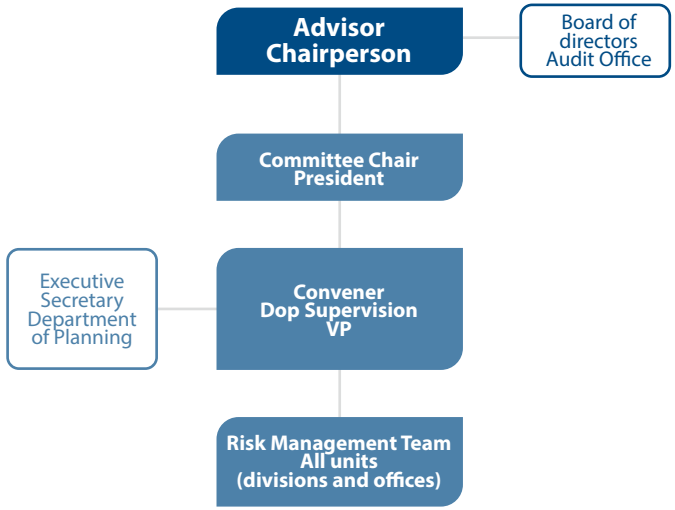
Material Topic: Business Continuity Management

Policy	Being able to equip employees with risk awareness and risk management ability and improve supply chain crisis handling capacity helps accomplish CPC' s medium- and long-term plans and sustainable management goals for the protection of stakeholders' interests.
Management Approach	· Risk management and crisis handling principles · Overall risk measurement principles · Supply chain self-assessment questionnaire
Action Plan	· Using "Risk Matrix" as an assessment tool and enterprise risk management (ERM) system to systematically record, trace, and control improvement of all risks that CPC is susceptible to. · Hold Risk Management Committee meetings regularly to track the implementation status of risk control measures and meeting resolutions.
2024 Actual Performance	In 2024, the Risk Management Committee reviewed a total of 10 risk events, formulated various response and contingency plans for each risk, and monitored the handling results to ensure CPC's crisis response capability.
Goals	· Promote risk management efforts, prevention and monitoring, and continuous improvement, and establish a complete and effective emergency incident response and reporting system. · Equip employees with risk awareness and risk management ability; blend risk management into routine operations and decision operations; and improve corporate crisis handling capacity to achieve our medium- and long-term plans and sustainable management goals and protect the rights and interests of stakeholders.

Risk Management Committee and risk management practices

In March 1998, CPC assembled its "Risk Management Committee" and risk teams under various units (divisions and offices) to help enforce the risk management system. The committee and teams continue to execute CPC' s risk management system today, using "Risk Matrix" as an assessment tool and enterprise risk management (ERM) system to systematically record, trace, and control improvement of all risks that CPC is susceptible to.

Risk Management Framework

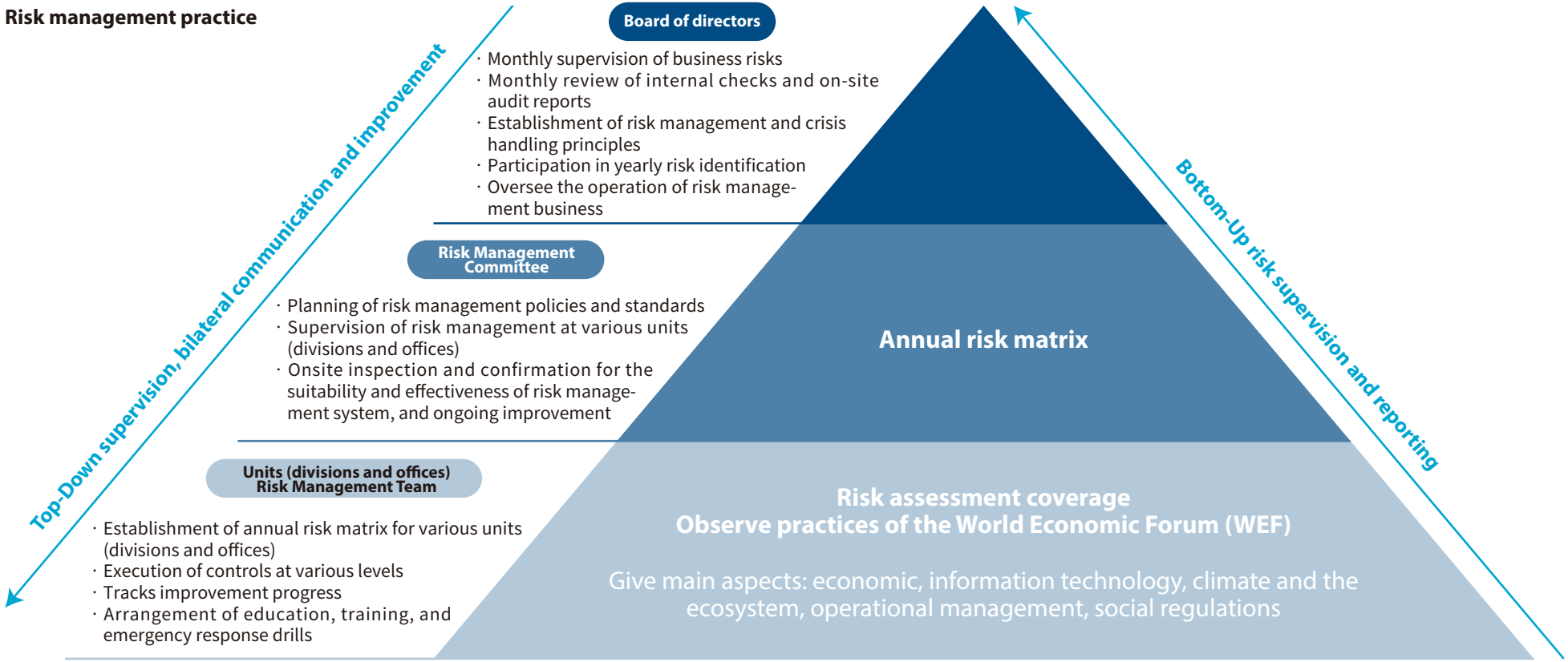


CPC has established its own "Principles for Risk Management and Crisis Handling Practices" and "Overall Risk Measurement Principles" to support the enforcement of risk management policy and the development of a crisis management system. A risk management system, an internal audit system, and a Crisis Response Team have also been put in place to provide appropriate and effective support for internal control practices. Four key risk management policies have been implemented to serve as guiding principles for organizational risk management:

CPC's four major risk management policies serve as guiding principles for organizational risk management:

- Reduce business risks for corporate sustainability
- Improve risk management capacity and shape a risk management culture
- Adopt total risk management and enforce operating procedures
- Enhance communication with employees and stakeholders and enforce the risk management policy

Risk management practice



Outcomes of risk management practice – 2024

CPC has a Risk Management Committee in which the Chairman serves as the Advisor and supervises meetings on behalf of the board of directors. All members of the board take part in the annual risk survey and ranking exercise, and participate in advanced risk management conferences from time to time. CPC's risk management operations were submitted to the Board of Directors in a special report in October 2024.

The Risk Management Committee conducts a full-scale examination of risks that the organization may be exposed to, devises appropriate responses for various scenarios, and examines and monitors the outcome of each response. In 2024, CPC identified 10 risk items. After implementing improvement measures and ongoing monitoring, the residual risk values of 8 items remained stable. The residual risk values of 2 items—unplanned shutdowns and failure to implement occupational safety and health standard operating procedures (including contractors), which result in construction or operational risks—decreased.

Risk category	Identification of risks and opportunities	Response measures and actions
Regulations	**Impacts of green energy transformation**	· Continue to monitor market trend changes to respond in a timely manner · Actively develop geothermal energy and carbon capture and storage (CCS) · Continue to promote carbon emission reduction and achieve annual targets · Strive for early bird program eligibility for major electricity users under the Ministry of Environment's carbon fee collection plan · Establish integrated charging stations · Integrate CPC's green energy transition strategies and action plans
	Impact of government policies on financial and business performance	· Report monthly to competent authorities on losses incurred from stabilizing oil prices in line with government policies · Assess business conditions and select appropriate timing to petition the government for a review of the floating oil pricing mechanism · Assess business conditions and select appropriate timing to petition the government for a review of the floating oil pricing mechanism · Continue to advocate for raising prices for non-power industry users to appropriately reflect gas sourcing costs · Submit annual capital increase project proposals from the Finance Department to competent authorities · Continue implementing various business improvement measures to increase revenue and reduce costs · Conduct benefit analysis and propose enhancement measures for all investment projects · Carry out hedging operations throughout the year to manage the price difference between export oil prices and crude oil costs
Information technology	**Risk of cybersecurity incidents**	· Establish a cybersecurity center dedicated to cybersecurity operations and reinforce professional manpower · Strengthen high-privilege account authentication and deploy EDR mechanisms to expand monitoring · Conduct annual on-site audits and domain account checks for outsourced vendors · Set up a backup-recovery zone and offsite backup mechanisms · Conduct both pre-announced and unannounced social engineering drills and business continuity exercises
Ecosystem	**Impacts of climate change**	· Update climate risk assessment reports for strong wind and flooding · Convene meetings to plan climate change adaptation strategies · Implement water conservation measures based on water condition alerts · Compile water restriction strategies and require all units to conduct rolling reviews and updates · Coordinate with the Water Resources Agency's rolling management of water information and hold response meetings as needed · Strengthen seismic-resistant design of pipelines and post-disaster inspection mechanisms · Enhance cleaning of oil-water separators before the rainy season and ensure drainage systems function smoothly · Strengthen typhoon emergency preparedness and safety awareness campaigns · Establish sustainability index-linked financing agreements with multiple banks · Activate tanker response tracking mechanisms in response to maritime typhoon warnings

Risk category	Identification of risks and opportunities	Response measures and actions
Operational management	**Stable supply and safety of oil and gas**	· Diversified crude oil sources · Utilize production and marketing linear programming models for optimization and regularly convene production and marketing planning and tracking review meetings · Strengthen cooperation with suppliers, as well as increase LNG receiving capacity and storage tank numbers · mplement long-distance pipeline integrity management · Main oil procurement is based on the principle of not purchasing Russian crude oil and naphtha · Ensure stable domestic oil and gas supply · CPC's risk assessment covers all operating sites within the reporting boundary, and development plans cover 100% of these sites
	Stable supply and safety of oil and gas	· Annually conduct recruitment for new staff and employees · Implement a ten-year advance recruitment plan for core technical personnel · Allocate budgeted headcount based on short-, medium-, and long-term manpower plans and continue recruitment accordingly · Strengthen training for new personnel and core professional development and certification acquisition · Control outsourced labor on a quarterly basis · Continue to utilize the KM system and establish an expert directory · Review in-house manageable tasks to gradually reduce outsourced labor and related costs
	Mishandling of crisis/extraordinary occurrence	· Handle crisis events or emergencies in accordance with operating procedures · Adhere to the principle of "proactively speak, act immediately, report promptly" in response to public opinion · Convene spokesperson meetings to discuss news crisis handling principles and response measures · Immediately report to relevant personnel and take emergency measures in response to unexpected maritime incidents · Track the implementation of emergency response drills by all units on a monthly basis · Include the number and amount of environmental fines in performance evaluations to strengthen control

Risk category	Identification of risks and opportunities	Response measures and actions
Operational management	**Construction or operation risk due to failure to implement the OHS SOP (including contractors)**	· Strengthen promotion, education and training, execution, and audit of standard operating procedures for internal and external personnel · Require contractors to conduct hazard identification and risk assessment, and job safety analysis, and implement graded safety inspections, site patrols, and morning briefings · Conduct regular/irregular equipment inspections in accordance with the automatic inspection plan and retain records · The Chief Engineer's Office supervises the audit of contractor qualifications and execution status and tracks improvements · Regularly compile and analyze accident cases · Conduct accident review for freak wave incidents, propose improvement measures, and continue to track and control · Establish an emergency reporting mechanism to immediately report accidents at the first moment
	Risk of maintenance for critical equipment	· Assess risks and plan improvement measures or protective mechanisms before critical equipment construction · Hold safety meetings to promote precautions before carrying out critical tasks · Continuously revise SOPs and strengthen promotion and compliance · Assign supervisors and contractor safety personnel at critical construction sites · Each oil supply center performs inspections and maintenance in accordance with standard operating procedures · Yongan Plant conducts tripartite inspections before high-risk operations and retains records · Dalin Plant uses dual power supplies for instrumentation and control equipment to ensure multiple protections · Input key equipment of each petrochemical plant into the CMMS system to regularly track maintenance progress and material preparation status · Revise long-distance pipeline patrol guidelines to clarify reporting mechanisms and strengthen implementation
	System halt and unplanned boiler halt	· Maintain and replace equipment according to plan and continuously review and update · Enhance inspection and replacement of pipelines with safety concerns and conduct VOC inspections · Incorporate equipment integrity concepts into design and procurement · Implement risk control measures such as HazOp, RBI, and SIS · Conduct MOC and feasibility assessment when changing equipment materials · Adjust operations in coordination with gas supply scheduling and continuously track maintenance and servicing progress · Shift personnel perform machine changeover operations and equipment cleaning weekly · Continue to carry out system updates to prevent unit trips of filling equipment · No system halts or unplanned boiler halts occurred throughout the year · Establish operating procedures to immediately allocate or import supplements in the event of unplanned production reduction · Each unit continues to conduct practical drills, notification drills, and training

Note: CPC also follows "TCFD Recommendations" when identifying potential risks and opportunities of climate change. Please see Chapter 2.1 – Mitigation and adaptation to climate change for details.

Internal audit and external supervision

To strengthen internal control and audit mechanisms, CPC established the Board of Directors Audit Office, and ensures respect for the professionalism and independence of internal auditors, granting them full authority to conduct various audit tasks. The following aspects of the audit system are specified:

(1) System aspect:

For any internal control document established by the management and approved by the board of directors, each unit (division and office) is required to examine and evaluate on a regular basis the appropriateness and completeness of such document given the internal/external business environment, the prevailing regulations, organizational adjustments, and business changes, etc., and thereby improve the internal control system.

(2) Execution aspect:

1. CPC devises audit plans according to risk assessment and duly conducts on-site audits each year: On-site audits were conducted on a total of 21 units and 21 headquarter divisions/offices in 2024.
2. The management department shall conduct internal control self-assessments once a year.
3. Conduct annual internal control special audits: Each year continue to carry out special audits on business items assessed as high risk or with recurring deficiencies. In 2024, a total of 4 special audits and 4 unannounced audits were conducted. All audit deficiencies and non-conformities are listed for follow-up and tracked until improvement is completed.

Internal audit

· Establish the Board of Directors Audit Office and, in accordance with the Regulations Governing Establishment of Internal Control Systems by Public Companies, develop the following year's internal audit plan based on risk assessment of the audited units.
· Communication meetings with Audit Committee members are arranged on an unscheduled basis each year to check and verify flaws within the internal control system and to evaluate the effectiveness and efficiency of current practices.

Externa supervision

· CPC is required to undergo a CPA audit and FSC inspection every year.
· CPC is subject to the supervision of the Department of State-owned Enterprise Affairs, MOEA, and the National Audit Office, Control Yuan.

1.4 Business Integrity

1.4.1 Compliance

Material Topic: Compliance

Policy

Compliance, robust corporate governance, and the establishment, enforcement, and adherence of related guidelines not only reduce business risk and penalty risk, but also contribute favorably to the improvement of business performance

Management Approach

- Operational overview and performance review report
- Guidelines for the Adoption of Codes of Ethical Conduct for TWSE/TPEX Listed Companies
- CPC Code of Ethical Conduct
- Act on Recusal of Public Servants Due to Conflicts of Interest
- Integrity and Ethics Principles for Employees of the Ministry of Economic Affairs

Action Plan

CPC pays constant attention to international conventions and policies that are potentially impactful to the Company given the prevailing trends, so that rules and procedures can be optimized to ensure that employees conduct business activities in accordance with laws.

2024 Actual Performance

No violations of laws related to "anti-competitive, anti-trust, and monopolistic behavior"

Goals

- No significant violation of social, environmental, and economic compliance
- Ensure the appropriateness and effectiveness of the internal control system and build an ethical business that is free of corruption

2024 CPC legal compliance and related violation incidents

0 Violations of laws related to "anti-competitive, anti-trust, and monopolistic behavior"	**3** Violations of laws related to the "Labor Standards Act"
13 Violations of laws related to the "Occupational Safety and Health Act"	**24** Violations of laws related to "environmental protection and pollution prevention"

Note: For detailed explanations of penalty cases and improvement measures, please refer to: 3.3.2 Employee Safety Protection, 2.3.5 Air Pollution Management and Compliance with Environmental Regulations, Appendix 5, Environmental Protection Related Information.

CPC penalty amounts over the past 3 years

2022	2023	2024
20,807 Thousand NT$	13,434 Thousand NT$	22,507 Thousand NT$

1.4.2 Anticorruption

Material Topic: Anti-corruption Measures

Policy

Taking the initiative to identify corruption risks at various locations helps promote anti-corruption awareness and brings positive effects to corporate governance over the long term.

Management Approach

- Corruption risk assessment at business locations
- Arrangement of anti-corruption training

Action Plan

- CPC carries out all business activities while observing integrity principles, and considers compliance with government regulations to be the minimum requirement.
- CPC strictly prohibits corruption, bribery, embezzlement, and any attempt to exploit the vested authority for own gains or gains of others, so as to preserve a corporate culture of sustainability and integrity.

2024 Actual Performance

- Operational sites that have undergone corruption risk assessments reached 100%.
- Employees who have received anti-corruption education and training reached 100%.
- Number of contract terminations or non-renewals with business partners due to corruption violations: 2 cases.[Note]

Goals

- Prevent corruption and pursue the highest standards of integrity
- Ensure the appropriateness and effectiveness of the internal control system and build an ethical business that is free of corruption

Note: This refers to the statistics on blacklisted vendors published by CPC in accordance with Article 101, Paragraph 1, Subparagraph 15 of the Government Procurement Act; a total of 2 cases were recorded in 2024.

CPC's integrity work mainly adheres to the principle of "prevention first, suppression second," aiming to establish preventive and corrective measures through improving business procedures, including the development of the "Principles for CPC Integrity Personnel Participating in Procurement Supervision" and the "Procurement and Integrity Department Irregular Information Reporting Mechanism," to effectively prevent procurement corruption and ensure open, fair, and transparent competition. In addition to promoting anti-corruption laws during training and department meetings, CPC also conveys the implications with contractors that it has a relationship with, and instructs contractors to uphold ethics in business dealings.
All CPC units are included within the scope of integrity risk assessments. For "integrity risk events" that may arise within this scope, related administrative responsibilities are pursued based on the severity of each case, including correcting deficiencies, recovering funds, and proposing improvement recommendations. In cases involving criminal liability, intelligence is continuously gathered and forwarded for legal investigation, with full cooperation provided to prosecutorial and anti-corruption agencies during investigations.

2024 Business location corruption risk assessment

CPC regularly conducts corruption risk assessments. In 2024, 100% of its operational sites conducted corruption-related risk assessments, and no incidents of bribery, corruption, money laundering, or insider trading occurred.

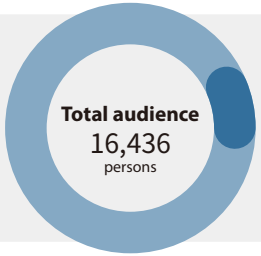
$$\frac{\text{No. of business locations assessed for corruption risk}}{\text{Total No. of business locations}} = \frac{14}{14} = 100\%$$

Percentage of business locations assessed for corruption risk

Note: "Business location" refers to any single location that the organization uses for production, storage, product/service distribution, or administrative purpose (e.g. office).

Percentage of CPC Corporation, Taiwan (CPC) units that received anti-corruption training

100%



Number and percentage of department employees subjected to anti-corruption training (by department)

Employees		2024		
Department	Employee role	Employee count	No. of employees trained	Percentage
Headquarters	Supervisors	113	113	All units achieved a 100% participation rate in anti-corruption training.
	Non-supervisors	826	826	
Oil Product Marketing Division	Supervisors	256	256	
	Non-supervisors	4,667	4,667	
Exploration & Production Research Institute	Supervisors	15	15	
	Non-supervisors	122	122	
Chemical Solvent Business	Supervisors	20	20	
	Non-supervisors	214	214	
Project & Construction Division	Supervisors	24	24	
	Non-supervisors	216	216	
LPG Business Division	Supervisors	14	14	
	Non-supervisors	117	117	
Refining Business Division	Supervisors	222	222	
	Non-supervisors	4,009	4,009	
Natural Gas Business Division	Supervisors	114	114	
	Non-supervisors	1,787	1,787	
LNG Project Division	Supervisors	15	15	
	Non-supervisors	143	143	
Lubricants Business Division	Supervisors	23	23	
	Non-supervisors	128	128	
Exploration and Production Business Division	Supervisors	114	114	
	Non-supervisors	1,238	1,238	
Petrochemical Business Division	Supervisors	95	95	
	Non-supervisors	1,373	1,373	
Refining & Manufacturing Research Institute	Supervisors	21	21	
	Non-supervisors	359	359	
Green Technology Research Institute	Supervisors	10	10	
	Non-supervisors	181	181	

2024 Corruption risk events

Severity of corruption risk | Type

Low corruption risk

Embezzlement, forgery of documents, fraud, inappropriate language/behavior, breach of discipline, violation of corporate vehicle rules

Moderate corruption risk

Incorrect filing for small purchase, incorrect filing for small claim, abnormality in procurement procedures, abnormality in fuel station bookkeeping

High corruption risk

Improper inspection of the services procured to the extent that constitutes suspicion for a surrender of interests to the vendor, suspected breach of duty that involves a large bribe, suspected divulgence of secrets

Note: In 2024, there was a total of 1 case in which an employee was dismissed or subjected to disciplinary action due to a corruption incident.

1.4.3 Whistleblowing system and whistleblower protection

CPC has established multiple channels for reporting integrity-related issues and also promotes these reporting channels through various print and electronic media. According to statistics, judicial authorities processed a total of 19 cases in 2024, including 3 indictments, 7 deferred prosecutions, and 9 judgments. Among these, 5 cases involved corruption (however, none of these cases occurred in 2024), while the remaining 14 cases were general criminal cases (such as theft, fraud, bid rigging by vendors, etc.). Violations are compiled into case studies and conveyed to employees on a regular basis.

Furthermore, CPC has an "Internal Control System for Whistleblower Protection" and "Whistleblower Protection Guidelines" in place to maintain the secrecy of a whistleblower's identity, and all misconduct reports are handled in a confidential manner throughout the entire process. Any reply to the whistleblower is sent using a separate mail, and any discussion with the whistleblower will take place at an appropriate venue with proper confidentiality measures taken for whistleblower protection. Extra attention is being directed to protecting identity and job security for whistleblowers.

Procedures for accepting misconduct report

2024 Outcomes of misconduct report

Cause for report	Case count	Handling measures	Percentage handled
Violation against Government Procurement Act	16	Referred to investigation	**100%**
Surrender of interests to vendors	1	Cooperate with investigation	**100%**
Corruption	5	Referred to investigation	**100%**
Fraudulent claim of business expense/overtime pay	6	Administrative resolution/discipline; referred to investigation	**100%**
Fraud / forgery of documents	12	Administrative resolution/discipline; referred to investigation	**100%**
Theft / misappropriation of public property, theft of livelihood items	7	Administrative resolution/discipline; referred to investigation	**100%**
Leak of confidential information	1	Administrative resolution/referred to investigation	**100%**
Exam fraud	1	Cooperate with investigation	**100%**
Employee conflict, internal management (attendance, internal control etc.)	19	Clarification; administrative resolution/discipline	**100%**
Others	14	Clarification; administrative resolution	**100%**

Internal corruption reporting channels

CPC Political Affairs Unit Address:
22F, No. 3, Songren Road, Xinyi District, Taipei City
e-mail: report@cpc.com.tw
TEL: (02)8725-8478
Fax: (02)8789-9007

External corruption reporting channels

Address of MOEA Procurement Audit Unit:
No. 15, Fuzhou Street, Taipei City
TEL: (02) 2397-1592
Fax: (02) 2397-1593
e-mail: ps.unit@moea.gov.tw.

Central Government Procurement Audit Unit, Public Construction Committee, Executive Yuan
Address: 9F, No. 3, Songren Road, Xinyi District, Taipei City
TEL: (02) 8789-7548
Fax: (02) 8789-7554

Agency Against Corruption, Ministry of Justice Free reporting
line: 0800-286-586
Mailbox: Academic Historica P.O. Box 153, Taiwan 100006.
Fax: (02) 2381-1234
E-mail: gechief-p@mail.moj.gov.tw
Report center
No. 166, Boai Road, Zhongzheng District, Taipei City

Offices and contact numbers of the Investigation Bureau, Ministry of Justice
(website: https://www.mjib.gov.tw/EditPage/?PageID=68997624-Bae6dd97c5ca1f87)

Employee integrity laws promotion
440 sessions
Number of employees reached:
13,271 person-times

Electronic communication
164 times
Number of employees reached:
86,995 person-times

Integrity and anti-corruption promotion
151 sessions of social participation activities
Number of citizens reached:
18,021 person-times

Integrity education promotion and social participation activities
Engaged **97** internal and external lecturers
Training expenses invested:
NT$ **1,031,381**

1.4.4 Transparent product pricing

CPC has been implementing a price stabilization system for oil and natural gas in line with the government's price stabilization policies. The system operates under the supervision of the authority, and is intended to charge users for the amount of energy used in a fair manner so that oil and gas prices can be set logically. CPC encountered no lawsuit in 2024 that involved manipulation of oil/gas prices. All key products such as oil (including 92 unleaded, 95 unleaded, 98 unleaded, ethanol, super diesel), LPG, and natural gas have passed quality requirements imposed by laws, and no loss on exchange was reported.

Natural gas

Compliance principles	The MOEA first approved the "natural gas price adjustment system" back in 2008, and given the current state of the natural gas industry, CPC issued a correspondence titled "Review and amendments to CPC's natural gas price and supply cost" to the MOEA in September 2020, and was granted approval to implement the amended supply cost from 2021 onwards.
Basis of price adjustment	According to the natural gas price adjustment system, CPC is required to conduct monthly reviews of changes in LNG cost, and make adjustments within the scope of delegated authority (up to 3% in a single month and up to 6% over 3 consecutive months) and notify the central authority afterwards. Adjustments above this cap must be reported to and approved by MOEA before taking effect. Explanations of gas price adjustment and the basis of calculation are announced and updated on CPC's website.
CPC's care for consumers	Since 2023, international oil prices and natural gas prices have gradually stabilized, but remain above past average levels. Electricity tariffs for natural gas have been gradually adjusted in accordance with the natural gas price adjustment mechanism. However, household users' gas prices, in consideration of the government's goal to stabilize consumer prices, have not been adjusted from June 2021 through the end of 2024. Industrial users' gas prices have also been frozen since June 2021 and only began to be gradually adjusted starting in June 2024; however, the price adjustments have still been insufficient. CPC has temporarily absorbed the difference, resulting in continued losses on natural gas products for the Company over the past two years.

Gasoline and diesel

Compliance principles	CPC proposes price adjustments each week according to the "Floating Price Adjustment Principles for Domestic Gasoline and Diesel" approved by the authority, and announces and implements the adjustment after seeking approval through administrative procedures.
Basis of price adjustment	CPC makes weekly adjustments in line with international oil prices and the average exchange rate; the extent of adjustment is determined solely by the outcome calculated using an oil price formula. Once calculated, the retail prices of 92 Unleaded and Super Diesel are used to determine the pre-tax wholesale prices. These prices are then compared to the current week's lowest pre-tax price observed in competing countries in Asia (namely Japan, Korea, Hong Kong and Singapore), which serves as the upper limit for price adjustments. Weekly price adjustments are disclosed on CPC's website and through a press release.
CPC's care for consumers	To lessen the financial burden and impact that price changes have on the general public, the MOEA announced a new set of oil price stabilization measures in 2018 that set three price thresholds for 95 Unleaded at NT$30, NT$32.5 and NT$35 per liter. If the retail price rises above the threshold, the government will absorb 25%, 50% and 75% of the excess, respectively. The same absorption rate applies to 92 Unleaded, 98 Unleaded, and diesel on a per-liter basis.

LPG

Compliance principles	CPC adjusts prices according to the "LPG price adjustment system" on a monthly basis, and announces and implements the adjustment after seeking approval through administrative procedures.
Basis of price adjustment	CPC calculates the amount of adjustment each month using the price adjustment system. These adjustments, once approved by the Chairman, are updated to the LPG rate sheet on CPC's website along with relevant details (including wholesale price, international CP average price, exchange rate, and prices in Asian neighbors) for public inquiry. In the downstream, canister filling factories and local gas suppliers are free to set end sales prices according to the market rate, which CPC does not interfere with.
CPC's care for consumers	CPC follows the government's instructions to halt or defer price hikes whenever there are drastic changes to the supply, demand, or competitive landscape of the domestic or foreign market, and thereby preventing any excessive change in price levels that may otherwise impact people's lives. Losses arising from adjustments that fall short of the real changes will be reversed when international prices fall. CPC offers fuel subsidy to low-income households and has been implementing the "Tanked Gas Subsidy for the Underprivileged" program since 2014, in which it paid subsidies whenever the wholesale price of household tanked gas exceeds NT$30 per kg.

1.5 Services and Innovation

CPC upholds the business philosophy of "Quality First, Service Supreme, Maximum Contribution," actively listens to customer voices, strengthens sound two-way communication mechanisms, comprehensively promotes product safety and customer rights management, and provides comprehensive products and services. We continuously improve processes, reduce non-conformance rates, and prevent problems before they occur, striving to provide high-quality and safe products and services, thereby safeguarding customer rights, enhancing customer satisfaction, and shaping corporate image.

1.5.1 No. 1 in Quality

Product/service quality requirements and tests

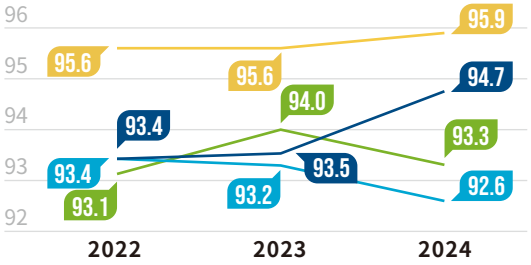
CPC prioritizes customer safety, strictly adheres to relevant regulations and quality management standards such as ISO 9001, and discloses information on major products and services and Safety Data Sheets (SDS) on its website, providing composition, hazard identification, pricing and adjustment records, and other historical records for stakeholder reference. Usage precautions are also indicated on the packaging of each product to ensure user safety. The Refining & Research Institute, refineries, oil and gas supply centers, transportation departments, and gas stations all conduct regular sampling and testing of the quality and calorific value of petroleum products, natural gas, and liquefied petroleum gas, with strict product quality control. The Energy Administration and the Bureau of Standards, Metrology and Inspection also conduct regular inspections of petroleum product quality to ensure compliance with national standards. Petroleum product quality and customer satisfaction are both included as assessment items with established targets, and each unit's target achievement rate is reviewed mid-year and annually. There were no incidents of products or services violating health and safety regulations in 2024.

1.5.2 No. 1 in service

Customer Satisfaction

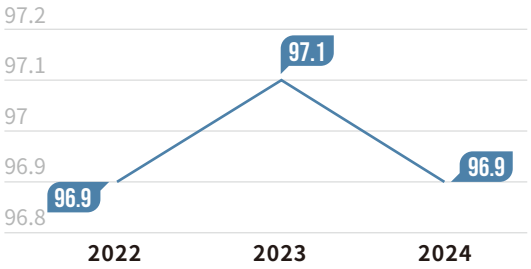
With serving the public as its core value, CPC attaches great importance to customer needs and feedback and provides excellent services, using complaint case handling rates, customer satisfaction surveys, and performance evaluations as internal assessment mechanisms. We have established the "Satisfaction Survey Operating Procedures" and conduct annual surveys and analyses. Based on the analysis results, we continuously improve to achieve the goal of enhancing service quality. The results of various surveys are as follows:

Outcomes of product and service satisfaction survey



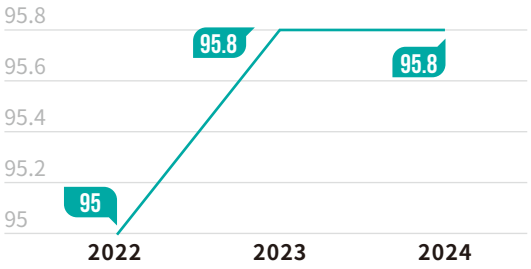
Through in-person visits or telephone interviews, we gather and review customer visit reports and customer satisfaction survey data, proactively resolve customer issues and provide assistance to improve customer satisfaction. In the future, CPC will continue to make progress and provide customers with better services and products.

Petrol station customer satisfaction survey



The State-owned Enterprise Affairs, Ministry of Economic Affairs (MOEA), outsources an annual customer satisfaction survey for each business unit, designing questionnaires for different customer categories through face-to-face interviews and telephone interviews to explore reasons for customer satisfaction and dissatisfaction. CPC continuously improves the service quality of each gas station staff member, consistently earning customer recognition in service attitude, appearance, and customer service center voice services. CPC will continue to enhance its services to maintain a high level of service quality.

Customer experience management (CEM)



CPC places great importance on the customer experience and feedback and has long been committed to improving service quality at gas stations. Through the implementation of "Customer Experience Management (CEM)" at 125 gas stations and conducting customer satisfaction surveys, we gain insights into areas for improvement. Additionally, the customer service center conducts telephone surveys with VIP members who made purchases at gas stations within the past 24 hours. The survey focuses on four major aspects: overall gas station service, service attitude, fueling operation, and fueling environment. The goal is to gain in-depth understanding of customer feedback, conduct focused reviews and improvements, enhance service quality, and maintain a high level of customer satisfaction.

Customer grievance system

To provide better service to customers, CPC promotional personnel visit direct sales customers monthly and compile and analyze customer visit reports. Based on customer suggestions and needs, they develop countermeasures, monitor customer dynamics, and assist customers in resolving issues to enhance customer satisfaction. In addition, CPC has established a customer service center to handle complaints or suggestions on a case-by-case basis. The average case handling time is 3 to 6 working days. If handling takes longer or if the customer cannot be reached, resulting in a processing time exceeding 6 working days, it is classified as an overdue case.

In 2024, customers were visited **3,543** times

In 2024, **197** customer fuel-related issues were resolved

CPC customer service center satisfaction rating **4.96**

Customer complaints and suggestions received in 2024

94% resolved on the spot

A total of 161,676 customer inquiry cases, 3,364 suggestion cases, 2,152 criticism cases, 37 complaint cases, and 942 other cases (including affirmation and recognition, etc.) were received, with a total of 168,171 cases. 94% of the cases were immediately handled by the customer service center and customer service office, while 6% (10,045 cases) required forwarding to the relevant business units for assistance in returning calls or emails to customers. All customer service cases were properly handled and completed.

0.01% overdue rate

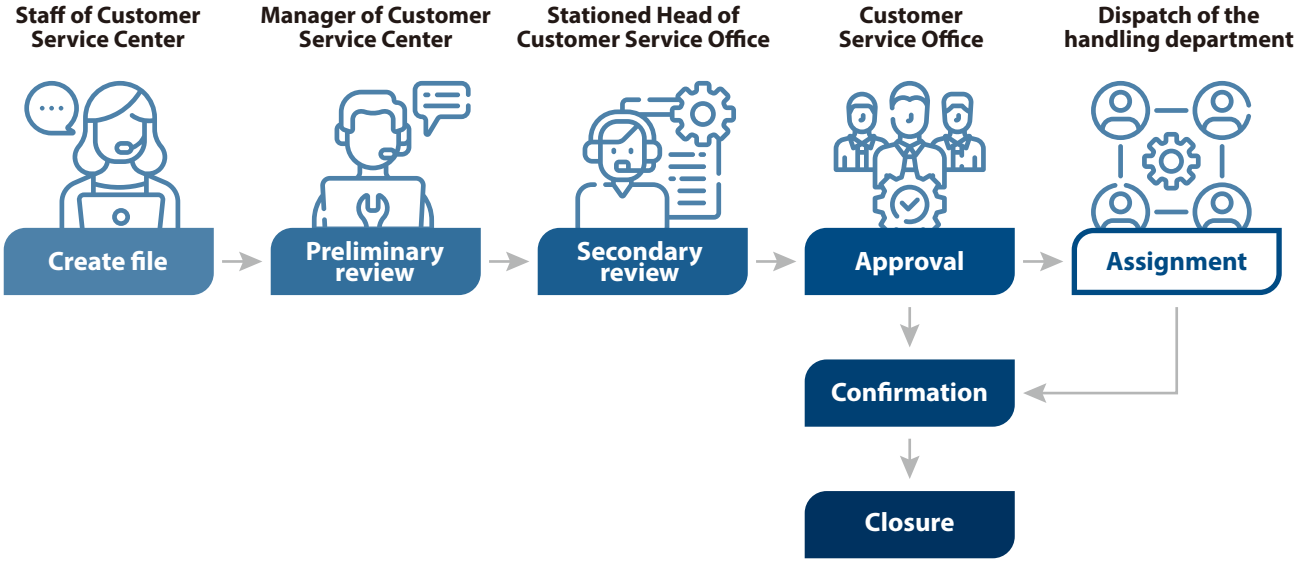
There were 16 overdue cases, representing an overdue rate of 0.01%. All 37 consumer disputes (customer complaints) were resolved in time.

Grievance channels and the resolution workflow

24-hour toll-free hotline 1912

"Opinion mailbox" on CPC website

Resolution workflow for customer service cases



Cybersecurity Management

Material Topic: Cybersecurity

Policy

Enhancing cybersecurity awareness among employees is vital for maintaining customer data and establishing a cybersecurity framework that meets regulatory and customers' requirements.

Management Approach

- Cybersecurity maintenance plan
- ISO 27001 – Information Security Management System
- Cybersecurity and personal data management procedures for customer service centers
- Dedicated information security personnel are assigned to promote, manage, and implement information security-related operations within the unit.

Action Plan

- Ensure the confidentiality, integrity, and usability of CPC's business-related information.
- Meet requirements for the given level of cybersecurity responsibility, and reduce cybersecurity risks.
- Organize cybersecurity training to raise employees' capacity and awareness.
- Enhance cybersecurity protection in line with policies and laws.
- Adopt proper outsourcing of information/communication system or service, and meet cybersecurity requirements.

2024 Actual Performance

- Conducted inventory check of high-privilege domain accounts and enhanced high-privilege account login by implementing two-factor authentication and.
- Continuously promoted the Endpoint Detection and Response (EDR) mechanism, deployed on endpoint devices across the entire Company to expand the monitoring scope.
- Conducted 2 internal audits at the head office and 7 on-site inspections of external units.
- Conducted 2 domain account inventory checks for labor service and third-party personnel at the head office.
- Conducted 3 phishing drills, both announced and unannounced, to reduce the risk of malicious email-based social engineering attacks; the average email-based social engineering drill open rate for the year was 0.93%, with a click-through rate of 0.81%.

Goals

- Conduct at least two internal audits of the headquarters and six on-site audits of external units (including contractors) each year.
- Report, respond to, and recover from cybersecurity incidents within the prescribed timeline.
- To keep the click rate below 4% and attachment view rate below 2.5% in social engineering drills.

CPC cybersecurity promotion team

CPC' s Information Security Center is responsible for information security management and defense in depth, promoting enhanced information security measures in IT and industrial control system environments. Dedicated information security personnel are assigned to promote, manage, and implement information security-related operations within the unit. In 2024, the Company' s actual total expenditure on information security was approximately NT$210 million (excluding tax), accounting for 20.02% of the total IT expenditure.

CPC's dedicated personnel for its information security environments

Obtained ISO 27001 certification

- Grade A units 4 persons
- Grade B units 2 persons
- Grade C Units 1 persons

CPC's cybersecurity and personal data response measures

CPC has established the "Customer Service Center Information Security and Personal Data Management Operating Procedures," regularly reviews operating mechanisms and strengthens system maintenance to enhance employee awareness of privacy and information security, thereby ensuring the security of customer data. In the event of a hacker intrusion or personal data breach, emergency response measures will be activated immediately, and the Personal Data Protection Promotion Task Force will be notified simultaneously. In response to the implementation of the Personal Data Protection Act, CPC holds at least one personal data meeting each year, convened by the vice president, with relevant personnel jointly discussing personal data protection issues. CPC has also established a personal data reporting and management system, investing manpower, funding, and software and hardware resources, conducting an annual inventory of personal data to strengthen protection and control.

Education and drills

To enhance employees' understanding of regulations and response capabilities, CPC holds two personal data law training sessions each year. In 2024, the Company additionally offered courses such as "Personal Data Litigation Practice Q&A" and "Personal Data Law through News Cases," with teaching videos recorded onsite and uploaded to CPC e-Learning Academy for employees to access at any time, thereby strengthening employees' awareness of information security and personal data protection. There was no report of customer privacy violation or leakage or theft of personal information in 2024. Please visit our corporate website for more about our information protection policy.

Complaints concerning breach of customer privacy or loss of customer data

0	Substantiated complaints from outside parties
0	Substantiated complaints from the authority

1.5.3 No. 1 in contribution

Material Topic: Oil industry transformation

Policy

CPC is the pioneer of vertical integrations in Taiwan' s petrochemical industry. Not only does the organization expand its product and service range from a value chain perspective, but it also takes the initiative to explore innovations and introduce smart technologies like 5G and AIoT growing in popularity around the world. By incorporating digital technologies into existing research capacity, CPC facilitates the transformation of the entire petrochemical industry and exerts a positive influence in ways that minimize negative impacts.

Management Approach

Continuously innovate and improve by keeping abreast of domestic and international trends to maximize corporate value.

Action Plan

- Business diversification strategy
- 5G and AIoT applications

2024 Actual Performance

- A total of 254 gas stations across Taiwan provide car wash services, and CUP&GO drive-thru coffee has been installed at 213 stations.
- 4 smart green energy stations.
- Conducted 10 in-person AI training courses, with a total of 312 participants.
- Offered 6 online AI courses, with a total of 757 participants.

Goals

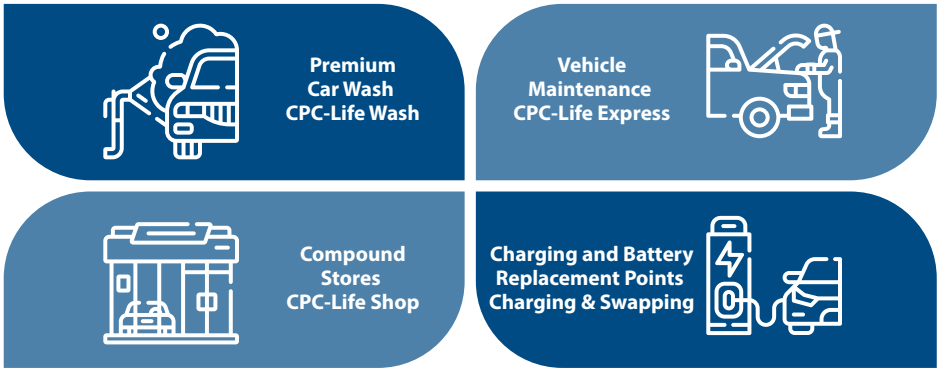
With diversified operations and digital transformation as the core, continuously introducing innovative technologies to enhance operational resilience and service value, and to build a sustainable industry value chain.

Business diversification

In response to market changes and international market trends, in addition to the core business of producing and marketing oil, gas, and petrochemical products, CPC also develops diversified business projects to enhance the value of gas station channels and services, providing customers with one-stop, diversified, value-added services. These include quick vehicle maintenance, car wash, parking, convenience goods sales, advertising, payment collection, eTag top-up, coffee, and agricultural product joint marketing, among various other services. Through the integration of membership points, various promotional activities are offered to guide customer spending, increase repurchase willingness, and build customer loyalty. In line with the trend of environmental protection and low carbon, CPC is also establishing electric motorcycle charging and battery swapping stations at gas stations to provide the public with convenient electric power replenishment services, and continues to promote the transformation of gas stations into diversified energy and service supply stations.

- CPC provides fast, convenient, and professional car cleaning services (including detailed manual wash and mechanical wash with manual finish) as well as add-on oil removal film and vehicle coating.
- A total of 254 CPC-operated gas stations across Taiwan provide car wash services.

- The petrol stations provide express car maintenance, tire changing, and fitness diagnosis for consumers' vehicles. All service technicians on-site have passed the national exam on Level B technician for automotive mechanics, and are competent at maintaining vehicles for the safety of their drivers.
- 60 direct stations are equipped with express car maintenance and tire service facilities.



- Petrol stations have been designed to serve as convenient spaces to shop for supplies and goods. Aside from general necessities, petrol stations also sell festive hampers, agricultural products, proprietary brand products, and Cup & Go.
- All 141 direct stations nationwide have either a compound store or a convenience store, whereas CUP & GO, CPC' s proprietary coffee brand, is available at 213 stations (including franchise stations).

- Stations now offer charging and battery swapping services for electric cars and bikes to accommodate the growth of electric vehicles and rising environmental protection awareness.
- CPC has a total of 100 e-bike charging stations, 900 e-bike battery swapping stations, 10 normal EV chargers, 74 quick charges in 16 stations, and 4 smart green energy fuel stations nationwide.

Technology innovation

Through implementation of the 5G AIoT project, talent training, and creation of smart traffic network, CPC actively adopts digital technologies and supports technological integration. Through close cooperation with industry, government, academia, and research institutions, we continue to work toward the vision of sustainable transformation and intelligent production, moving into the era of digital intelligence.

5G AIoT Application

In the development of Taiwan' s industry, CPC has always played a key role. As the guardian of the nation' s energy, we are not only committed to ensuring a stable energy supply, but also continuously seek innovation and cooperation in the face of global competition and technological change. In response to national policies, CPC has collaborated with the Export Processing Zone Administration of the Ministry of Economic Affairs, leveraging plant resources and land to support the expansion of the Kaohsiung Software Technology Park and promote the vigorous development of the technology industry. By adopting a "large enterprises supporting small enterprises" approach to accelerate the growth of start-up teams, CPC, together with the Kaohsiung Asia New Bay Area 5G AIoT Innovation Park, start-up companies, state-owned enterprises, and the Kaohsiung City Government, has organized intelligent occupational safety seminars and matchmaking exhibitions to provide start-ups with a platform for on-site demonstrations. At the same time, CPC is actively pursuing cross-sector cooperation, partnering with Formosa Chemicals & Fibre Corporation and Formosa Petrochemical Corporation to explore AI applications in areas such as corrosion monitoring and bearing life prediction. In academic research, CPC also collaborates with multiple universities to advance technologies for process improvement and equipment life prediction, jointly promoting industrial technology upgrading and social progress.

In the promotion of 5G AIoT technology, CPC focuses on five core application areas: intelligent occupational safety, critical equipment, pipelines and storage tanks, environmental protection, and operational management.

Intelligent work safety	Site management, smart inspection, work site safety image recognition	Resources have been invested to introduce advanced tools such as robotic inspection dogs and construction site safety image recognition systems, significantly enhancing the identification and prevention of potential workplace hazards, thereby creating a safer and more efficient working environment.
Key equipment	Process improvement, maintenance forecast, materials management	Advanced Process Control (APC) and predictive maintenance systems have been introduced to prevent failures through real-time equipment monitoring and AI forecasting, ensuring the stability and efficiency of production processes.
Pipelines and storage tanks	3D pipeline data, leak detection	CPC incorporates 3D pipeline data and leak detection technology to improve monitoring and management over the pipeline system, which in turn ensures safe storage and transportation of oil as well as petrochemical products.
Environmental protection	CO2 monitoring, solar power system	Through smart gas station management and customer service applications, service efficiency and customer satisfaction are improved, driving the digital transformation of business processes.
Operational management	Intelligent transformation of petrol stations, smart customer service	CPC promotes the use of renewable energy and invests in projects such as carbon dioxide monitoring and solar power system maintenance, which contribute to reducing and monitoring carbon emissions.

Training of 5G and AIoT talents

Planning and commencement of AI courses

Having realized how AI technologies will affect the growth of every business, CPC has devised a 6-stage "AI capacity training plan" as depicted in the figure below:

CPC AI capacity training plan

		Estimated time	Subject	Course objective	Training plan
General knowledge course A	Entry level A1	2 hours	General employees	Strengthen general knowledge	Existing online course (Tibama)
	Fundamental A2	8-10 sessions/hours	General employees	Learn new knowledge	Keynote speech by experts via CPC LIVE
	Managerial A3	3 hours	Mid-level/ senior managers	General and theme-based	Included in the managerial curriculum
Specialist courses	Application B1	More than 6 months of brainstorming and discussion	Field experts	· Field experts · Contribution of topics · Commitment/planning/execution	Technical courses are delivered by external lecturers or outside professionals
	Technical B2	6 months to more than 1 year of training	AI engineers	· Assessment of needs · Algorithm and modeling · Generate outcome	
	Technical B3	3 to more than 6 months of training	Data engineers	· Analysis of needs · Data analysis · Visualization	

The training targets include general employees, mid- to high-level managers, domain experts, AI engineers, and data engineers. The content covers introductions, general knowledge, management, and technical topics. The goal is for all employees to acquire basic concepts of artificial intelligence, for managers to gain in-depth understanding and effectively apply it to management, and for engineers to master artificial intelligence and data-related technologies. The specific plan is as follows:

In-person courses and training

Conduct in-person AI-related courses, inviting experts and scholars from industry and academia to teach.

Conducted **10** in-person course sessions
Total of **312** participants

Digital learning resources

Record and post-produce in-person AI courses into digital courses, and upload them to the "CPC e-Learning Academy" platform

A total of **66** hours of AI digital courses uploaded

Online learning and live broadcast promotion

License AI-related digital courses and promote them through CPC-Live live broadcasts

6 AI courses
A total of **757** online learners

Cross-sector cooperation and resource sharing

Collaborate with industry, government, and academia to broadcast 5G AIoT-related courses and seminars

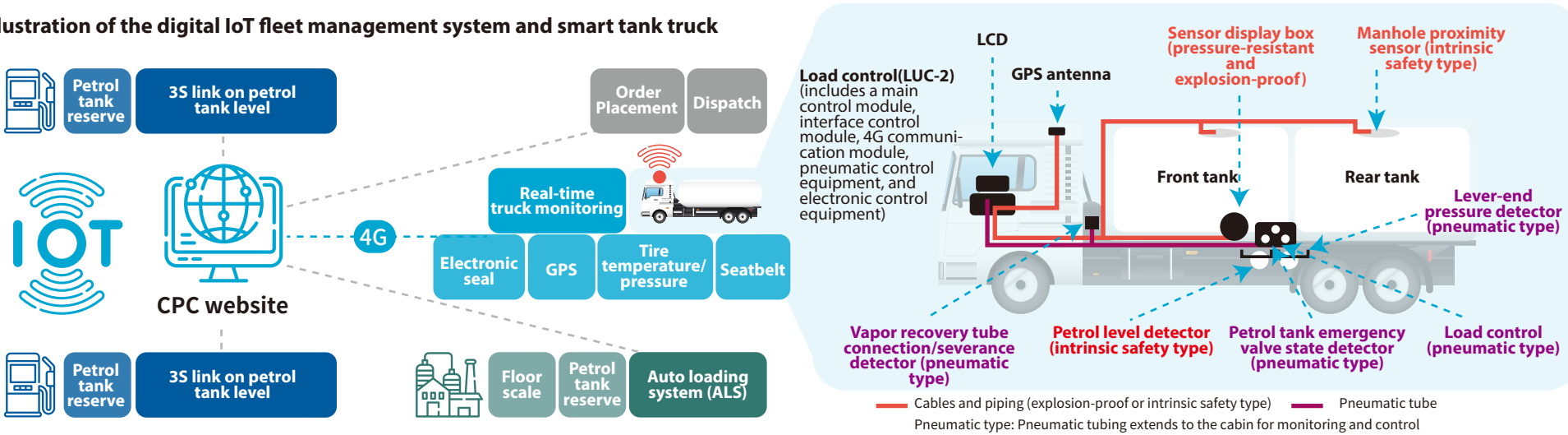
A total of **47** live/rebroadcast sessions
A total of **2,105** online participants

Tank truck digital IoT fleet management system

Oil transportation is an important factor in the stability of the oil supply. For the safety of tank trucks during transportation and to facilitate proper monitoring of oil quality and quantity and effective prevention of work safety accidents, CPC has developed a proprietary, patented (utility model) digital IoT fleet management system that combines in-vehicle GPS (global positioning system) with 4G communication, big data, AI, and IoT technologies. This management system allows real-time monitoring and status reporting of tank trucks, and has proven effective at optimizing the oil loading, unloading, and transportation workflow. Combined with the Tyre Pressure Monitoring System (TPMS), CPC has successfully introduced AI into oil transportation and safety management.

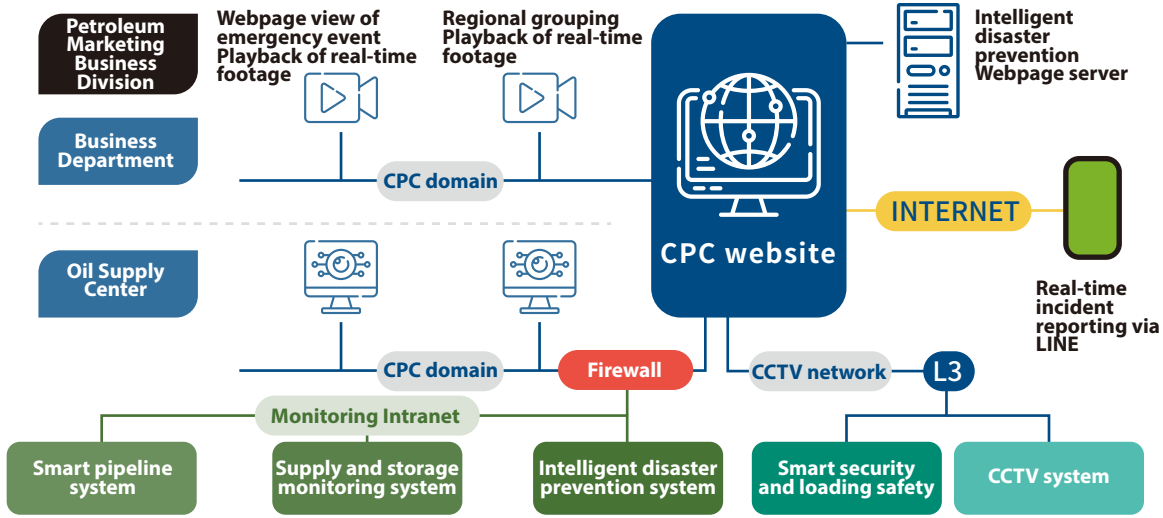
The tank truck electronic IoT management system features proactive alert and foolproof functions such as "fuel not fully unloaded from tank truck," "wrong site arrival and incorrect unloading," and "tank level full alert." In 2024, there were no incidents of incorrect unloading, over-unloading, or tank overflow caused by system failure, effectively preventing incidents such as invisible overflows of tank trucks, wrong site arrival, incorrect unloading, and over-unloading.

Illustration of the digital IoT fleet management system and smart tank truck



Fire safety VR simulator and intelligent disaster prevention system

CPC promotes 5G AIoT application policies. For depot oil leaks and fires, on-site monitoring and early warning systems are integrated to provide automatic mobile phone alerts and remote offsite real-time response images, enhancing the completeness of information and response time. Historical data can also be used for statistical analysis to improve the effectiveness of on-site disaster prevention management. In 2024, the "Intelligent Disaster Prevention System of the Oil (Aviation Fuel) Supply Center" project won the 21st National Brand Yushan Award. In addition, the Business Division has set up VR fire simulation training equipment, adding features such as dynamic fire extinguishing guideline lines, voice prompts, and new gas station scene fire pan images, making VR simulation training more realistic to actual fire scenarios. This reduces potential air pollution and personnel hazards during live fire extinguishing drills and enhances employees' fire extinguishing proficiency through simulation training. In 2024, each Business Division conducted VR simulation training, with a total of 562 participants.



1.5.4 External Cooperation

Signing collaborative agreements

Memorandum of Understanding (MOU) Name/Type	Partners	Description
Memorandum of understanding (MOU) on green energy development cooperation	Taiwan Cement, Academia Sinica, ExxonMobil, SLB, and Baseload Power Taiwan.	Promote climate change mitigation and low-carbon development operations
Memorandum of Understanding on Geothermal Research, Exploration, and Development Technology Cooperation	Academia Sinica, National Central University	Promote geothermal R&D and exploration technology
Memorandum of Understanding on the "Hydrogen High-Pressure Transport and Storage Safety Testing Technology Alliance	Metal Industries Research and Development Centre	Promote the development of hydrogen transport and storage safety testing and verification technologies
Memorandum of Net Zero Emissions Cooperation	National Taiwan University	Promote net-zero emissions to achieve CPC' s transformation goals of "High-value Petrochemical", "Low-Carbon Emission", and "Lean-Renewable Energy"
Letter of Intent on "Industry-Academia Net Zero, Advancing Quality Oil for You" Cooperation	National Chung Hsing University	Promote nature-based solutions for climate change to fulfill the commitment to achieving a "net-positive impact on biodiversity"
Cooperation Agreement on "Kaohsiung New Petrochemical Industrial Zone External Pipeline Intelligent Monitoring"	Industrial Technology Research Institute	Focus on pipeline monitoring technology cooperation for Dalin and Linyuan plants

Engagement with external organizations

To keep abreast of domestic and international industry trends in real time and to maintain CPC's corporate competitiveness and visibility, we engage in exchange and cooperation by participating in domestic and international industry organizations and trade associations, with the aim of expanding multilateral relations and exchanging business experience and market information. Below is a list of key external organizations that CPC is a part of and its existing role.

Name of external organization	Form of participation
International Group of Liquefied Natural Gas Importers	Member; Executive Committee Member
Chinese International Economic Cooperation Association (CIECA)	Member; member representatives: 5
Chinese Association for Energy Economics	Member; directorship and supervisorship
Chinese Petroleum Institute	Member; directorship
Petrochemical Industry Association of Taiwan	Member
Sino-Arabian Cultural & Economic Association	Member, chairperson, directorship, and supervisorship
ROC-USA Business Council	Member
Taiwan Museum Association, ROC	Member
Taiwan Biotechnology Industry Alliance	Member; member representatives: 3
The General Association of Chinese Culture	Member
Taipei Measuring Instrument Association	Member
Taiwan Occupational Hygiene Association	Member; member representatives: 1
Chinese Society of Structural Engineers	Member; member representatives: 1
The Corrosion Engineering Association of the Republic of China	Member; member representatives: 1
The Institute of Internal Auditors-Chinese Taipei	Member; member representatives: 4
Taiwan Institute for Sustainable Energy	Member
Center for Corporate Sustainability	Member; directorship
World Business Council For Sustainable Development Taiwan	Premium member; member representatives: 12
Taiwan Association of Soil and Groundwater Environmental Protection	Member; member representatives: 1
National Chung Hsing University Soil and Groundwater Remediation Technology Alliance	Member
Industrial Safety and Health Association of the ROC	Member
Taiwan Safety Council	Member; member representatives: 3
Taiwan Responsible Care Association (TRCA)	Member; member representatives: 3

02 CPC and Green Contributions

Chapter summary

Bearing the responsibility of carbon reduction in the energy industry, CPC spares no effort in promoting the transition to net-zero emissions and places great importance on the risks and opportunities arising from climate change. The Company has established a Climate Change Response Task Force and integrates international management frameworks such as TCFD and TNFD. It implements its low-carbon green energy transition strategy under the three guiding principles of "High-value Petrochemical," "Low-Carbon Emission," and "Lean-Renewable Energy," leading the development of forward-looking technologies such as promoting the development of lithium titanate energy storage materials, constructing smart & green e-stations, and establishing an Advanced Catalyst Center. CPC conducts comprehensive product carbon footprint inventories, introduces internal carbon pricing, and seeks opportunities for carbon reduction and the circular economy. Meanwhile, CPC responds proactively to the claims of environmental protection organizations by founding the first ecosystem preservation fund in Taiwan to support preservation efforts, taking progressive steps to cater for sustainability of the ecosystem and economic growth at the same time.

Reader Priorities

• Shareholder (MOEA) • Public representatives • Customers • Employees • NPOs/NGOs • Partners
• Communities • Government Agencies • the Media

Corresponding SDGs

CPC's performance highlights

- **Water recycling rate at Refining & Petrochemical Plant No. 3 reaches approximately 98%**
- **Total wastewater pollutant intensity reduced by 7%**
- **VOCs emission intensity reduced by 6%**
- **The nation's first ecosystem preservation fund**
- **Risk management framework – adoption of TNFD**
  (Taskforce on Nature-related Financial Disclosures)

2.1 Mitigation and Adaptation to Climate Change

As a major energy supplier in Taiwan, CPC has been actively monitoring possible risks and opportunities of climate change in recent years. As a response to the global sustainability development strategies, CPC conducted scenario analyses, quantified financial impacts, and devised response measures using the climate scenarios published by United Nations Intergovernmental Panel on Climate Change (IPCC) and International Energy Agency (IEA), so as to evaluate possible operational impacts as well as physical and transition risks to CPC. CPC also adopts the framework developed by TCFD (Task Force on Climate-related Financial Disclosures) for disclosure of climate resilience, and thereby ensures the sustainability of its practices.

Governance	· The Board of Directors regularly reviews climate change-related risks and opportunities. · Established the Sustainable Business Promotion Committee. Starting from 2024, the committee's level has been elevated, with three additional seats added, filled by directors. · Established the Climate Change Response Task Force to implement climate action.
Risk management	· CPC's risk management process incorporates the TCFD framework to establish climate risk identification and assessment. · Annually conduct rolling reviews of risk and opportunity assessment results and analyzes their impacts on operations and finances.
Strategies	· Engage in cross-departmental discussions and identification of short-, medium-, and long-term climate risks and opportunities. · Report climate risks and opportunities to the Risk Management Committee for materiality assessment and formulates response strategies for material climate risks and opportunities.
Goals and indicators	· Annually conduct greenhouse gas emissions inventory and disclosure through ISO 14064-1. · Set CPC's interim target of reducing emissions by 50.2% by 2032 compared to 2005 levels, striving to achieve net-zero emissions through measures such as improving energy efficiency, using low-carbon fuels, recovering and utilizing energy, adopting renewable energy, carbon capture and storage, hydrogen energy, and carbon-neutral natural gas.

2.1.1 Climate change governance

Climate change governance and risk management framework

Management

Board of directors
Supervises climate risks and opportunities

Sustainable Management Committee
Coordinates cross-department decision-making on climate change issues; the Chairperson serves as committee chair, whereas the President makes unscheduled progress reports to the board of directors

Risk Management Committee
Reviews the climate change risk management system
Oversees improvements and makes regular reports to the board of directors

Decision-making and supervision ↓ | Promotion and execution ↑

Execution

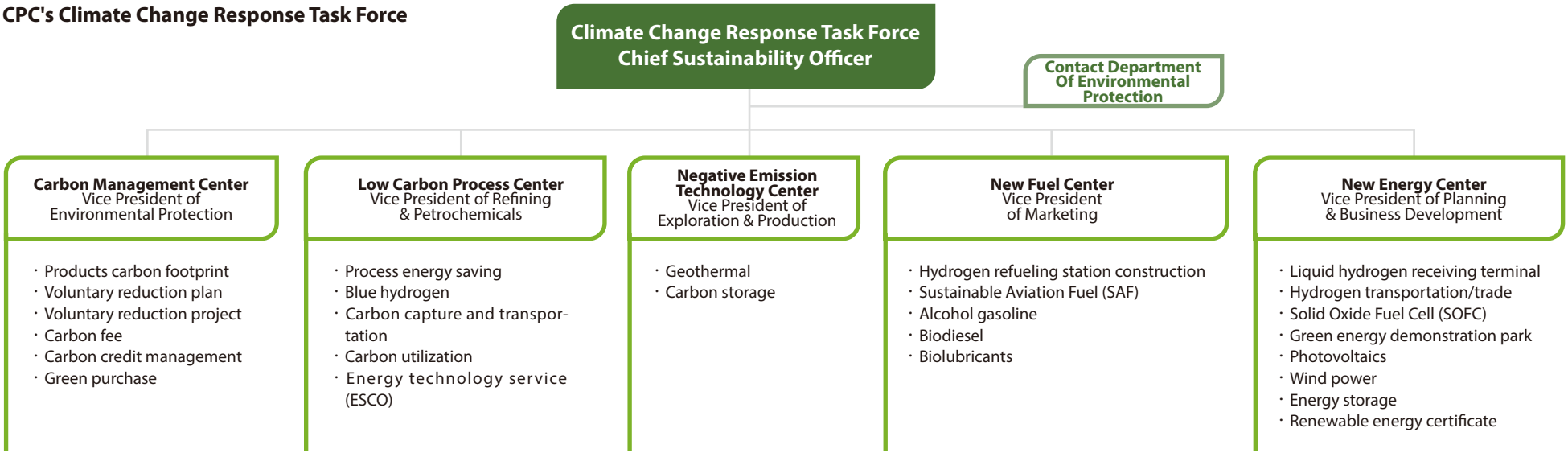
Climate Change Response Task Force
Executes low-carbon transformation and energy/carbon reduction strategies and actions in response to climate change

Carbon Footprint Survey and Internal Carbon Pricing Task Force
Promotes product carbon footprint survey and internal carbon pricing; sets carbon emission price for CPC

Energy and Carbon Reduction Task Force
Executes energy/carbon reduction strategies and actions

Risk Management Team
Identifies and executes control actions for climate change risk, and makes ongoing improvements to risk control practices

CPC's Climate Change Response Task Force



2.1.2 Risks and opportunities of climate change

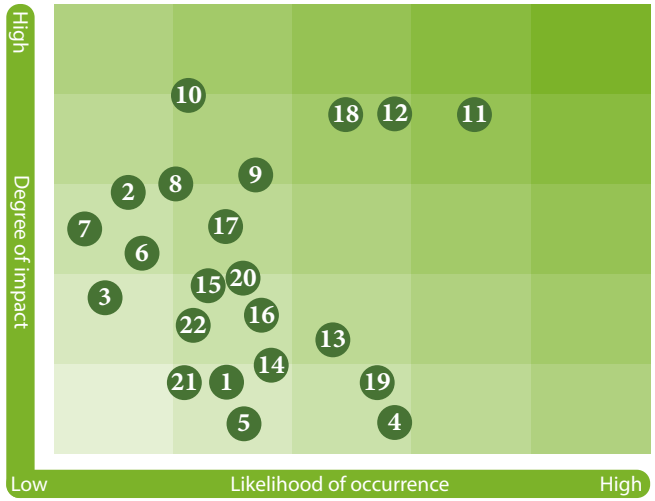
Climate Change Response

CPC incorporates climate change risk issues into its risk management system by referring to the TCFD framework. The risk management teams of each unit assess the potential operational and financial impacts of "climate and ecology" risks on the Company based on the nature of their business. Various risks are recorded and tracked using a risk matrix and the Enterprise Risk Management (ERM) system. The risk assessment process is conducted at least once a year and covers existing operational sites as well as parts of the supply chain. The process is illustrated in the following diagram:

Procedures for identifying major climate change-related risks and opportunities

Identify 1	Gathering of scenario data through discussions	CPC adopts UKCIP's climate change risk assessment procedures and TCFD's disclosure framework. Through department discussions, CPC gathers qualitative data and attempts to make preliminary identification of potential climate risks and opportunities while establishing an understanding of how each climate risk affects CPC.
Evaluate 2	Issuance and recovery of TCFD questionnaire	Using quantitative climate risk questionnaires, CPC evaluates and identifies factors that are relevant to climate risks and opportunities.
Analyze 3	Analysis and evaluation of climate risk	By using scenario analysis tools, the questionnaire results are compiled and analyzed based on three parameters: vulnerability, impact, and exposure, to develop CPC's TCFD climate risk matrix.
Control 4	Response, strategy, and management approach for climate risks and opportunities	CPC discloses the climate risks and opportunities it identifies along with explanations on the possible impacts. Strategies and management approaches are then proposed for each of the risks identified.

TCFD Climate Change Risk Matrix



Note 1: The X-axis represents likelihood of a given issue under the global sustainability trend.
Note 2: The Y-axis represents the intensity of impact that an issue may have on CPC.

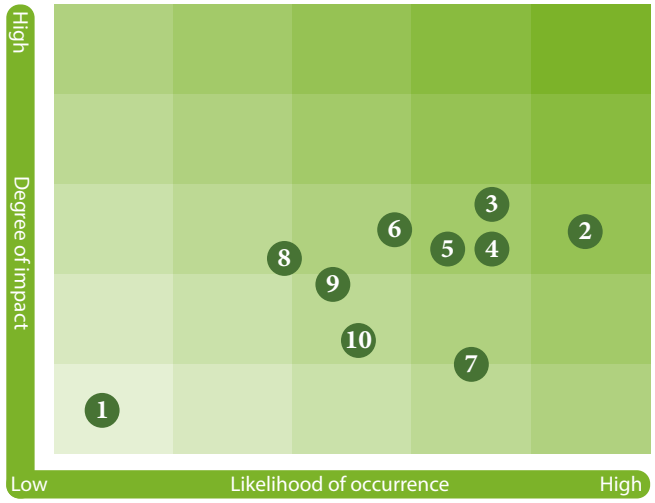
Physical risk

1. Equipment damage caused by extreme weathers
2. Impact on employees' attendance and operations caused by extreme weathers
3. Impact on transportation, supply, and communication caused by extreme weathers
4. Rising sea levels and impact on the operations of coastal plants
5. Property devaluation from rising sea levels
6. Disruption of operation caused by drought and water shortage
7. Rising average temperatures may force suspension of business locations due to excessive heat
8. Power shortage causing operational interruption at the plant site

Transformational risks

9. Shortage of key materials caused by extreme weathers
10. Tightened environmental regulations increase environmental protection spending
11. Unstable supply of power or risk of shortage from the green energy policy
12. Carbon fee/carbon tax systems imposed by governments around the world
13. Demand for green products
14. Change in customers' preference
15. Customers' increasing environmental requirements in production/operation
16. Unstable supply and transportation of energy sources
17. Long-term climate risk makes supply of renewable energy unstable
18. Rising cost of critical materials
19. Product or market dominance may be replaced by peers with low-carbon or new technologies
20. The need to commit significant R&D budget increases operating costs
21. Underwhelming transformation in response to climate change affects reputation
22. Half-hearted effort toward energy and carbon reduction compromises brand image

TCFD climate change opportunities matrix



Note 1: The X-axis represents likelihood of a given issue under the global sustainability trend.
Note 2: The Y-axis represents the intensity of impact that an issue may have on CPC.

Opportunities

1. Implementation of water conservation measures increases the efficiency of water resource utilization
2. Analyze flood scenarios, devise risk management procedures, and implement disaster response system
3. Strengthen pipeline resilience to sudden temperature changes
4. Promote use of renewable energy sources for improvements to the energy structure
5. Increase energy efficiency and save operating costs
6. Smart/green energy transformation conforms with power conservation requirements and increases the competitive advantage of the industry
7. Invest resources into low-carbon R&D and secure early advantage in the new energy market
8. Acquire government incentives and engage in carbon offset and carbon trading
9. Set supplier behavior guidelines and improve supply chain stability
10. Improve brand reputation as well as customers' and stakeholders' perception

Impacts of and responses to major climate risks

Risk aspect		Risks	Financial and non-financial impacts(-)	Response actions / opportunities(+)
Transformational risks	Policies and laws	**Carbon fee collection**	—In 2024, the Company' s total greenhouse gas emissions subject to carbon fee amounted to 6.625 million metric tons1. Based on an estimated carbon fee of NT$100 to NT$300 per metric ton per year, the annual carbon fee payable would range from NT$6.63 billion to approximately NT$1.98 billion.	+In 2024, a total of 554 product carbon footprint inventory tasks were completed, and verification was obtained for 92 product carbon footprints. +A voluntary reduction plan was proposed to achieve the designated greenhouse gas reduction targets and to qualify for a preferential carbon fee rate of NT$100 per metric ton.
		Green energy policy	—Budgets are being allocated persistently into the research of technologies such as solar power, geothermal, hydrogen power, energy storage etc.	+Interdepartmental discussions were held to plan the timeline for the Company' s achievement of the statutory green power installation targets, with a total of more than 270 project sites planned and a total installed capacity reaching 21.222 MW. +Completed the construction of equipment for the hydrogen refueling demonstration station, which is planned to officially commence operation in 2025 to provide hydrogen refueling services for vehicles.
	Market	**Unstable supply/ increasing cost of key materials**	—Disruption in the supply of key materials may cause instability in domestic energy supply and put business activities to a halt —Rising cost of raw materials diminishes financial performance —War causes a surge in energy prices and poses challenges and uncertainties to the future business environment.	+CPC will engage regional partners more actively in the emergency sourcing (i.e. exchange or resale) of gas inventory +and sharing of market information. +Develop a secondary supply system, increase energy reserves, conduct ongoing assessment of supplier risks, and avoid or reduce purchases from high-risk locations. +Increase production and internal warehouse capacity. +Promote waste heat recovery in collaboration with other companies in the industrial park; purchase reusable steam produced by China Steel to lower energy consumption.

Impacts of and responses to secondary climate risks

Risk aspect		Risks	Financial and non-financial impacts(-)	Response actions / opportunities(+)
Physical risk	Immediate and long-term considerations	**Typhoon and flood**	—Climate change increases both the frequency and severity of Typhoons and heavy rains, which may cause damage to operating facilities and injury to employees, and thereby incur additional costs on equipment maintenance and insurance coverage.	+Conduct detailed surveys on the vulnerability of existing facilities. CPC will consider moving equipment to elevated platforms and installing additional drainage pumps in the future, and work with the Industrial Technology Research Institute to devise adaptation strategies for improved operational resilience. +CPC will continually monitor and analyze climate disasters (including drought, tidal wave, flood, hurricane, mudslide, and lightening strike) while at the same time enhance disaster resistance of equipment and buildings and implement complete SOPs for disaster preparation, response, and recovery.
		Drought and water shortage	—Production disruption due to output reduction or boiler shutdown as a result of water rationing.	+Recycle and reuse reclaimed water through premium water treatment facilities for higher water efficiency and enhanced operational resilience. +Purchase of reclaimed water.
		Power shortage	—Power outage/interruption causes operational interruption at gas stations, resulting in financial losses.	+Advance regulatory development of renewable energy programs. +Strengthen the Energy Management System (EMS).

Risk aspect		Risks	Financial and non-financial impacts(-)	Response actions / opportunities(+)
Physical risk	Market	**Change in consumers' preference**	—A change in customers' preference may render CPC unable to respond to market demand in time and ultimately affect revenues. —The rise of electric vehicles affects consumers' demand and ultimately corporate revenues.	+Smart green energy transformation of gas stations: in accordance with the "Smart Electric Motorcycle Energy Replenishment Facility Popularization Program," 1,000 electric motorcycle charging and battery swapping stations and 4 smart & green e-stations have been completed, providing diversified services and creating new green business opportunities. +Through collaboration with a tertiary institution, CPC assembled a research team and contributed to the successful development of new farming technology for species of high economic value.
	Transformation technology	**Existing products being replaced with low-carbon alternatives**	—The rise of sustainability awareness causes consumers to switch to low-carbon and energy-efficient products or services, which negatively affects the sale and revenue of CPC's conventional energy products. —Support the government's energy transformation policy by increasing supply of natural gas and committing resources into investment projects.	+Direct technological advantage and R&D capacity into the development of relevant technologies and markets; construct a net zero transformation strategy that emphasizes fuel upgrade, carbon reduction, clean energy, and expand operations accordingly. +Expansion of the liquefied natural gas receiving terminal to enhance the capacity for natural gas import, storage, and supply, replacing demand in the oil product market and creating a clean energy supply chain for CPC.
		High cost	—To reduce greenhouse gas emissions and meet the demand for environmentally friendly products and services, investments have been made in high energy-efficiency equipment and the development of new process technologies.	+The "Refining Business Division Dalin Refinery Gasoline Benzene Reduction and Quality Improvement Investment Project" has an investment amount of NT$7.578 billion. +In 2024, continued signing of short-term sustainability index-linked loans, and handling of long-term sustainability index-linked loans, with estimated annual interest savings of up to NT$18.9 million.
	Reputation	**Impacts to business reputation**	—Climate change actions and products of high carbon emission that do not meet stakeholders' expectations will result in negative publicity and reduce customers' trust and satisfaction to the detriment of business reputation, causing CPC to lose market leadership and suffer financial losses.	+In addition to monitoring international trends, regulatory changes, and market trends, CPC also adjusts internal management guidelines and makes transparent disclosures as well as timely responses to promote the organization's low-carbon, green image. +Participation in relevant sustainability certification and evaluation performance, and implementation of related actions.

Response to climate change opportunities

Aspect	Climate-related opportunities	CPC's practices
Use of energy	**Renewable energy development and use**	✚Assembled an Offshore Wind Power Joint Venture Project Team and a Hydrogen Energy Team. ✚Installation of solar photovoltaic systems, with a generation capacity of 21.222 MW completed in 2024, and a projected generation capacity of 25.356 MW to be completed in 2025. ✚In line with the Ministry of Transportation and Communications' 2050 Net-Zero Emissions Policy, from 2021 to 2024, a total of 74 electric vehicle fast-charging guns were completed, with 14 guns planned for completion in 2025. ✚Since 2013, CPC has been planning "Green Building Gas Stations" utilizing carbon reduction or ecological construction methods. As of the end of 2024, a total of 74 gas stations have obtained the Green Building Label.
	Increase of energy efficiency	✚In response to the "Deep Energy Conservation Promotion Plan" approved by the Executive Yuan, energy-saving measures have been implemented at 23 large electricity user accounts and 3 preliminary energy-saving sites to enhance the effectiveness of electricity conservation management. ✚CPC helps at least 10 industry participants make use of natural gas as fuel a year. ✚Refineries, petrochemical plants, and other operational facilities have implemented various energy-saving measures to improve energy efficiency at the sites, achieving carbon reduction of 86,000 metric tons of CO_2 equivalent in 2024.
Operational resilience	**Evaluation and prevention of risks and hazards**	✚A climate risk assessment report is completed annually and continuously updated; in 2024, a total of 5,706 operational facilities were inventoried.

Aspect	Climate-related opportunities	CPC's practices
Resource utilization	**Use and management of water resources**	✚CPC introduced energy conservation technologies such as heat recovery pipe, heat exchanger network simulation, new air preheater, crude oil pre-flash system, and use of high efficiency blades for cooler tower fans. Furthermore, fuel gas, medium/low pressure steam, and water resources are being used and recycled at higher intensity. ✚Pro-active efforts are being committed to recycle and reuse wastewater, whereas improvements are being made to the use of coolant, boiler water, hydrant water, and production water. Rainwater recovery systems are being installed at petrol stations, whereas reclaimed water is being purchased by appropriate units.
Product/market/reputation	**Market and business opportunities**	✚CPC developed production technology for HMF, a precursor to the bio-based polyester material PEF, and reduced waste in the production procedures, making it an ideal upstream material for bioplastics. ✚Continue support to government policies by supplying and promoting E3 ethanol at 14 fuel stations in Taipei City and Kaohsiung City. Invest into the development of production technologies for renewable oil and sustainable aviation fuel. ✚Invest into the development of technologies concerning biomass energy, energy storage materials, and biomaterials; make investments that add value to petrochemical products.
	Brand image and market presence	✚Enhance the adjustment of refining and manufacturing structure and equipment renewal Adopt the best available technology (BAT) to enhance energy efficiency and reduce environmental impact. ✚Continuously promoting product carbon neutrality. As of 2022, CPC has launched carbon-neutral natural gas, carbon-neutral ethylene, carbon-neutral crude oil, and carbon-neutral gas stations. In 2024, a total of 133,762 metric tons of carbon-neutral natural gas were imported.

2.1.3 Analysis of climate change risk and opportunity scenarios

Each department of CPC is required annually to identify risk items and risk levels related to its departmental operations, which include various climate-related risks, and to submit them to the Risk Management Committee for review. The Risk Management Committee holds meetings annually to continuously advance the inspection and monitoring of risks the Company may face, and to plan, discuss, and analyze possible solutions. CPC uses climate scenario analysis to assess the intensity of future extreme weather and, based on this, evaluates financial impacts and corresponding response strategies. The chart below shows some of the climate risks and opportunities identified through scenario analysis in 2024, which will be explained in detail in later parts of this section.

Category	Item	Physical/transition	Timeframe[1]	Likelihood[2]	Financial Impact
Climate risk	Heavy rainfall and flood	Physical	Short-term	High	Moderate
	Power shortage causing operational interruption at the plant site	Physical	Medium-term	Moderate	Moderate
	The government collects carbon fees	Transition	Short-term	Extremely high	Significant
	Reduced demand for fossil fuel	Transition	Long term	High	Significant

Note 1: Timeframe refers to the time of risk occurrence. Short-term: 0-3 years; medium term: 3-8 years; long-term: 8-28 years.
Note 2: Likelihood refers to probability of occurrence for the given risk.

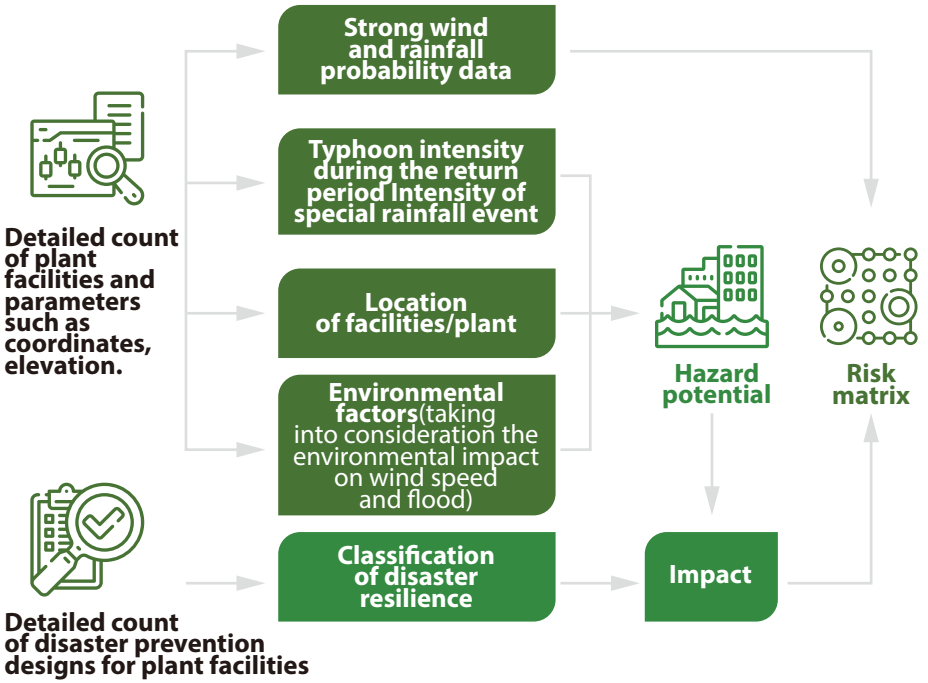
Heavy Rainfall and Flood Risk Scenario Analysis and Assessment

CPC has been a participant in the Energy Administration' s "Climate Change Adaptation Strategy and Guidance for the Energy Sector" since 2018. After conducting a comprehensive survey of parameters such as coordinates and elevations and learning the disaster prevention design across plant facilities, CPC chose to evaluate disaster potential and disaster tolerance for various risk factors including strong winds and floods using the AR5 high emission scenario – RCP 8.5. Impacts of extreme weathers were also simulated during this process. Based on the probability of occurrence and impact assessment established above, a risk matrix was produced to help determine CPC's climate change physical risks.

CPC cumulatively completed climate risk survey for 30 energy supply sites between 2018 and 2024. Considering how the methodologies and scenario information used in each year have improved over time, CPC will continue updating climate change risk assessment reports for its plant sites in the future so that plant sites can be compared using a uniform baseline to better establish current and future risk levels under the same scenario and conditions.

Heavy Rainfall and Flood Risk Assessment Results

Heavy Rainfall and Flood Risk Assessment



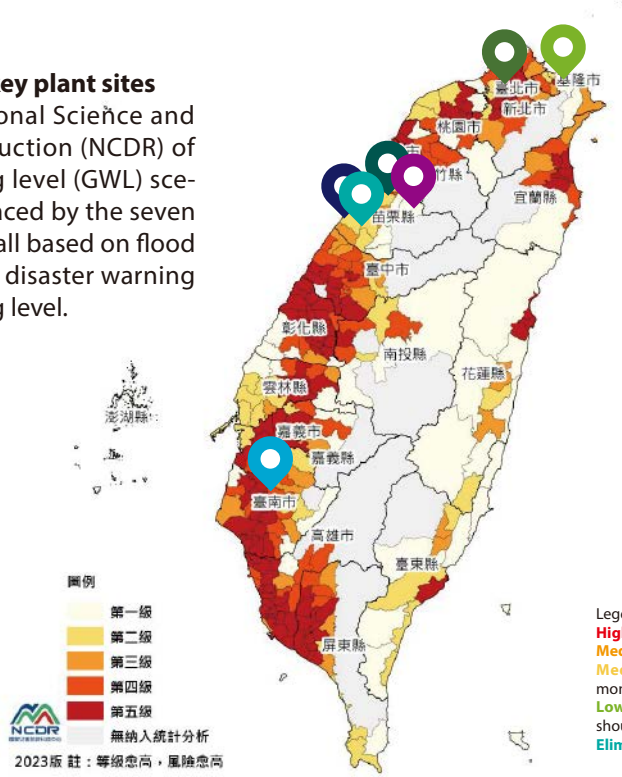
Heavy Rainfall and Flood Risk Assessment Scenarios and Selected Mapping Data

Taiwan has been susceptible to the threat of extreme weather events in recent years. Given the increasing risk of heavy rainfall, it is necessary for CPC to develop responses for typhoon, heavy rain, potential shutdown of petrol stations, suspended transportation of oil products, and lessened demand for oil. To enable better control over risks of physical damage associated with climate change, CPC adopted the future climate model and data published on Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP) and analyzed risks as well as impacts of heavy rain-induced flood for some of CPC's operations using scenario RCP 8.5. In 2024, CPC promoted climate risk assessment and selected seven key energy supply sites for flood risk potential analysis, including the Songshan Airport Aviation Fuel Center, Shen'ao Port Supply and Transport Center, Tainan Supply Center, Tongxiao Transfer Center, Oil Production Engineering Division, Storage and Injection Engineering Division, and Miaoli Gas Supply Center.

Flood risk potential map for CPC's key plant sites

CPC referred to tools from the National Science and Technology Center for Disaster Reduction (NCDR) of Taiwan and, under a global warming level (GWL) scenario of 1.5 ° C, analyzed the risks faced by the seven sites under the impact of heavy rainfall based on flood rainfall (Level 5 warning level), slope disaster warning level, and debris flow disaster warning level.

According to the outcomes of the analysis, all seven of CPC's plant sites have had the risk of flood from rainfall classified as a level 5 alert due to the local terrain, whereas alert thresholds for slope failure and mudslide both exceeded extreme precipitation. This means that, except for flood caused by sudden extreme precipitation, no other risks would pose any immediate major hazard to CPC under any climate scenario.



Plant site	High risk	Medium-high	Medium risk	Low risk	Eliminated risk/no data
Songshan Airport Aviation Fuel Center	0	2	0	0	61
Shenao Port Fuel Supply Service Center	0	0	0	0	204
Tainan Fuel Distribution Center	0	0	0	9	40
Tongxiao Transmission Center	0	0	0	0	58
Oil Production Engineering Division	0	0	0	64	117
Injection and Storage Engineering Division	0	0	0	0	95
Miaoli Gas Supply Center	0	0	0	9	240

Legends for risk level:
High risk: The building/facility is very susceptible or vulnerable to future climate change, and should be prioritized for mediation measures.
Medium-high risk: The building/facility is highly susceptible or vulnerable to future climate change, and should adopt mediation measures.
Medium risk: Susceptibility and vulnerability of the building/facility to climate change is acceptable, and should have risks closely monitored.
Low risk: The likelihood and impact of the building/facility being affected by future climate conditions are relatively low. Risk monitoring should be maintained.
Eliminated risk: Susceptibility and vulnerability of the building/facility to climate change is very low.

Note 1: The flood potential assessment was conducted by assuming rainfall of 650mm/day under the AR5 RCP8.5 scenario
Note 2: All climate change data was derived from physical or statistical simulations, and the simulation process involved many assumptions and conditions. Furthermore, TCCIP takes a low resolution of the global climate model and applies it to Taiwan using dynamic/statistical downscaling. Although this approach increased the resolution of space/time, it also introduced additional errors and uncertainties.

Heavy Rainfall and Flood Risk Financial Impact

According to the statistics taken from CPC's work safety management system, there have been two instances of petrol station shutdown due to typhoon or heavy rain in the last four years, which means that the rate of occurrence has doubled to 0.5 instance/year in the last 4 years. This rate of occurrence was also applicable to franchise stations. Assuming that a weather event causes a station to shut down for 3 days, each event would affect CPC's revenues by approximately NT$1.83 million. Based on available data, CPC estimates that about 10% of petrol stations are susceptible to the impact of heavy rain, and the amount of financial impact is approximately NT$134.4 million a year.

Power Shortage Risk Scenario Analysis and Assessment

The Executive Yuan of Taiwan has planned the 2025 energy mix target as "50% natural gas, 30% coal, and 20% renewable energy," indicating that natural gas is gradually becoming the main source of power generation in Taiwan. However, with global warming intensifying and causing rising temperatures, along with continued industrial growth, Taiwan's power supply is becoming increasingly tight. CPC referred to tools from the National Science and Technology Center for Disaster Reduction of Taiwan and analyzed household and industrial electricity demand growth under the RCP 8.5 scenario. Based on the natural gas supply situation, three power shortage risk scenarios—high, medium, and low—were established:

Risk level High

Natural Gas Supply Chain Disruption:
International wars, political instability, or soaring prices affecting imports, leading to fuel shortages for power generation units.

Risk level Moderate

Extreme Climate Impacts:
Natural disasters such as typhoons and earthquakes damaging natural gas receiving terminals or pipelines, affecting fuel supply.

Risk level Low

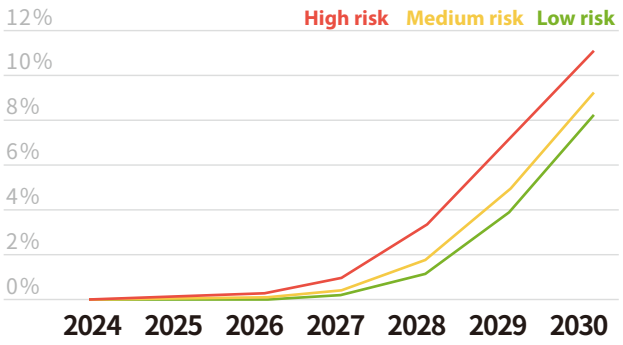
Policy and Environmental Regulation Changes:
Stricter carbon emission regulations and accelerated green energy transition limiting natural gas power generation.

Parameters	Description	Source References
Industrial Index	Electricity consumption by the industrial sector in Taiwan accounts for more than 50%; therefore, there is a strong positive correlation between industrial growth and total electricity consumption. The faster industrial expansion occurs, the greater the increase in electricity demand.	Ministry of Economic Affairs
Household Electricity Consumption	Using the RCP 8.5 scenario, when the temperature is between 23.642° C and 25.62° C, a 1% increase in average temperature leads to a 0.23% increase in household electricity consumption.	Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP)
Installed Capacity	The available capacity of each power generation unit is calculated and summed. The higher the total installed capacity, the lower the probability of power shortage.	Taiwan Power Company
Reserve Capacity Ratio	Reflects the security buffer of the power supply. The higher the reserve capacity ratio, the stronger the grid's ability to cope with unexpected demand.	Taiwan Power Company

Power Shortage Risk Assessment

Based on the simulation analysis results of the power shortage risk scenarios, the probability of power shortages is shown in the figure below

Probability of Power Shortage for CPC under Different Natural Gas Risk Scenarios

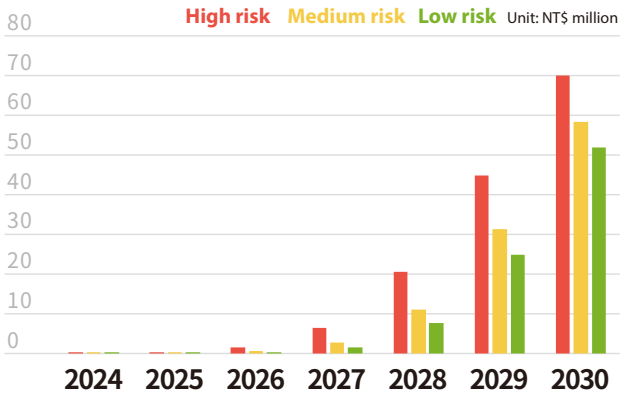


Note: The above power shortage probability forecast assumes no change in power generation units.

Power Shortage Risk Financial Impact

This analysis assesses the potential impact of power shortage events on gas station revenue. According to statistics, CPC operates a total of 1,895 gas stations nationwide (company-operated + franchised). To explore regional risk differences, Taiwan is divided into four regions: North, Central, South, and East. The locations and frequency of past power shortage events are referenced to comprehensively assess the potential impact on gas station revenue in each region under the power shortage scenario. As power shortage risks increase year by year, it is estimated that under a high-risk scenario, by 2030, approximately NT$70 million in revenue loss may occur, which would still account for less than 1% of the total annual revenue in 2023. The analysis results are shown in the figure below (unit: NT$ million):

Financial Impact on CPC under Different Natural Gas Risk Scenarios



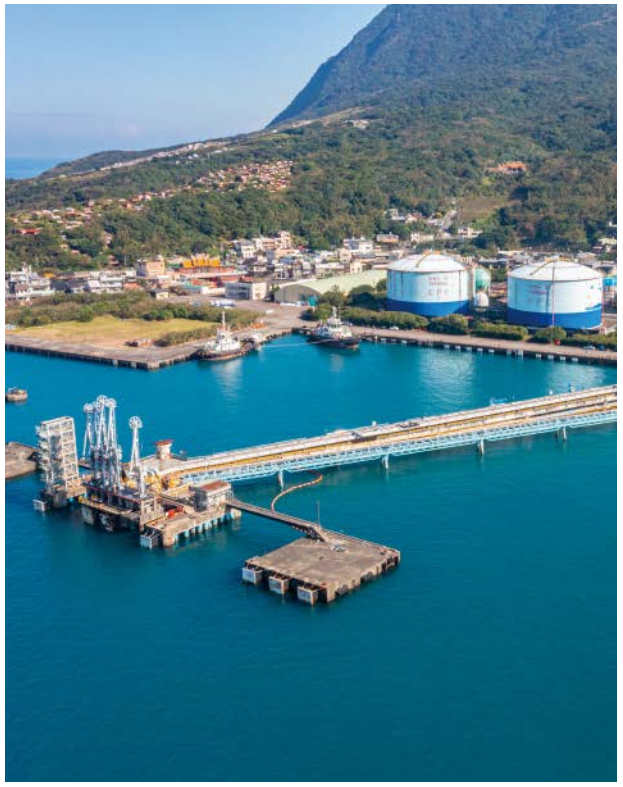
Note: This result reflects the financial impact of a full-day power shortage event.

Carbon Fee Risk (Policy and Regulatory) Assessment

According to the outcomes of CPC's climate change risk and opportunity identification exercise, the impact of policy and regulatory risks under transition risk was the highest among all risks, and has been highlighted as a major risk. In response to the net-zero emissions target and related regulations announced by the Taiwan government, CPC conducted a transition risk assessment using the International Energy Agency (IEA) Beyond 2 ° C Scenario and further developed three carbon emission scenarios to assess future carbon emissions and the potential financial impact of carbon fees:

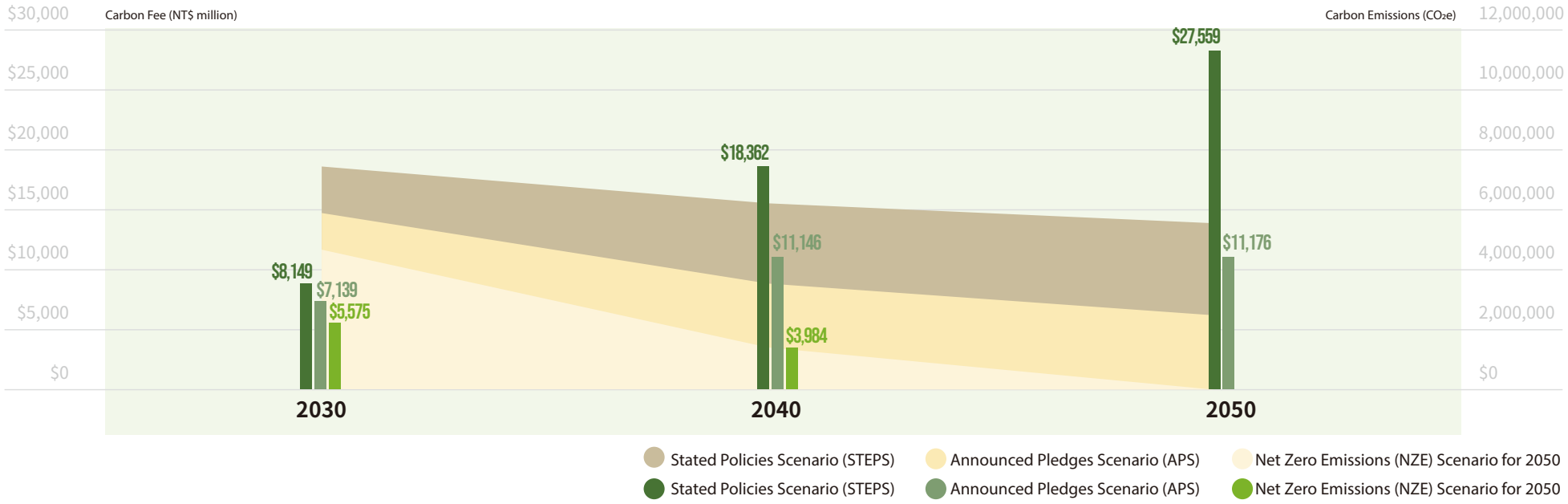
Assumptions of IEA's 3 carbon reduction scenarios

SPS	STEPS is deemed as a conservative scenario. It is a "Business As Usual" scenario that analyzes changes in carbon emissions based on existing policies of governments around the world, without considering potential tightening of climate policies.
SDS	SDS assumes that clean energy policies and investments progress at faster rates toward accomplishing key sustainable development goals. The SDS sets "well below 2 ° C" as the goal; it assumes that all existing net zero commitments have been fulfilled and more extensive efforts are being made to reduce emission in the near future. While developed economies are expected to achieve net zero by 2050, China is expected to achieve net zero by 2060 whereas other nations should achieve net zero by no later than 2070.
NZE	NZE is the scenario that assumes net zero emissions by 2050, with developed economies achieving net zero ahead of other countries. This scenario conforms with the United Nations' Sustainable Development Goals (SDGs) relating to energy, especially the goals to make energy widely accessible and to significantly improve air quality by 2030. The NZE is also consistent with IPCC' s Special Report on Global Warming of 1.5°C with regard to the reduction volume.



According to the carbon fee collection regulations announced by the Ministry of Environment, carbon fees will be levied on emission sources with annual greenhouse gas emissions of 25,000 metric tons or more. It is anticipated that five CPC plants will be affected by this impact. Based on the simulated climate scenarios, it is apparent that CPC will incur some degree of carbon fee in any of IEA' s three climate scenarios, and the cost impact is the highest under STEPS. No matter the level of carbon price, CPC' s exposure to carbon cost will increase progressively over time, and amount to as high as NT$27.56 billion. However, in the NZE scenario where CPC actively develops renewable energy sources and purchases carbon credit to offset emission as a means to achieve net zero by 2050, CPC will not incur additional carbon fee for having ultimately achieved net zero.

Carbon fee scenario analysis



Market Demand Reduction Risk Assessment

CPC has the largest share of Taiwan's oil and natural gas market (about 79.6% in gasoline and 77.2% in diesel), and supplies fuel to businesses and consumers for transportation as well as manufacturing activities. Due to the imposition of emission charges and the resulting transition from fossil fuel to electricity or renewable energy sources, customers will have less demand for oil and natural gas, which gives rise to market risk. Taiwan' s path to achieving net zero by 2050 also includes a goal to cease all new sale of non-electric vehicles and scooters by 2040. As fossil fuel cars decrease in number, sale of gasoline, diesel, and automobile lubricant will decrease as a result. CPC has a relatively high market share in oil and gas products and will inevitably be impacted by the electrification of automobiles.

Market Demand Reduction Risk Financial Impact

The current trends toward electric vehicles and low-carbon energy sources will change customers' and consumers' behaviors in such a way that lessens demand for petrochemical products. CPC studied the electrification strategy proposed as part of "Taiwan 2050 Net Zero Roadmap" and predicted that, by 2030, all gasoline- and diesel-powered buses will be replaced with electric buses, and all new vehicles will run on electricity or other low-carbon energy sources by 2040. For this reason, scenarios have been configured to simulate a 50% drop in the market share of conventional fossil fuel cars and a 40%–60% reduction in the sale of automobile fuel between 2035 and 2040. In 2024, CPC' s total oil product sales revenue was approximately NT$609.9 billion, of which gasoline accounted for NT$225.9 billion (37%) and diesel accounted for NT$134.4 billion (22%). Without considering oil price fluctuations, under the long-term trend of automobile electrification, CPC is expected to lose 40-60% of its market share, equivalent to approximately NT$243.96 billion to NT$365.94 billion.

Climate Risk Response Strategies and Results

Physical risk

Risk Item	Strategies and Results
Heavy rainfall and flood	✓ Construction of drainage facilities at gas stations and employment of personnel for maintenance and cleaning. ✓ Total investment cost for purchasing water pumps was approximately NT$940.5 million.
Occurrence of power shortages	✓ In 2024, an investment of NT$19.823 million was allocated for the development and research of solar photovoltaic technology. ✓ Completed the drilling of 9 geothermal wells at Yilan Renze and Tuchang, with the goal of completing the construction of a 5.4 MW geothermal power plant in the Tuchang area by 2025.

Transformational risks

Risk Item	Strategies and Results
Government carbon fee collection	✓ Set an interim target of a 50.2% reduction by 2032, aiming to achieve net-zero emissions through improving energy efficiency, using low-carbon fuels, recovering and utilizing energy, adopting renewable energy, carbon capture and storage, hydrogen energy, and carbon-neutral natural gas.
Reduced demand for fossil fuel	✓ Expand the coverage of electric vehicle and motorcycle charging stations to meet the growing demand for EV charging stations. ✓ If the installation of automobile and motorcycle charging stations is gradually expanded to all Company-owned gas stations, the total investment cost will be approximately NT$4.72 billion.

Performance of Major Energy Conservation and Carbon Reduction Measures from 2005 to 2024

Major Energy Conservation Measures	Reduction (KLOE)	Performance (NT$ ten thousands)	tCO_2e (t)
Process Equipment Renewal	277,854	395,605	852,095
Equipment Repair/ Improvement	151,113	222,977	455,574
Waste Heat and Fuel Gas Recovery	268,933	431,888	799,592
Operation Improvement	144,723	323,474	409,452
Other Improvements in Energy Management	270,894	406,341	667,188
Total	**1,113,516**	**1,780,285**	**3,183,901**

Analysis and evaluation of climate change opportunities

In addition to conducting full-scale scenario analysis on the climate risks it has identified, CPC also performs scenario analysis and evaluation on opportunities that offer potential commercial value, and thereby ensures that the Company keeps up with national policies and market trends while setting sustainability goals and policies, and directs R&D resources in ways that generate maximum value and yield. The chart below shows the three climate change opportunities that CPC identified in 2024. Scenario simulations were performed to estimate commercial viability and opportunity cost of investment.

Category	Item	Physical/transition	Timeframe[1]	Likelihood[2]	Financial Impact
Climate opportunities	Increase solar power capacity	Transition	Long term	High	Moderate
	Develop geothermal energy	Transition	Medium-term	High	Moderate
	Develop carbon storage technology and markets	Transition	Medium-term	High	Significant

Note 1: Timeframe refers to the time opportunity occurs. Short-term: 0-3 years; medium term: 3-8 years; long-term: 8-28 years.
Note 2: Likelihood refers to probability of occurrence for the given opportunity.

Climate Opportunity Response Strategies and Results

Transition Opportunities

Opportunity Items	Strategies and Results
Increase solar power capacity	✓ In 2024, CPC increased its capacity to 21.222 MW, and it is projected that total capacity will reach 35 MW by 2050. ✓ Develop intelligent monitoring and management application systems to continuously optimize solar power maintenance and storage technologies. ✓ CPC has established four smart green energy demonstration stations and plans to convert more gas stations into smart green energy gas stations in the future.
Develop geothermal energy	✓ Taiwan is located within the Pacific Ring of Fire, where shallow and deep geothermal energy may reach 33.6GW. ✓ Completed the drilling of 9 geothermal wells at Yilan Renze and Tuchang, with the goal of completing the construction of a 5.4 MW geothermal power plant in the Tuchang area by 2025.
Develop carbon storage technology and markets	✓ By 2025, carbon storage capacity will reach 100,000 metric tons per year, and will gradually increase to 10 million metric tons per year by 2050. ✓ From 2022 to 2024, CPC has invested approximately NT$221 million in carbon storage R&D, and plans to invest about NT$700 million by 2030.

2.1.4 Climate change goals, indicators, and management performance

In response to domestic and international net-zero emission trends, CPC, under the guiding principles of "High-value Petrochemical," "Low-Carbon Emission," and "Lean-Renewable Energy," is actively developing technologies for hydrogen energy, geothermal energy, solar energy, and carbon capture, utilization, and storage, with the targets of reducing carbon emissions by 50.2% by 2032 compared to 2005 levels and achieving net-zero emissions by 2050.

Based on the outcomes of risk identification exercise and international trends, CPC introduces climate change action plans along with short-, medium-, and long-term performance indicators for greenhouse gas management, energy/resource management, water resource management, and pollution control, which are examined regularly for target attainment and progress. CPC also follows the "GHG Protocol" and surveys direct emissions (Scope 1) as well as indirect emissions (Scope 2) of greenhouse gases to determine the effect of its operations and any potential impacts. Outcomes of the greenhouse gas survey have been certified for ISO 14064-1.

CPC Carbon Reduction Pathway Diagram

2025

I.Carbon management:
1.Completed carbon footprint assessments for 554 products.
2.Implemented internal carbon pricing (NT$1,500 per ton).

II.Promotion of process emission reduction measures:
From 2021 to 2024, a total of 71 process reduction measures were implemented, achieving a reduction of 497,000 metric tons.

III.Use of renewable energy:
1.Installed solar PV capacity reached 21.189 MW.
2.Completed construction of the 5.4 MW Yilan Tuchang Geothermal Power Plant.

Third LNG terminal expected to commence gas supply in 2025, which may increase emissions.

Seventh LNG terminal expected to commence gas supply in 2050, which may increase emissions.

2032

I.Continue to promote carbon management and process reduction measures.

II.Expand the use of renewable energy.

III.Evaluate expansion of negative carbon technology deployment.

IV.Adjust refining production model in response to changes in oil market demand.

V.Continue to monitor and adopt advanced process emission reduction technologies.

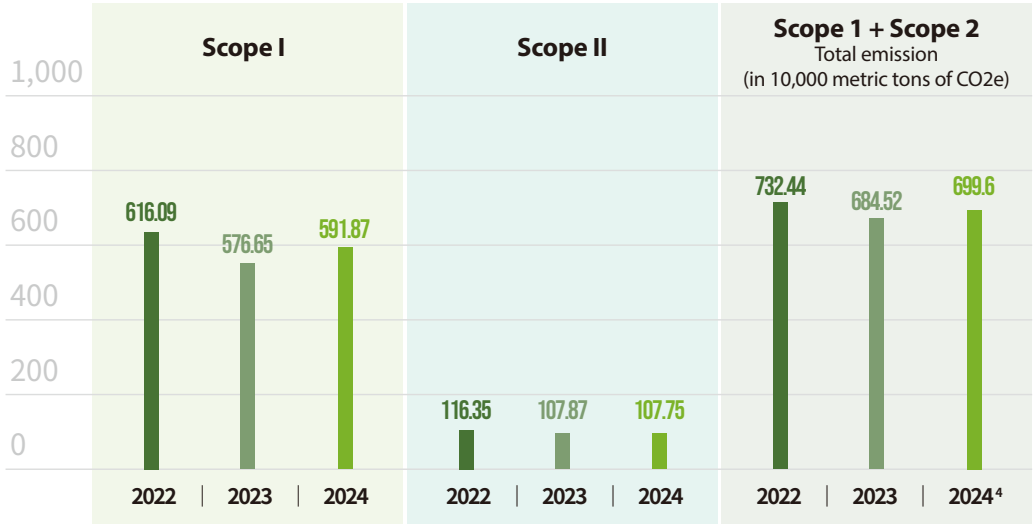
40.6% reduction in emissions compared to the base year by 2025

50.2% reduction in emissions compared to the base year by 2032

Achieve net **ZERO** emissions by 2050.

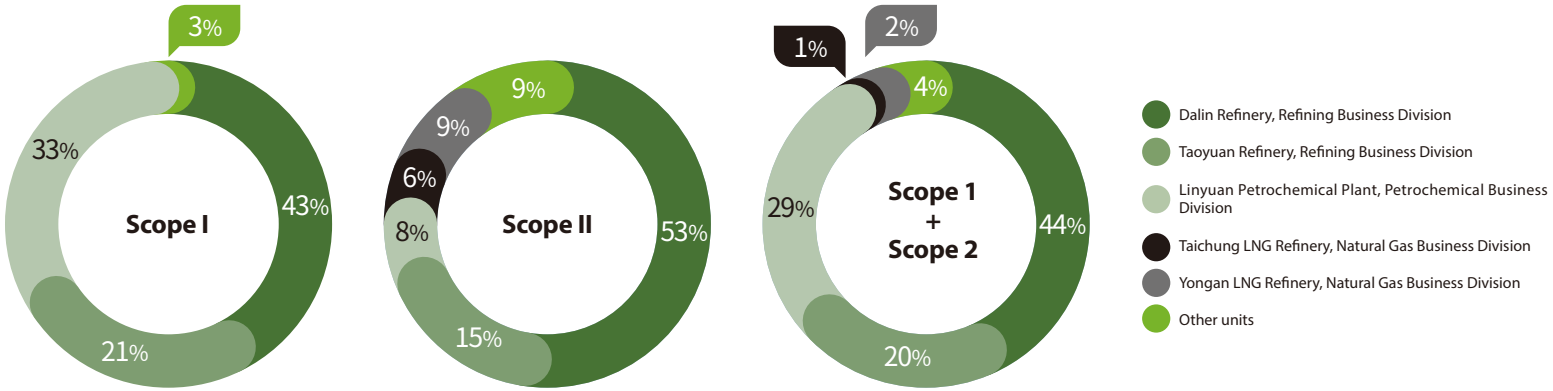
2024 | 2025 | 2032 | 2050

As a support to the national carbon reduction goals outlined in the Climate Change Response Act, CPC designated 2005 as the baseline year, in which it measured greenhouse gas emission at 11.58 million MT (carbon dioxide equivalent). CPC has since surveyed Scope 1 and Scope 2 greenhouse gas emissions on a yearly basis, and made calculations by following the Ministry of Environment's Greenhouse Gas Emission Coefficient Sheet for guidelines, or using proprietary coefficients as a priority. GWP values are adopted according to Ministry of Environment's rules. In 2024, CPC's greenhouse gas emission intensity was 6.38 metric tons CO_2e per NT$1 million in revenue. The overall total greenhouse gas emissions have been reduced by 39.59% compared to 2005.



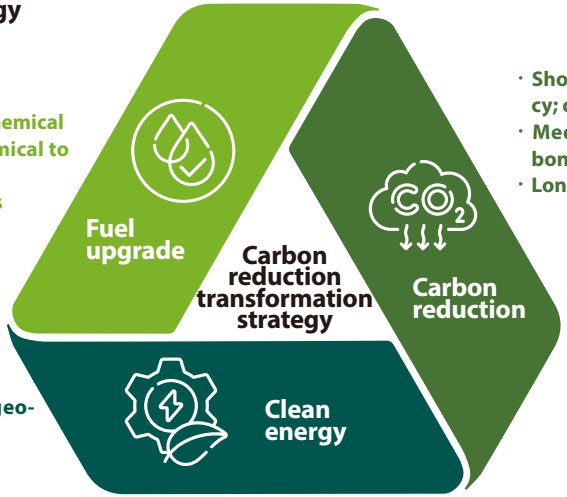
Note 1: Greenhouse gas emission intensity is calculated as greenhouse gas emissions (tCO_2e) / revenue (NT$ million).
Note 2: The boundaries of CPC's Scope 3 survey cover greenhouse gas emissions by the entirety of CPC as well as upstream and downstream participants of the value chain. Scope 3 survey includes the following: 1-Purchase of merchandise and services (raw materials), 2-Capital goods, 3-Upstream fuel and energy supply, 4-Upstream transportation and delivery, 5-Waste generated from operations, 6-Business travel, 7-Employees' commute, 9-Downstream transportation and delivery, 10-Processing of goods sold, 11-Use of goods sold, 13-Downstream leasing, 14-Franchise, and 15-Investment. Data is mainly sourced from: Carbon Footprint Information Platform of the Ministry of Environment and SimaPro database.
Note 3: In 2024, the Scope 3 greenhouse gas inventory had not yet commenced at the time of report publication; therefore, only data for Scope 1 and Scope 2 are disclosed.
Note 4: In 2023, major overhauls and efficiency-driven furnace shutdowns were carried out in response to market conditions. In 2024, increased production led to a slight rise in greenhouse gas emissions compared to the previous year.

CPC's main emitting plants and other units' emission proportions in 2024 are shown in the figure below. For detailed emission data, please refer to Appendix 5: Environmental Information



2.2 Low-carbon Transformation and Circular Economy

CPC's low-carbon green energy transformation strategy



- Short-term: oil to petrochemical
- Medium-term: petrochemical to high-value materials
- Long-term: new materials

- Short-term: increase energy efficiency; carbon neutral oil/gas
- Medium-term: carbon capture/carbon storage
- Long-term: carbon utilization

- Short-term: natural gas
- Medium-term: photovoltaic/geothermal/cold energy
- Long-term: hydrogen power

Budget and outcome of prospective R&D

Item	2022	2023	2024
Investment budget (NT$100mn)	28.98	35.99	31.07
R&D expenses as a percentage of net operating revenues1	0.24%	0.33%	0.28%
Financial benefits (in multiples of NT$100 mn)	49.76	51.65	49.12
Acquired patents	21	20	33
Published papers	218	220	265
Outcomes delivered (items)	75	81	93

Note: "Budgets committed" into R&D are calculated based on "actual amounts" of research and development expense (including capital expenditure) paid

Focuses and outcomes of prospective R&D

2024 CPC Patents Obtained

Taiwan patents
14 items
I859450
I846266
I838147
I804353
I735348
I832426
I838844
I840934
I838304
I860185
M658247
I858738
I855988
M661647

Japan patents
2 items
7418514
7177220

US patents
1 items
US12 202 752B2

India patents
1 items
545053

Key focus	R&D outcome
R&D category: Assessment and research of domestic and overseas oil mine potential	
Study of domestic mine sites	• Strengthened oil and gas exploration prospects in the southwestern Taiwan offshore area, proposed that the Tainan Basin may contain two petroleum systems and several reservoir rocks with large oil and gas potential among various exploration targets.
Foreign mining area studies	• Evaluated the exploration potential of the Canning area offshore northwest Australia, proposed exploration strategies and directions for Block WA-533-P to reduce exploration risks. • Evaluated the oil and gas potential of the Nogal Basin and Somaliland mining areas in Africa, completed Cretaceous stratigraphic sequence analysis of the Nogal Basin, and screened prospective exploration zones in the Somaliland mining area.
R&D category: Development and use of renewable energy	
Development and use of renewable energy	• Completed geological drilling at Ma-tsao, Tatun Volcano Group, with a well depth of 1,195.5 meters; measured temperatures above 240° C below 750 meters in the reservoir, and obtained approximately 50 meters of core samples at depths between 750 and 800 meters. Initial estimates suggest that single-well power generation could reach megawatt level, making a significant contribution to the search for weakly acidic geothermal power in the Tatun Volcano Group. • Established a 3D subsurface geothermal conceptual model of the Ma-tsao area in the Tatun Volcano Group, displaying the volume and distribution of the weakly acidic subsurface reservoir in the Ma-tsao area, and based on the model proposed six recommended future exploration well locations in the Ma-tsao area. **Key Promotion Project:** In addition to metamorphic rock-type geothermal resources in the Yilan area, Taiwan also contains abundant volcanic-type geothermal resources, with the Tatun Volcano Group being the area with the highest potential. However, geothermal fluids in this area from historical drilling often exhibit strong acidity, causing severe corrosion problems. Through related studies, the aim is to identify non-acidic zones or acid-resistant materials to develop the potential for geothermal resource exploitation in the Tatun Volcano Group.
Development of photovoltaic (PV) technology	• Actively supporting the development of solar photovoltaic (PV) systems, CPC had completed over 270 PV sites by 2024, with a total installed capacity of 21.222 MW. Developed a drone-based solar panel defect image recognition system to assist in PV site inspections.

Key focus	R&D outcome
Evaluation for the establishment of mobile hydrogen fuel station	• In 2024, in collaboration with Linde Group, a major gas manufacturer from Germany, CPC established Taiwan's first mobile hydrogen refueling demonstration station in Kaohsiung. **Key Promotion Project:** The first hydrogen refueling station is scheduled to begin operation in 2025, supporting the Ministry of Transportation and Communications' demonstration program for hydrogen-powered buses, providing hydrogen fuel for demonstration vehicle operations.
Low-Carbon Fuel R&D (Biomass Energy)	• Land Transportation Alcohol Gasoline: CPC signed an MOU with the U.S. Grains Council (USGC) for research on alcohol use in SAF and E10 alcohol gasoline. Completed the "E10 Fuel Specification and Evaluation of Real-World Fuel Efficiency, Power Output, and Aldehyde and Ketone Emissions." • Marine Biofuel: In coordination with the "Marine B24 Biofuel Pilot Program" (scheduled for Q4 2025), completed blending research for B20/B30 marine biofuel, and conducted compatibility, long-term stability, and microbial testing. • Aviation Sustainable Aviation Fuel (SAF): Completed feedstock analysis of used cooking oil (UCO) for co-processing and evaluation of commercial-scale co-processing catalysts, and assisted Taoyuan Refinery in establishing procurement specifications.
R&D category: Development of new products and new technologies	
Development and application of lithium-titanate (LTO) materials	• Constructed a ton-scale pilot production plant for lithium titanate (LTO) materials; plant and mechanical equipment were completed in 2024, with trial production for **Key Promotion Project:** Compared to conventional graphite carbon materials, lithium titanate (LTO) offers structural stability and is non-flammable, significantly enhancing safety when used as the anode material in lithium batteries. The ton-scale LTO pilot production plant is Taiwan's first LTO material production facility. Once fully operational, it will be capable of producing 1,000 tons of LTO energy annually.
Development of biocarbon super capacitors	• CPC completed the trial production of 500 pieces of 1200F 40138 super capacitor, developed 48V modules, and invested into the development of anode materials for modified sodium ion battery. CPC has implemented a 30kW/70kWh hybrid energy storage demonstration and is gradually scaling up.

Key focus	R&D outcome
Development of environmentally friendly high performance coating materials	• Developed eco-friendly green building coating technologies and conducted trial applications on CPC buildings. • By applying hydrogenation technology on dearomatized solvents, CPC successfully developed environmentally friendly solvent D50 that can be used in paint, coating materials, industrial cleaning agents, and metal processing.
Development, trial production, and validation of PPE resin for high frequency substrate	• The developed general-purpose high-frequency substrate resin underwent ton-scale mass production and optimization. Performance testing by copper-clad laminate manufacturers confirmed that the product met expected targets. In addition, customized adjustments and promotion were successfully carried out in response to customer needs. • Successfully developed various reactive low-dielectric flame-retardant resins, and established ketonization, phosphorylation, and functionalization technologies. Product validation by board manufacturers confirmed low dielectric properties. The UL-94 flammability test reached the V-0 rating, and the resin demonstrated ≥ 50% solubility at room temperature in toluene and dimethylacetamide solvents.
Testing of high/low temperature fuel cell	• CPC created a distributed power generation test site for high/Low temperature fuel cell, and completed the establishment of fuel cell monitoring system and big database. **Key Promotion Project:** Completed optimized design and production of CPC's 5kW natural gas reformer and integrated verification testing of a high-temperature fuel cell system. Next steps will include efficiency enhancement design for the high-temperature fuel cell system.
Research on Carbon Capture, Utilization, and Storage (CCUS) Technologies	• To ensure the safety of the inter-agency pilot project at Tiezhen Mountain (carbon storage demonstration site), atmospheric and soil gas continuous monitoring stations have been gradually established to monitor changes in CO☒ concentrations in the atmosphere and soil gas in real time. • Established coupled fluid-mechanical simulation technology and microseismic localization technology to develop suitable injection strategies and clarify seismic correlations. • Used satellite remote sensing InSAR technology to establish the vertical velocity baseline prior to CCS injection. • Updated carbon storage potential assessment results using newly collected survey line data; completed investigation of carbon emission sources in central and southern Taiwan and conducted value chain analysis for carbon capture and storage under different capacity scenarios.

Key focus	R&D outcome
Smart green energy stations	・CPC had 4 green energy-based pilot smart fuel stations in Northern, Central, Southern, and Eastern Taiwan, where research outcomes were applied to support "power generation," "power storage," "power usage," and "AI-assisted" services.
Development of cosmetics material - MïBlancSol	・Developed MïBlancSol, a whitening active ingredient that has obtained halal certification and been used to create a face cream product ("MïBlancSol Radiant Cream"). Human trials confirmed anti-wrinkle and spot-lightening effects, and the product has been promoted and made available in multiple locations.
Local Revitalization – Development of Diffuser Products	・Completed the development of high-value utilization technology for rush grass, extracted rush dew, and developed a series of diffuser products.
Development of production procedures for bioplastic materials	・In support of the nation' s plastics reduction policy, CPC completed the development of production technology for 5-hydroxymethylfurfural (5-HMF), a critical precursor to the bio-based polyester material polyethylene furanoate (PEF), and successfully produced 5-HMF products of high purity.
	Key Promotion Project: Promoting the construction of a continuous pilot production plant with an annual capacity of 20 metric tons of 5-Hydroxymethylfurfural (5-HMF). The basic and detailed design planning of the pilot plant has been completed.
Dicyclopentadiene (DCPD) Pilot Production	・Construction of a pilot production plant for dicyclopentadiene (DCPD) with an annual capacity of 8 metric tons, with trial operation scheduled for 2025 to produce high-purity DCPD.
	Key Promotion Project: Trial operation to produce DCPD with a purity above 95%, and supply to downstream manufacturers for trial use to verify quality and performance, and collect market demand and downstream application information.
Refinery Spent Catalyst Recycling for Vanadium Flow Battery Electrolyte Production	・CPC' s refinery recycles spent catalysts to produce vanadium electrolyte, completing discussions on purity, basic performance, and feasibility of flow battery energy storage applications.

Key focus	R&D outcome
Advanced oxidation process (AOP) for air pollution control	・**Air Pollution Control Technology:** Developed high-sulfur process deodorization cleaning technology and applied it on-site. To date, it has been implemented in Taoyuan Plant' s VGO unit sour water stripping system, sulfur plant alkaline wash and sour gas systems, distillation unit sour water system, and post-RFCC LPG alkaline wash system. It removes over 99% of odorous sulfur compounds such as hydrogen sulfide and mercaptans, and 86–99% of VOCs. ・**Wastewater Treatment Technology:** Developed AOP (Advanced Oxidation Process) waste liquid treatment technology and assisted the sulfur plant of Taoyuan Plant in planning and building a 20 CMD AOP waste alkali treatment system.
Development of bio/energy-efficient lubricant	・Completed development of energy-saving hydraulic oil products. By adjusting the formulation, vortex loss in pipelines is reduced, improving overall stability of power transmission and achieving energy-saving effects. According to related test reports, the product applied to injection molding machines, can achieve an annual energy savings of approximately 4–6%. ・Based on market data and customer demand, completed development of bio-based cutting oil products. Compared with similar commercial products, this product shows better machining efficiency, cooling performance, and rust resistance, and is suitable for applications in the aerospace industry.

R&D category: Circular economy

Adding value to heavy oil materials - development and application of soft carbon derivative for energy storage	・Ongoing promotion and construction of pilot soft carbon production factory. ・Developed long-life functional soft carbon anode materials, high-capacity artificial graphite, high-power activated carbon, and capacitive deionization carbon materials for semiconductor wastewater treatment, creating high-value carbon materials that contribute to carbon capture and emission reduction. ・Soft Carbon Battery Applications: Scooter battery swap services.
Turning recycled PET into polymeric dispersant	・CPC developed catalytic depolymerization technology for turning PET into high value-adding applications, thereby increasing the economic benefits of recycling efforts. ・Through alcoholysis and functionalization, CPC successfully turned recycled PET into water-based polymers characterized by high polymer count and crystallization resistance, which can be made into titanium dioxide dispersant.

Key focus	R&D outcome
Development of DeNOx catalyst	・The honeycomb SCR catalyst regeneration technology was applied in an actual plant in 2023, and the catalyst performance was tracked in 2024. The catalyst's denitration activity remained stable, and the flue gas outlet concentrations were all below regulatory limits, showing that the regenerated catalyst maintained performance comparable to that of new catalysts. ・To meet increasingly stringent air pollution regulations in the future, in 2024, efforts were made to convert plants previously using flat-plate catalysts to honeycomb catalysts to improve NOx removal efficiency and reduce flue gas outlet NOx concentrations.
Use of cold energy - development of algaculture and functional materials	・CPC developed green extraction technologies to help extract sarcodia essence, a functional substance found in algae, for the development of high value-adding products such as Sarcodia Extract Milky Essence, Sarcodia Extract Hair Tonic, and Sarcodia Extract Shampoo. Sea Peony shampoo and body wash have been sold through gas station channels.

R&D category: Development and application of environmental safety technology and new technologies

Application of ground-penetrating radar	・CPC continued using ground-penetrating radar as a non-destructive way to assist subordinate units in surveying underground pipelines. A total of 4 service requests were completed in 2024.
Green Sustainable Pollution Remediation Technology	・Developed biopulping methods for treating diesel-contaminated soil and evaluated the effectiveness of bioremediation at specific diesel-contaminated sites.
Pollution Source Tracing Technology	・Established a hydrocarbon isotope ratio identification technique to distinguish between two sources of finished gasoline, identifying products made by CPC and Formosa Petrochemical, and explored the impact of weathering on the identifiable components of gasoline.
Polluted Site Investigation and Remediation Operations	・Continued to assist CPC Corporation's affiliated units in the investigation, planning, remediation, and delisting of polluted sites, and completed remediation, delisting, and improvement operations.

Results are as follows: ●Hsinchu Fuel Supply Service Center under the jurisdiction of the Zhunan and Miaoli Sales Division ●Shengang Gas Station under the jurisdiction of the Taichung Sales Division ●Songshan Airport Gas Station under the jurisdiction of the Taipei Sales Division ●Huxi Fuel Supply Center under the jurisdiction of the Penghu Sales Division ●The mobile laboratory vehicle completed self-managed soil gas/groundwater testing at gas stations in Chiayi, Taichung, Miaoli, Hsinchu, and Taoyuan, and assessed potential sources of pollution.

2.2.1 Fuel upgrade transformation

74
EV fast chargers

In line with the Ministry of Transportation and Communications' 2050 Net-Zero Emissions Policy, CPC has planned to complete 80 electric vehicle fast-charging guns from 2021 to 2025; from 2021 to 2024, 74 guns have been completed, and 14 guns are planned for completion in 2025.

74
Green Building Labels

Since 2013, CPC has been planning "Green Building Gas Stations," utilizing carbon reduction or ecological construction methods. As of the end of 2024, a total of 74 gas stations have obtained the Green Building Label.

4
Smart green energy pilot stations

In 2019, a new type of smart green energy gas station demonstration site was established, not only to validate the results of research and development but also to explore future development paths and symbiotic models for smart cities. Plans are in place to convert more gas stations into smart green energy gas stations.

Highlights of smart green energy stations – 2024

On April 21, 2023, CPC opened its first self-constructed, self-operated composite EV charging station at the carpark of Hsinchu Guangmin Station. The charging station has four fast charging units each with two charging points, and four slow charging units each with one charging point. They support several types of chargers to meet the needs of different EVs. To achieve optimal operation and management of the charging stations, CPC created a proprietary platform where customers are able to inquire the location of charging station and track the charging status in real-time using CPC PAY. In addition, CPC Corporation participated in the 21st National Yushan Award in 2024 in the Most Popular Brand category with the project "CPC Scooter Battery Charging and Swapping 1000-Station Nationwide Coverage Service" and won the first prize recognition.

In the future, CPC plans to incorporate solar power as a form of energy and will develop energy storage systems at the station. By leveraging power generation and energy storage technologies and connection to the smart grid, CPC hopes to power electric vehicles entirely using green energy. The charging rates will also be lowered appropriately to attract more users, thereby promoting CPC's green, positive image and making the station a true pilot for diverse energy sources in the future.

The smart green energy station also combines CPC's proprietary coffee brand CUP&GO and fine car wash to provide a diverse range of services and bring comfort to the charging environment.

ESG benefits of green energy pilot station

With the assembly of "Smart Green Energy Station Project Team" in April 2018, CPC plans to transform conventional petrol stations into integrated smart, green energy platforms that "generate, store, and utilize green energy." Two petrol stations, namely Xinyi Road Station in Chiayi and Qianfeng Station in Tainan, have been chosen as pilots for CPC's smart green petrol station project; together, they validate our research findings and help us explore ways to create smart cities and co-exist with nature.

- Electricity cost per kWh (before system implementation) averaged NT$3.7 in 2020 and NT$3.4 in 2024, representing NT$0.3 of saving per kWh.
- In 2020 (before system implementation), electricity contract overuse charges occurred for a total of 9 months throughout the year; in 2024, no electricity contract overuse charges occurred.

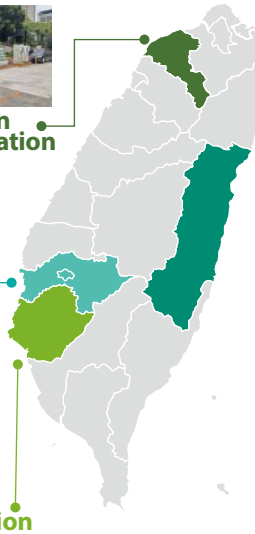
Taoyuan Qiedong Station

- In 2024, CO_2 reduction reached 31,760 kg, equivalent to the amount of carbon sequestered by 1,588 trees through one full year of photosynthesis.
- In 2024, the average self-generated green power rate was 81.05%.

Chiayi Hsinyi Station

- Weight of self-produced power averaged 22.9 %
- Electricity was provided for the electric motorcycle fast-charging system, with a total of 22 charging services provided for electric motorcycles in 2024.
- Two fast-charging systems for electric vehicles were installed and began providing charging services on June 1; a total of 152 charging services were provided in 2024.

Tainan Qianfeng Station



Hualien Guangfu Station

- The LTO energy storage system allows the station to switch to islanding mode during a power outage, so that it continues to supply power to the emergency needs of the local township or indigenous people's reserve.

Tainan Qianfeng Station Group Tour and Guided Visit Activities
Introduction to the Tainan Qianfeng Station's integrated multi-energy display, green energy education promotion, and actual operation and maintenance performance.

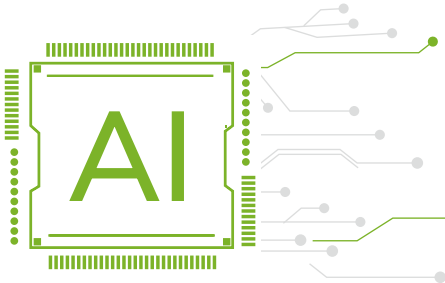
A total of **221** people participated in guided tours in 2024

Group tour at Chiayi Xinyi Road Station
Introduction to the design objectives, hardware configuration, green energy education promotion, and actual operation and maintenance performance of Chiayi Xinyi Road Station.

A total of **6** guided tours were conducted in 2024

Advance Catalyst Center

R&D outcome of Advance Catalyst Center - 2024



Carbon Reduction Economy

- Developed a catalyst for converting carbon dioxide into methanol; the performance of the self-developed catalyst is comparable to that of commercial catalysts and still holds potential for improvement.

Energy Conservation and Environmental Protection

- [Establishment and Application of SCR Catalyst Regeneration Technology] won the 2025 5th Taiwan Circular Economy Awards "Innovation Technology Award" – Potential Award.

In light of the global movement to reduce energy and carbon and the multitude of innovative technologies being developed to achieve net zero emission in Taiwan, CPC assumed its role as the leader of industrial transformation and founded an "Advance Catalyst Center" in 2021 with the goal to support "carbon reduction, energy conservation, environmental protection, and green products" with upgraded refining processes, value-adding chemicals, and carbon capture/utilization solutions. By 2022, the Advance Catalyst Center had successfully: CO2 hydrogenation for the production of methanol catalyst, catalysts for efficient removal of NOx, and high value green oil products. The Advance Catalyst Center also combines CPC's chemical products with other petrochemical materials into the development of electronic grade materials for the semiconductor industry.

CPC aims to establish its Advance Catalyst Center as the "pilot site for next-generation smart production" and therefore incorporates digital and AI technologies to create a smart production environment that supports the petrochemical industry's transition into "Industry 4.0." In 2022, Advance Catalyst Center incorporated 5G and AIoT technologies and introduced and developed a "Bionic Automated Inspection Device" in the form of a dog. This bionic dog performs automated inspections throughout plant premises and sends inspection data to the control center to facilitate cloud computing for smart energy management, workplace safety, personnel safety etc., and is a good example of how AI can be applied in safety monitoring.

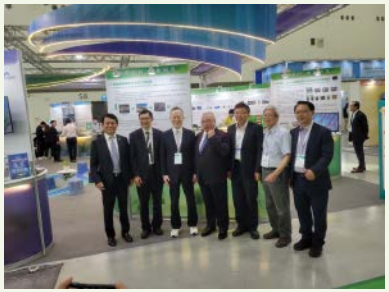
Bionic Canine Automated Inspection Device (Robot Dog) – Three Major Features

- Helps check dashboard and reduces the need for manpower in patrols
- Checks gas leakage by detecting sound of unique frequency and triggers alarm
- Prevents personnel entry that may damage or contaminate environment, and therefore improves equipment uptime

* **In 2024, the inspection range was expanded and practically applied at the Linyuan Plant and Taoyuan Plant.**

The Bionic Automated Inspection Device is assigned employee ID of "918779," which is pronounced similarly to "Go machine dog"

The Advance Catalyst Center has been cooperating actively with industry participants, government agencies, and the academia locally and abroad toward accomplishing localized production of catalysts. In 2022, the Advance Catalyst Center completed validation of DeNOx catalyst with China Steel Corporation, developed carbon capture technology with Taiwan Power Company, and invited Nippon Shokubai Co., Ltd. to an exchange of technologies and know-how. With respect to industry-academia collaboration, the Advance Catalyst Center has outsourced studies of DeNOx catalyst, smart factory, and catalyst development to National Taiwan University and Academia Sinica as ways to secure growth for domestic catalyst manufacturers and to support circular economy.



In 2024, CPC completed a practical case of regenerating and reusing honeycomb-type used catalysts. The regenerated used catalysts met specification requirements, with a regeneration recovery rate of over 80%. The pilot CO_2 capture and utilization test equipment completed trial runs and acceptance testing. One CO_2-to-methanol catalyst formulation was developed, and a p-DCPD composite prototype sample was completed and exhibited at the "TASS Asia Sustainable Supply + Circular Economy Expo." CPC continues to drive domestic industrial upgrading through innovative technologies and promote net-zero transition and development.

Composite materials R&D center

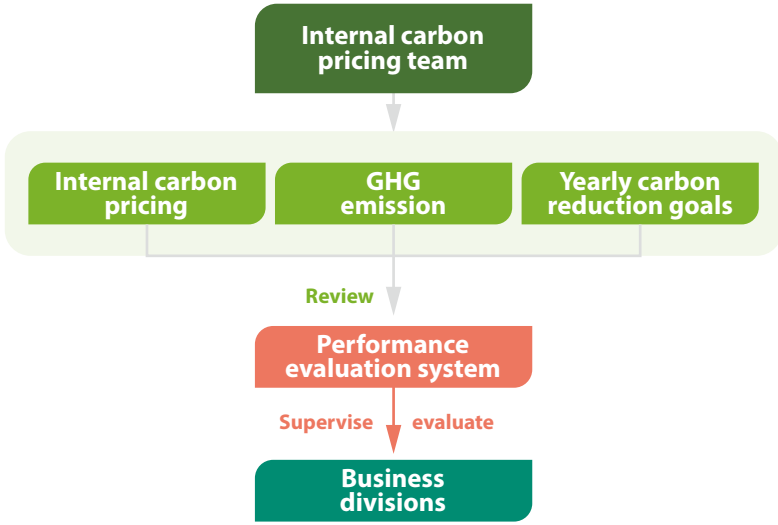
There is high degree of competition for carbon fiber composite materials around the world, which makes it one of the critical next-generation technologies that Taiwan will focus its development efforts on in the future. Taiwan has accumulated strong know-how and had successful experience with composite materials over the years. By having the composite materials center integrate resources that are scattered across individual entities, local businesses will be able to ascend from making carbon fiber to designing an entire system with composite materials. Meanwhile, CPC will be directing its heavy oil to carbon fiber production for added value, emission reduction, and carbon storage benefits, thereby contributing to the sustainable growth of the organization. By leveraging the government's influence, CPC took the initiative to form an industry alliance that not only brings new ideas into old practice, but also creates and shares values during the process.

In 2022, the first batch of carbon fiber-reinforced polymers featuring CPC's proprietary asphalt-based carbon fiber materials was produced; this was also the year when CPC and Taiwan Space Agency jointly created "aerospace grade composite barrel," a structural component in high precision optical lens for use on remote sensing satellite, from design to manufacturing. In 2023, CPC completed the design of a small-scale reaction device for the production of carbon fiber precursors used in staple fiber products. In 2024, the focus is on introducing industrial-grade carbon fiber composite industrial ceiling fans into CPC gas stations and testing facilities. Four carbon fiber industrial ceiling fans have been installed at the Catalyst Center of the Refining and Research Institute, and in January 2025, six ceiling fans were installed at the LTO pilot production facility of the Green Energy Institute. Installations at CPC gas stations are ongoing, as the Company continues to establish proprietary processes, equipment, formulas, and products for carbon fiber.

2.2.2 Carbon reduction transformation

Internal carbon pricing

As a response to carbon reduction trends around the world, CPC has set its long-term goal to introduce internal carbon pricing and allocate emission costs to internal operating activities. According to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6), the global carbon price must reach US$300 per ton by 2030 to limit global warming to no more than 1.5 degrees Celsius. CPC, referencing internal carbon pricing rates disclosed by well-known large domestic enterprises and the possible pricing under Taiwan's future total emission cap policy, has set an internal carbon pricing rate of NT$1,500 per metric ton.



CPC's first phase of implementation is carried out through a performance appraisal system, incorporating the Company's annual greenhouse gas reduction targets to assess the unit carbon cost per production volume of each business division. Through annual performance management, each unit is encouraged to actively reduce carbon emissions and gradually lower the carbon cost per unit of production, jointly working toward the goal of achieving net-zero emissions by 2050.

Introduction of carbon pricing to internal performance evaluation

New performance measurements on "carbon management" have been introduced for annual performance evaluation at all responsibility centers of each business division. Calculation for "carbon management" performance takes into account the production (refinery, sales) volume, GHG emission, and energy/carbon reduction plan of each department, as well as the Company's GHG emission targets for the year.

The responsibility center of every business division has included "carbon management" as one of the measurements for performance evaluation, and assigned appropriate weight based on the nature of business activities. Outcomes of the performance measurement will directly affect overall performance of the business division for the year.

When setting "carbon management" performance measurements, each business division is required to take into consideration the differences in business activities and adopt an independent approach for performance evaluation. Targets for the next year should be set based on data in the last 3–5 years.

Outcomes of the "carbon management" performance measurement will directly affect the overall performance of the business division for the year. Departments that deliver favorable carbon reduction performance are rewarded with annual performance credit and bonus.

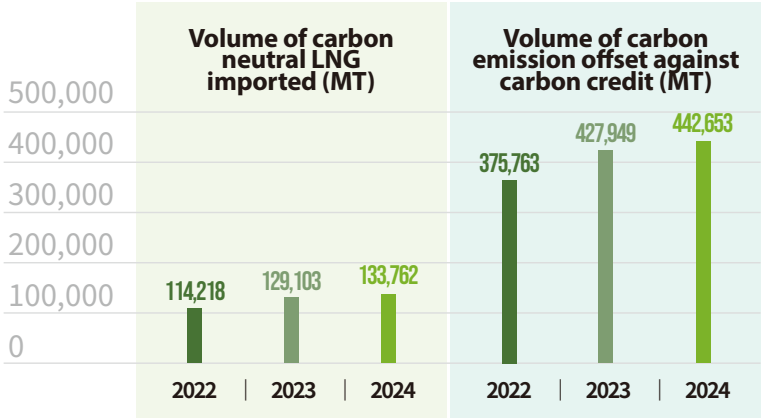
Pioneer in carbon neutrality

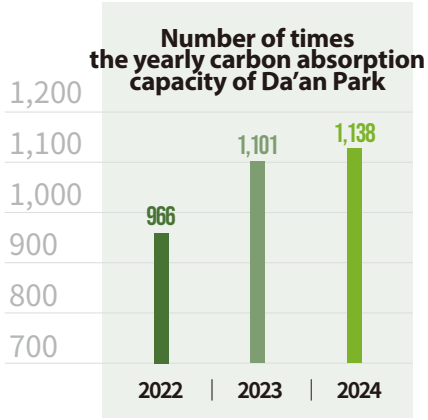
CPC's carbon neutral milestones

2021
- Signed carbon neutral LNG MOU with TSMC
- Received the world' s first shipment of carbon neutral ethylene

2022
- Completed Taiwan' s first carbon neutral fuel station
- Received the first shipment of carbon neutral crude oil

In response to the global transition to net-zero, CPC spares no effort in achieving carbon neutrality and actively
partners with international supply chain collaborators for carbon reduction. Through carbon offset mechanisms, the Company acquires full carbon emission reductions.





Persistent import of carbon neutral LNG


Source of picture: Shell

In 2024, CPC imported two shipments of carbon-neutral liquefied natural gas (LNG), offsetting the greenhouse gas emissions generated from extraction, production, to end-use with carbon credits compliant with the "Verified Carbon Standard (VCS)." Third-party certification of the carbon-neutral LNG was then obtained, and carbon-neutral certificates were provided to industrial users with net-zero needs. The Company is committed to reducing net greenhouse gas emissions, demonstrating CPC's determination in the face of the energy transition.

Since 2020, CPC has been importing carbon neutral LNG, showcasing real examples of carbon neutral products, and commercializing carbon neutral products to help industry participants achieve carbon neutrality. Currently, CPC maintains stable cooperation with multiple domestic industrial users, supplying carbon-neutral certificates for natural gas according to user needs, jointly striving to build a low-carbon and environmentally friendly supply chain.

Note 1: Carbon absorption capacity of Da'an Park is approximately 389 MT a year.
Note 2: Carbon neutrality certification is pending in 2024 and is expected to be obtained in the second half of 2025.

Pioneer of carbon neutral fuel station in Taiwan; contributor to net zero lifestyle

CPC is committed to using green energy as a means to carbon neutrality. Its smart green energy fuel station located at Qianfeng Road, Tainan, passed PAS 2060:2014 carbon neutral certification in March 2022, which made it the first carbon neutral fuel station in Taiwan and set a key milestone in terms of green energy development. In 2022, CPC purchased local carbon credits (Chang Bin Wind Power) through the "Voluntary Carbon Offset Management Platform" Gold Standard. The local offsetting made it the first carbon-neutral gas station in Taiwan and the first in the world to adopt the PAS 2060 specification and undergo third-party verification by BSI (British Standards Institution) to complete organizational carbon neutrality. Future plans include conducting carbon footprint inventory and verification for 12 petroleum products across storage, transportation, and sales stages. The inventory will cover the product life cycle from cradle to gate and distribution phase, to concretely fulfill carbon reduction commitments and enhance product visibility and market competitiveness.

Tainan Qianfeng Station was Taiwan's first carbon neutral petrol station

Product carbon footprint survey

Accomplishments of CPC's product carbon footprint survey

- Identified carbon emission hot spots and increased energy efficiency
- Responded to consumers' demand for green products
- Prepared for entry into international markets and participation in carbon trading
- Introduced product life cycle survey for enhanced carbon management
- Established baseline for carbon reduction designs for subsequent products
- Establish a domestic carbon inventory template to reduce carbon inventory costs
- Built comprehensive carbon footprint data on local products
- Led the oil industry in environmental surveys and coordinated with industry participants to create a sustainable value chain

CPC has been surveying and verifying the carbon footprint of its main products in order to meet supply chain requirements and analyze emission hotspots as part of its sustainability practice. Using the methods introduced in ISO 14067, CPC takes quantitative measurements of greenhouse gases emitted in different stages of the product life cycle; this data not only facilitates the calculation of the product carbon footprint throughout a supply chain, but also allows analysis of emission hotspots that internal departments can make use of to identify areas where emissions can be reduced, and devise effective reduction plans and risk control measures accordingly.

CPC Circulation Oil R68
Obtained carbon label certificate from Ministry of Environment

Product carbon footprint survey was carried out over several phases; the first phase began in 2022, in which CPC completed carbon footprint survey and third-party validation for 21 products including petrochemical materials, In the second phase, CPC have completed carbon footprint inventory for a total of 554 products in 2024, among which 92 products completed third-party verification, and 10 products obtained the carbon label certificate issued by the Ministry of Environment. CPC will continue to update data in the future to monitor changes in product carbon emissions.

2022-2024 progress by department

Unit	Inventory (items)	Verification (items)	Carbon Label	Inventory Item Content	Overview of Inventory Boundary
Refining Business Division	38	38	-	Gasoline, diesel, aviation fuel, fuel oil, and others	Raw materials – Refinery
Petrochemical Business Division	16	16	-	Ethylene, propylene, butane, benzene, toluene, xylene, and 10 by-products	Raw materials – Petrochemical plant – (Storage and transportation facility)
Exploration and Production Business Division	4	4	-	Natural gas, condensate oil, LPG, propane	Raw materials (mines, gas distribution stations) – Plant (natural gas processing plant, gas storage cavern)
Natural Gas Business Division	1	-	-	Trial calculation of imported natural gas carbon footprint, referencing the calculation method for carbon-neutral LNG ships	Raw materials – Receiving terminal – Regional gas distribution station
LPG Business Division	8	8	-	Household LPG, blended propane-butane, propane, butane, automotive LPG (five substances, including 8 items of finished and semi-finished products)	Raw materials – Shen'ao Center – (Taoyuan Plant / Tiezhen Mountain)
Chemical Solvent Business	56	4	-	Spot remover, general solvent, rubber solvent, blended hexane, and others (39 substances, 56 items across various packaging types)	Raw materials – Plant
Lubricants Business Division	419	10	10	Industrial oil, automotive oil, marine oil, grease, car wash wax, etc. (232 substances, 419 items across various packaging types)	Raw materials – Plant – Warehouse
Oil Product Marketing Division	12	12	-	· Carbon footprint of gasoline, diesel, aviation fuel, and fuel oil from refinery through supply center storage and distribution to sales outlets · Inventory scope includes 16 oil depots, 2 aviation fuel centers, 1 fishing boat station, 2 automobile gas stations, Shen'ao Center, Shalun Oil Depot, and Qianzhen Facility	Refinery – Supply center – Sales outlets (gas stations / customers)

From 2022 to 2024, carbon footprint inventory was fully completed for a total of 554 major products.

2.2.3 Clean energy transformation

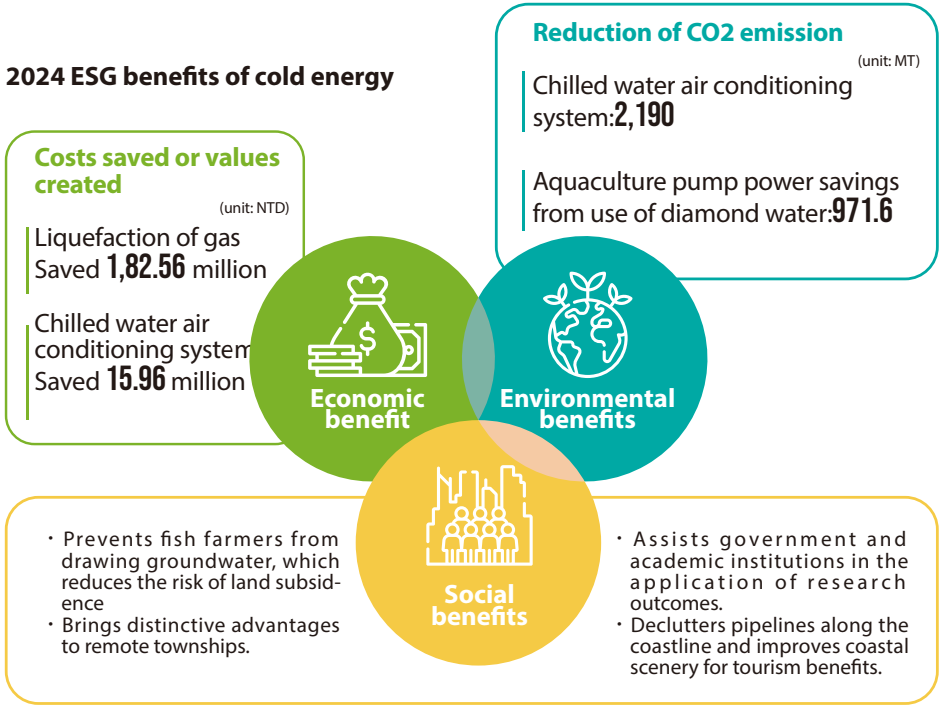
Ongoing investments are being made to the development of photovoltaic systems, geothermal power, and natural gas and cold energy supply. CPC has also ventured into hydrogen power, and will explore viable business models given the domestic demand, regulations, and supply chain availability to transform into a supplier of clean energy. Success of the clean energy transformation will make each CPC fuel station a supply center for diverse energy sources.

Reuse of cold drainage (diamond water)

CPC imports liquefied natural gas (LNG) from overseas, and in order to bring LNG back into gas form, the Company has to use large volumes of seawater to warm up the LNG, which is stored in extremely low temperatures during transportation. The sea water is discharged when temperature drops to about 15° C, and this "cold drainage" undergoes three cleaning and filtering processes to remove any concern for contamination or eutrophication. The purified water has such excellent and stable qualities and carries ideal temperature of 22–24° C during summer that make it very suitable for fish farming.

CPC utilizes the cold wastewater discharged from the Yongan LNG Refinery and adopts green supercritical extraction technology. Through supercritical carbon dioxide extraction, it produces the cosmetic ingredient "Marine Wood Ear Extract." This ingredient received the National Brand Yushan Award for Best Product and has been applied to the Company's developed products "Marine Peony Shampoo" and "Marine Peony Body Wash." Both products have obtained the Green Mark and the MIT Smile Label, becoming the first products in Taiwan developed from marine resources to receive dual certifications.

2024 ESG benefits of cold energy



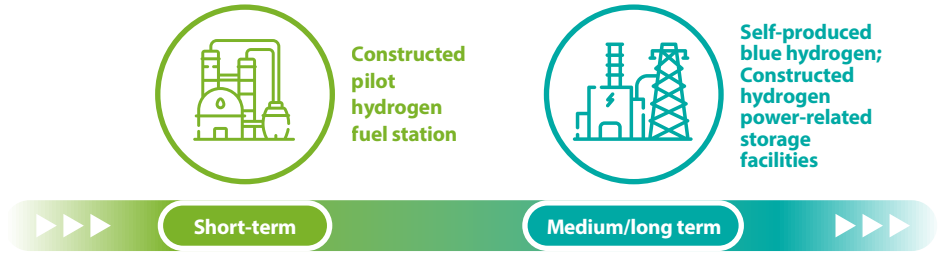
Hydrogen power roadmap

According to the nation's 2050 net zero goal, Taiwan aims to generate 9% to 12% of power from hydrogen by 2050, which was why CPC assembled a Hydrogen Power Team in March 2021 to oversee the hydrogen power business and to keep track of hydrogen power development in countries around the world, thereby helping local players connect with the international market.

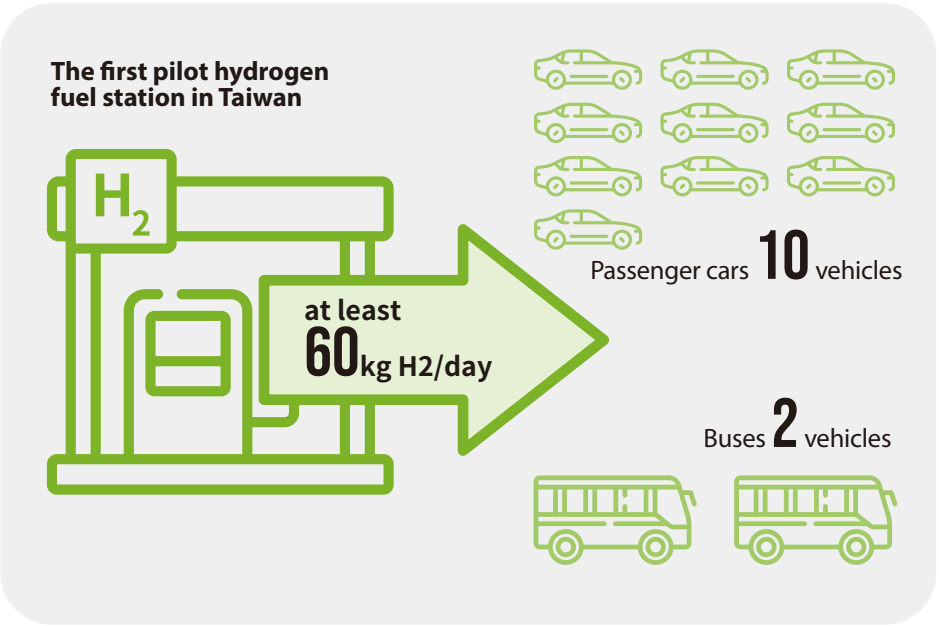
Direction of hydrogen power research

- Study of domestic and foreign hydrogen power regulations Collaborated with CSC on the investment of Steel-Petroleum Joint Factory
- Steel refinery with hydrogen power
- Quantitative hydrogen power study
- Blending hydrogen with natural gas Combustion research

Future hydrogen power plans



CPC, in coordination with the government's hydrogen vehicle development plan, is constructing hydrogen refueling stations. Taiwan's first hydrogen demonstration station is located in the Kaohsiung area and was completed in 2024. It is expected to obtain an operating permit in 2025. Going forward, CPC will work with central or local government plans for hydrogen fuel cell bus routes to assess the feasibility of establishing a second hydrogen refueling station. With regards to the supply of hydrogen power, CPC will start with blue hydrogen before transitioning into green hydrogen, and produce blue hydrogen through a combination of steam methane reforming (SMR) combined and carbon capture and storage (CCS) until far ocean transportation of hydrogen power is commercialized.



Geothermal Development

In Taiwan's "2050 Net-Zero Emissions Pathway" and "Twelve Key Strategies," geothermal and ocean energy are prioritized under the forward-looking energy category, alongside the development of biomass energy technologies. The plan envisions an installed capacity of 8 to 14 GW of forward-looking energy by 2050. To fulfill its long-term vision and goals for net-zero transition, CPC has been committed for many years to expanding geothermal energy development. Since 2018, CPC has successively completed the drilling of shallow geothermal exploration wells in Renzhe and Tuchang, Yilan County. By the end of 2024, CPC had drilled a total of nine geothermal wells in Renzhe and Tuchang.

In recent years, from restarting geothermal exploration, conducting feasibility studies for power plant construction, obtaining approvals from relevant authorities, to implementing geothermal power plant projects, CPC's senior, mid-career, and young employees have worked together to overcome numerous challenges in completing this unprecedented mission. In addition to Renzhe, where Taipower constructed a plant that was connected to the grid in 2023, CPC aims to complete the construction of a 5.4 MW power plant in Tuchang by 2025. It is expected to generate a net annual electricity output of 25.7 million kWh and reduce carbon emissions by approximately 13,000 metric tons per year, marking a significant milestone in CPC's geothermal power generation efforts. The Tuchang Geothermal Power Plant not only demonstrates CPC's full commitment to implementing the government's net-zero emission policy but also, amid a wave of renewed private-sector geothermal exploration, offers professional exploration and extraction services—joining hands with industry partners in entering a new era of net-zero emissions.

Shallow Geothermal

1. Yilan Region
   - Construction of the 5.4 MW Tuchang Geothermal Power Plant in Yilan
   - Completion of drilling for Tuchang Geothermal Wells No. 19 and No. 20 in Yilan
2. Central Region
   - Taipower's Guguan Geothermal Development Project in Taichung
3. Northern Datun Volcanic Area
   - Completion of the Datun Mountain Machao Geological Drilling Project
   - Identification of future drilling sites

Deep Geothermal

1. Completion of Yilan Yuanshan Geothermal Well No. 1 and subsequent development drilling and plant construction planning
2. Introduction of horizontal drilling rigs, stimulation production equipment, and technology for geothermal drilling projects planned in 2026 at four deep geothermal sites: Yilan Yuanshan, Sanxing, Wanli in New Taipei, and Ruisui in Hualien

2.3 Energy Resource Management and Pollution Prevention

2.3.1 Use and management of energy

In response to the international call for low-carbon transition and in line with the net-zero emission target declared by the Taiwanese government, CPC, as the largest oil and gas energy supplier in Taiwan, is fully aware of its significant responsibility in environmental protection and sustainable development. Therefore, CPC actively participates in carbon reduction actions and promotes the implementation of deep energy-saving programs to enhance energy efficiency. The types of energy used by CPC include electricity, natural gas, steam, fuel gas, liquefied petroleum gas, and fuel oil. In 2024, the total energy consumption (in heat value) of CPC's major production plants reached 92.9 million GJ, with the highest heat value consumption from fuel gas. Based on this, the energy intensity in 2024 was 84.66 (Total Energy Consumption(GJ) / NT$ Million Revenue).

Annual Energy Consumption (Heat Value) of CPC's Major Production Plants

Unit: Ten Million GJ (GJ = 10^9J)

		2023	2024
Direct energy consumption	Natural gas	2.41	2.81
	Fuel gas	3.76	4.22
	LPG	0.005	0.009
	Low sulfur fuel oil 0.5 %	0.242	0.205
	Carbon residue	1.48	1.27
	Total heating value	7.9	8.51
Indirect energy consumption	Purchased electricity	0.668	0.692
	Purchased steam	0.083	0.09
	Total heating value purchased	0.751	0.782
Total energy consumption		**8.65**	**9.29**

Note 1: Energy Consumption = Fuel Usage * Unit Heating Value
Note 2: The unit heat values for fuels are as follows: (1) Natural gas: 8,517–9,831 KKcal/KS; (2) Fuel gas: 4,406–7,962 KKcal/KS; (3) Liquefied petroleum gas: 6,635 KKcal/KL; (4) Low sulfur fuel oil (0.5%): 9,200–10,604 KKcal/KL; (5) Residual carbon: 9,580 KKcal/TON; (6) Purchased electricity: 860 KKcal/MWH; (7) Purchased steam: 724 KKcal/TON
Note 3: In 2024, actual unit heat values were adopted for natural gas, fuel gas, and fuel oil statistics.

Use of renewable energy

In response to the Renewable Energy Development Act and its sub-regulation "Regulations on the Installation of Renewable Energy Power Generation Equipment for Electricity Users with Contract Capacity Above a Certain Level," a total of six CPC units are subject to regulation and have planned solar PV system sites. In 2024, newly added solar PV system capacity reached 8.223 MW. The sites are spread across Taiwan and outlying islands, including gas station rooftops, oil supply centers, refinery and petrochemical plant areas, and office building rooftops, in compliance with each unit's legally mandated renewable energy obligation.

2024 Renewable Energy Performance

Research budget	Number of PV system sites	Power generation capacity
NT$411.2 million (New Taiwan Dollars)	270 stations (of which 256 stations are for self-use)	21.222 MW (excluding leased 709 KW)

In 2024, the amount of renewable energy generated by solar power stations was 15.62 million kWh. Among the 270 solar PV system sites, 256 were self-use sites. A total of 21 renewable energy site certifications were obtained, and 9,719 renewable energy certificates were acquired. In the future, CPC will continue to expand its renewable energy deployment. In 2025, the goal is to reach a total installed capacity of 25.365 MW (with an additional 4.135 MW of renewable energy generation capacity), demonstrating CPC's determination to actively support policy-driven energy transition and contribute to the development of green energy in Taiwan.

Transition into an energy company of diverse services including oil and electricity

GOALS

2025
- Established a central photovoltaic equipment maintenance base.
- Optimized the monitoring and management system by integrating online inspection functions and applying IoT technology to enhance operation and maintenance efficiency.

2024
- **A total of more than 270 solar PV systems have been completed, with a total installed capacity of 21.222 MW.**
- Reached the mandatory capacity needed to claim early bird privilege (10% deduction) under "Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity"
- Developed 5G AIoT technology, developed drone-assisted solar PV site inspection technology equipped with AI image recognition, which can be applied to inspections of large-scale solar power sites and floating PV systems in the future.

2023
- Established a northern photovoltaic equipment maintenance base at the Taoyuan Refinery Plant for local operation and maintenance of the Company's solar PV sites.
- Trained maintenance personnel to build up the foundation for the Company's future business transformation

2022
- **A total of 251 solar PV systems have been completed, with a total installed capacity of 12.515 MW**, spread across Taiwan.
- The number of sites incorporated into the central monitoring and management system has reached 246 stations, with automatic anomaly detection.
- Launched the autonomous operation and maintenance management plan, conducting equipment health checks and issue improvements before warranty expiration.

2021
- Officially founded the "Solar Power Operations Center"
- Developed in-house operation and management technologies, assign dedicated responsibility for solar PV installation assessment and planning, and establish the "Cloud-Based Solar Power Monitoring and Operation Management System" to unify central monitoring and management.

2.3.2 Water consumption and management

CPC has developed a comprehensive water resource management system and adopted a diversified water resource utilization strategy to address the impact of climate change on water resources from two perspectives: "water recycling and reuse" and "access to water resources." Following the implementation of water resource management, all uses of water are subject to water impact assessment and do not pose any material impact on the water source.

Water usage and impact assessment

To enable better control over the water constraints and risks of water usage at various plant sites, CPC has adopted the water risk assessment tools developed by World Resources Institute (WRI) and devised water risk management strategies after taking into consideration the local water resources, stability of water supply, regional supply and demand, and risks of water usage identified for critical operations and sites. Using the WRI Aqueduct Tool, CPC considers the stability of water supply and regional supply and demand to be of low risk at critical operations and sites.

Water user / Water supplier	Water constraint	Water treatment provider	Location of discharge
Dalin Refinery **1. Taiwan Water Corporation(Fresh water)** **2. Daliao Water Station (groundwater)** **3. Linhai Reclaimed Water Treatment Plant(Reclaimed water)**	Low	1.Effluents from living activities: internal water treatment plant (level 2 treatment) 2.Industrial effluent: internal water treatment plant (level 3 treatment)	1.Discharge into the ocean (Type B maritime space) 2.Directed into Combined Wastewater Treatment Plant (level 3 treatment)
Taoyuan Refinery Plant **1. Northern Region Water Resources Branch, Water Resources Agency (raw water from Taoyuan Canal)** **2. Taiwan Water Corporation (tap water)** **3. Taoyuan City Government (groundwater)** **4. Northern Region Water Resource Recovery Center (reclaimed water)**	Low	1.Domestic sewage: Treated together with industrial wastewater through the on-site wastewater treatment plant (tertiary treatment) 2. Industrial wastewater: On-site wastewater treatment plant (level 3 treatment)	Nankan River (Category C surface water from river)
Linyuan Petrochemical Plant **Taiwan Water Corporation** **(Fresh water)**	Low	1.Effluents from living activities: internal water treatment plant (level 2 treatment) 2. Industrial effluent: internal water treatment plant (level 3 treatment)	Directed into the water treatment plant of Linyuan Industrial Park → Discharged into ocean (level 3 treatment)
Taichung LNG Refinery **Taiwan Water Corporation** **(Fresh water)**	Low	1.Domestic sewage: On-site prefabricated treatment facilities 2. Industrial wastewater: On-site CPI oil separators	Marine discharge (Type B maritime space)
Yongan LNG Refinery **Taiwan Water Corporation** **(Fresh water)**	Low	None	Discharge to receiving water body (sea)

Note: WRI Aqueduct Tool assesses water risks; "Low" indicates adequate water resource (http://www.wri.org/)

CPC Major Production Plants Water Resource Intake and Recycling

Unit (ML)

			2022	2023	2024
Total volume			1,702,083	1,607,288	1,652,862
Surface water (tap water, river water, irrigation system water)	Water drawn		23,716	23,327	23,670
	Proportion		1.39%	1.45%	1.43%
Groundwater (well water)	Water drawn		4,180	3,531	3,691
	Proportion		0.25%	0.22%	0.22%
Reclaimed water	Water drawn		3,638	3,645	3,558
	Proportion		0.21%	0.23%	0.22%
Reclaimed Water	Stormwater		53	48	50
	Production effluent (Water reclaimed through effluent recycling equipment)		1,314	846	701
	Others	Volume of coolant water cycled	1,609,654	1,517,934	1,537,730
		Volume of condensate reclaimed	7,284	7,054	6,724
		Acidic water reclaimed	610	467	544
		Other water reclaimed	51,634	50,437	76,193
	Total volume reclaimed		1,670,549	1,576,785	1,621,943
	Proportion		98.15%	98.10%	98.13%
	Discharge volume		8,628	8,665	8,870
	Water consumption		22,907	21,838	22,048

Note 1: The scope of the above water usage and recycling data includes Linyuan Petrochemical Plant, Taoyuan Refinery, Dalin Refinery, Taichung LNG Plant, and Yung-An LNG Plant.
Note 2: Water Intake - Recycle Water Volume - Discharge Volume = Water Consumption

2024 Water Resource Reuse in the Three Refining and Petrochemical Plants

Number of times water is used
8.35 times

Average water recycling rate
98%

Note: Water Recycling Rate = Recycled Water Volume ÷ (Water Consumption + Recycled Water Volume)

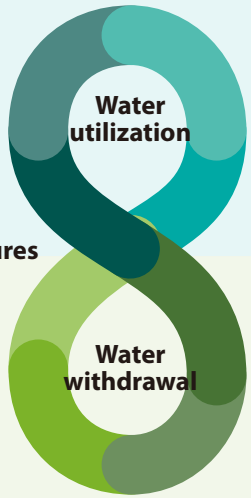
Water resource management measures of CPC plants

Reduce cooling water loss
Renew water trays and honeycomb water deflectors to lower the volume of cooling water lost through evaporation from 0.1% to 0.003%, which lessened the need for cooling water refill.

Improve boiler water quality
Produce water with ultrapure water equipment to increase water intake and reduce effluent per cycle. Treat raw water with electrodialysis reversal (EDR) equipment to reduce water conductivity and total hardness, in order to increase the water intake of ion-exchange resin and thereby reduce boiler water consumption through improved quality of water intake.

Improve water for fire-fighting
Stagnant water for fire-fighting is prone to deteriorate. Flushing water surface with backwash water for fire-fighting to inhibit algae growth can maintain water quality for a longer time.

Save process water
Install condensate monitoring and diversion equipment to keep track on condensate quality at all times to prevent condensate from contamination and non-reusability. Reclaim condensate to the water tower with solenoid valves, reclaim low-pressure steam with the de-aerating feed tank to recover heat energy and reclaim condensate.



Reclaim and reuse effluents
Production wastewater after treatment is transported to the park wastewater treatment plant. Some effluents can be reclaimed and reused in sludge dehydrators or incinerator wet scrubbers. After sedimentation and sediment removal and sand filtration, some effluents from sewage can be used in washing gutters and oil tanks.

Purchase of reclaimed water
To expand water sourcing models and align with the government's reclaimed water plant strategy, CPC's Dalin Refinery and Taoyuan Refinery have respectively signed contracts with Kaohsiung City Linhai Reclaimed Water Treatment Plant and Taoyuan City Government North District Water Resource Recycling Center, committing to purchase approximately 10,000 metric tons of reclaimed water per day each to support plant water demands.

2.3.3 Discharge and management of effluents and waste

Material Topic: Management of waste and hazardous substances

Policy

Wastewater Management: CPC has wastewater treatment facilities or wastewater treatment plants in relevant units and manages the treatment and discharge of wastewater in accordance with the "Operational Guidelines for Upstream Wastewater Source Discharge Management at Wastewater Plants."
Waste Management: CPC has established the "Industrial Waste Management Guidelines" and the "Industrial Waste Tracking Operation Principles" to ensure that waste disposal complies with legal requirements and to prevent environmental pollution.

Management Approach

Wastewater Management: Regulations are stipulated for the operation, maintenance, and cleaning of oil-water separation tanks in each facility under various jurisdictions. The environmental protection departments of the refining and petrochemical business divisions also stipulate their own effluent water quality standards and testing regulations to effectively manage the wastewater generated during operations.
Waste Management: Waste cleanup tracking and management are reinforced. In accordance with regulations and implementation status, meetings are held irregularly for rolling reviews and amendments to implement waste management effectively.

Action Plan

- Water-saving measures are implemented according to plan; bypassing and dilution must be approved by environmental protection authorities.
- Implement contingency measures and report to competent authorities for water body contamination due to negligence.
- Enhance source management of upstream workshops, improve the quality of effluents, and increase effluent reclamation.
- Enhance patrol, inspection, and emergency response drill of storage tanks and transportation equipment
- Encourage employees to obtain related licenses and certificates and participate in professional training
- Upgrade wastewater treatment equipment and recycle wastewater

2024 Actual Performance

- The main type of reused waste at the refining and petrochemical plants is spent zeolite catalyst, with a reuse rate reaching 100%.
- Effluent water quality is better than national discharge standards.

Goals

Water use efficiency is enhanced, wastewater discharge volume is reduced, and the quality of discharged water is improved.

Discharge and management of effluents

CPC' s wastewater pollution prevention focuses primarily on controlling wastewater discharge at the source within production processes. This is complemented by high-efficiency equipment for wastewater recycling and reuse treatment. The treated effluent from the recycling process complies with environmental regulatory standards, thereby mitigating the environmental impact of wastewater generated during production. Petroleum organic compounds are the major pollutants contained in our effluents. The focuses of our regular effluent monitoring efforts include suspended solids (SS), chemical oxygen demand (COD), oil, and phenol.
In the event of pipeline damage, remedial actions will be taken to clear the damaged pipeline of residual oil, remove contaminated soil, stop residents from using groundwater and use water supplied by CPC for irrigation instead, and subsidize the installation of freshwater equipment for access to drinking water. Overall, residents' use of water will not be affected. Furthermore, additional pressure monitoring system, inspection points, and anticorrosion test points are being introduced whereas pipelines are actively replaced to prevent pipeline damage. In 2024, effluent monitoring at all plants confirmed proper treatment, compliance with effluent standards, and no groundwater discharge. The wastewater treatment and discharge quality at CPC's major production sites in 2024 are as follows:

Dalin Refinery — Secondary/tertiary treatment plant→central wastewater treatment plant of Kaohsiung Linhai Industrial Park→discharge into ocean

Test Item	Marine effluent discharge standards	2022	2023	2024
SS (mg/l)	100	7.30	5.6	8.3
COD (mg/l)	280	30.60	30.77	22.1
Oil (mg/l)	20	<1.0	<1.0	<1.0
Phenol (mg/l)	1.0	<0.01	<0.01	<0.01

Taoyuan Refinery Plant — Wastewater treatment plant (secondary/tertiary treatment) → Discharge into the Nankan River

Test Item	Marine effluent discharge standards	2022	2023	2024
SS (mg/l)	30	10.43	11.7	15.7
COD (mg/l)	100	18.62	27.45	43.3
Oil (mg/l)	10	3.33	3.25	4.4
Phenol (mg/l)	1.0	0.004	0.0074	0.0081

Linyuan Petrochemical Plant

Primary treatment→Secondary/tertiary treatment plant→treatment at Linyuan Industrial Park Wastewater Treatment Plant→discharge into ocean

Primary treatment→partial secondary treatment→high-level treatment→recycled and reused in plant

Test Item	Marine effluent discharge standards	2022	2023	2024
SS (mg/l)	100	8.60	4	4.8
COD (mg/l)	280	48.35	46.95	37.35
Oil (mg/l)	20	<1.00	<1.00	1.1
Phenol (mg/l)	1.0	<0.01	ND	0.0047

Taichung LNG Refinery

Via precast treatment facilities → Marine discharge

Test Item	Marine effluent discharge standards	2022	2023	2024
SS (mg/l)	100	1.2	5.8	3.4
COD (mg/l)	280	18.5	46.9	19.4
Oil (mg/l)	20	0.7	<0.5	3.9
Phenol (mg/l)	1.0	ND	ND	0.0054

Yongan LNG Refinery

No wastewater treatment facilities in the process; direct marine discharge[Note].

Test Item	Marine effluent discharge standards	2022	2023	2024
SS (mg/l)	100	-	-	-
COD (mg/l)	280	-	-	-
Oil (mg/l)	20	-	-	-
Phenol (mg/l)	1.0	-	-	-

Note: The discharged water is cooling water derived from seawater used in the process, there is therefore no report for this testing item.

Mining formation with water production

Most domestic oil and gas mining areas are natural gas wells. When mining natural gas, condensate oil and formation water are also produced. After three phase separation of oil, gas, and water, the formation associated water production will be affected by the difference in salt content (Cl-, about 3,800-11,000 ppm) in different mining areas. Although salt is not included in the effluent control standard, it may cause soil salinization. Therefore, there are two treatment methods for water production:

1. First, after concentration, it is reinjected into the reservoir via the water production reduction well, which helps extract additional oil.
2. Second, after the water is treated by the treatment plant and passes the water quality inspection, it will be discharged to the river.

Area and Qingcaohu Area of Jinqing Mine

2,769.2 kiloliters | 12.33 %

Volume treated in 2024

Treatment method
Reinjection into the formation through disposal wells

Description
Before oil reinjection into the formation, the oil slick is recovered by oil-water separation and before reinjection into the underground reservoir. The specifications of disposal wells mainly refer to the relevant regulations of the second class of injection wells of the United States federal regulations.

Chuhuangkeng Mine

19,695.1 kiloliters | 87.67 %

Volume treated in 2024

Treatment method
Discharge after treatment

Description
Oil is first separated and recovered through an oil-water separator (API) and discharged when it meets the release standard using an air pressurization floater and a biological treatment system.

Response to Water Pollution Control Regulations

In 2024, CPC had a total of 5 incidents violating the Water Pollution Control Act. All incidents were promptly addressed in accordance with the requirements of the competent authorities, and comprehensive reviews and preventive measures were implemented for the identified deficiencies to prevent recurrence of similar incidents. For details on the penalties and improvement plans, please refer to Appendix 5: Environmental Information.

Discharge and management of waste

CPC has "Industrial Waste Management Guidelines" and "Industrial Waste Tracking Principles" in place to guide management over waste reduction, reporting, storage, and disposal (clearance, treatment, and reuse). Pro-active efforts are being taken to track and manage waste disposal, and rolling adjustments are being made in meetings to reflect prevailing laws and progress.

In 2024, the primary type of reused waste at the refining and petrochemical plants was spent zeolite catalysts (main components: aluminum oxide (Al_2O_3) and silicon dioxide (SiO_2)). In accordance with the reuse purposes specified in the Ministry of Economic Affairs' Regulations Governing the Reuse of Industrial Waste, the waste was sent to reuse institutions, achieving a reuse rate of 100%.

Main wastes produced

Main production plants	Category of waste	Description of materiality	Mitigation and improvement measures
Three Refineries	Oil sludge	Oil sludge (hazardous and non-hazardous) is produced mainly from repairs of the storage system, feedstock oil tank, semi-finished oil tank, and finished oil tank, whereas non-oil sludge represents key waste produced from the water treatment system. The two types of sludge account for about 10% of total waste produced.	The primary treatment methods are self-incineration or incineration by qualified waste treatment providers.
	Catalyst	As an important material used for adsorption in the refining process, including non-hazardous catalysts and zeolite catalysts, spent catalysts account for approximately 11% of the total waste generated.	The main treatment methods include reuse as raw materials or treatment by qualified waste treatment providers.
	Waste oil mixture	The refining process produces waste oil mixtures that contain complex substances; the mixture is collected from various sources (e.g. oil-water separator, repair of tanks, and three phase separation) and accounts for about 45% of total waste produced.	The waste is collected and redirected to the refining process.
Taichung LNG Terminal	Waste liquid with pH value less than or equal to 2.0	Generated monthly from equipment cleaning, with a total output of 16.06 metric tons in 2024, accounting for approximately 0.01% of the total waste generated.	Handled by qualified waste treatment providers.
Yongan LNG Receiving Terminal	Vegetable waste residue	Total output of 100.31 metric tons in 2024, accounting for approximately 0.07% of the total waste generated.	Handled by qualified waste treatment providers.

Waste treatment status of major production plants

Waste category	Waste type	2022	2023	2024	Whether disposed of by external party	Waste treatment methods
Non-Hazardous Waste	Other single non-hazardous waste catalyst or mixture	16,425.69	15,039.28	10,596.93	Yes	Treatment/reuse
	Organic/non-organic sludge	7,993.92	7,271.18	10,727.59		Treatment by self/external party
	Non-hazardous sludge	3,080.868	2,281	3,407.86		Treatment by self/external party
	Waste oil mixture	55,051.4	77,561.86	58,890.16	No	Self-treated/refined
	Spent zeolite catalysts	4,652.55	2,668.03	4,456.65	Yes	Reused
Hazardous waste	Hazardous sludge	1,997.97	1,768.7	835.55		Treatment by self/external party
	Waste liquid with pH of 12.5 or higher	38,046	32,792	32,169	No	Self-treated

Note: Major production plants include the three refineries and the two natural gas plants.

Highlights of outsourced waste reduction

The Company's outsourced waste removal and treatment are all conducted through public tenders, and in accordance with relevant waste treatment regulations of the Ministry of Environment, the qualification requirements for waste treatment/recycling vendors are specified.

- **Recycling and reuse of waste active carbon; 100% reuse rate. (Approximately 288 metric tons recycled and reused in 2024)**
- **Recycling and reuse of waste zeolite catalysts; 100% reuse rate. (Approximately 4,456 metric tons recycled and reused in 2024)**
- **General/specific reuse of other single non-hazardous waste catalyst or mixture. (Approximately 4,903 metric tons reused in 2024)**

2024 Waste Disposal Methods by Major Production Plants for Directly Disposed Waste by Treatment Operation

Category	Method	Volume (t)	Percentage by disposal method (%)	Waste (t)	Category percentage (%)
Hazardous waste	Chemical Treatment	32,185.06	24.849	33,262.460	25.68
	Solidification	201.82	0.156		
	Physical Treatment	39.94	0.031		
	Wash	0	0		
	Incineration	835.633	0.645		
	Thermal Treatment (except for incineration)	0.007	0		
Non-Hazardous Waste	Chemical Treatment	1,373.75	1.061	96,259.943	74.32
	Solidification	2,948.52	2.276		
	Physical Treatment	47,511.290	36.682		
	Recycling	25,321.334	19.550		
	Landfill	2,133.080	1.647		
	Incineration	16,506.589	12.744		
	Thermal Treatment (except for incineration)	465.380	0.359		
Total		129,522.403	100	129,522.403	100

Note: Major production plants include the three refineries and the two natural gas plants.

2024 Waste Transferred from Disposal to Recycling by Major Production Plants

Category	Recycling	On-site	Off-site	Total volume
Non-Hazardous Waste	Renewal and reuse	13,353.39	-	13,353.39
	Other recycling operations	-	11,967.94	11,967.94
	Total volume	13,353.39	11,967.94	25,321.334

Recovery rate of industrial waste (%)

2022	2023	2024
35.57%	16.51%	19.55%

Note 1: Major production plants include the three refineries and the two natural gas plants.
Note 2: CPC does not produce any hazardous industrial waste that is recyclable or reusable as per Ministry of Environment's announcement regarding "Waste and Renewable Resources to Recycle/Reuse" and MOEA's "Regulations Governing Reuse of Industrial Waste"; for this reason, none of the hazardous industrial waste can be recycled or reused, and the volume of hazardous waste recycled accounted for 0% of total hazardous waste.

Management of toxic substances

CPC is required to present to the authority a response plan for Ministry of Environment's Class 1 to Class 3 toxic chemical substances and hazardous chemical substances of concern that meet a certain level of significance. This plan has to address details including: composition of the emergency response team, the command system, the reporting system, and availability of emergency disaster prevention equipment. Two unannounced tests and an overall drill shall be implemented for every contingency plan each year, and drills in collaboration with the emergency response drills of local environmental protection units shall be implemented to ensure preparedness for toxic disaster prevention. All relevant units participate in the nationwide toxic chemical substance joint prevention organization in accordance with Paragraph 1, Article 38 of the "Toxic and Concerned Chemical Substances Control Act." In addition, we complete the stage 1 registration of a total of 150 existing chemicals according to the "Regulations of New and Existing Chemical Substances Registration." Furthermore, we voluntarily complete the Chemical Commodity Importation Pre-Confirmation in coordination with the "Import Management in Chemical Substance Registration" promoted by Ministry of Environment.

Major leakages by CPC – 2024

0

Leakage incidents or plants

2.3.4 Soil and Groundwater Pollution Prevention and Control Management

Material Topic: Environmental pollution prevention

Policy

CPC, in accordance with the law, has established the "Soil and Groundwater Pollution Prevention and Remediation Operational Reference Guidelines" to set standards for the prevention and remediation of environmental pollution and to ensure that negative impacts on soil and groundwater ecology are minimized.

Management Approach

For sites under regulatory control:
Relevant units are required to propose response, control, and remediation plans within the stipulated time and to carry out follow-up soil and groundwater pollution remediation work in accordance with the content of the pollution remediation plans reviewed and approved by the environmental authority and experts.

For sites not under regulatory control:

1. Strengthen the monitoring data of leak detection pipes and groundwater monitoring wells at oil depots, supply centers, and gas stations.
2. Require affiliated units to implement CPC's "Soil and Groundwater Pollution Prevention and Remediation Operational Reference Guidelines." When abnormal soil and groundwater pollution monitoring data are detected within their jurisdiction, pollution remediation measures must be formulated and actively executed.

Action Plan

- Adopt appropriate soil remediation methods for sites under regulatory control to enhance rehabilitation effectiveness.
- Continuously improve remediation techniques and personnel training to meet site remediation needs.
- Ensure that all site pollution remediation work complies with pollution control laws and regulations.
- Strengthen pollution prevention measures to avoid irreversible environmental damage.

2024 Actual Performance

- Lifted regulatory control at 5 sites, with a cumulative total of 57 sites delisted.
- Produced approximately 28 metric tons of green agents, which were used at the Fengde Bioremediation Site and other polluted sites, assisting Chung Shell Company in rehabilitating 2,269 metric tons of contaminated soil.
- Completed the outsourcing and investment promotion for soil thermal treatment, supporting remediation work at the Kaohsiung Refinery.

Goals

Completed soil and groundwater remediation, resulting in the lifting of regulatory control and reactivation of land use

CPC conducts soil and groundwater pollution investigations and remediation in accordance with regulations. In 2024, regulatory control was lifted at 5 sites. As of the end of 2024, a total of 57 sites had been delisted, while 32 sites remained under regulatory control.

Dalin Plant, Tank Areas C and D
Date of deregulation：2024.01.02

Shengang Gas Station
Date of deregulation：2024.03.22

Songshan Airport Gas Station
Date of deregulation：2024.04.08

Green Island Fishing Vessel Station
Date of deregulation：2024.06.06

Taichung Office, overturned oil tanker at National Highway No. 1 Changhua Interchange
Date of deregulation：2024.11.22

Methods of soil remediation – 2024

Washing

Description of Remediation Techniques

- Soil washing is an effective method for treating contaminated soil, and it involves two main processes: hydraulic separation and wastewater treatment. In the hydraulic separation process, large blocks of soil are broken down and separated by particle size through several steps including sedimentation, up flow sorting, hydro-cyclone, etc. This process allows large volume of soil to be separated into different particle sizes in an efficient manner. As for the wastewater treatment process, the purpose is to ensure that effluents from the soil wash are treated appropriately to prevent secondary contamination.
- The soil washing technique uses water or other cleaning agents to separate contaminants from soil. This process often involves mixing soil with a cleaning agent, so that contaminants may detach from soil particles and attach to water. Next, using physical methods such as sifting and sedimentation, the larger, cleaner soil particles are separated from finer particles that carry contaminants. Lastly, the contaminated water is treated to remove or stabilize contaminants, whereas the clean water is either reused or discharged.
- Progress highlights: Take the 60th phase of land replot at Asia New Bay Area in Kaohsiung, for example, CPC applied the soil washing technology to significantly improve the efficiency of its remediation efforts. This proves the feasibility and viability of the soil washing technology in actual application, especially when treating large areas of contaminated sites. The technology not only increases the efficiency of remediation efforts, but also helps achieve sustainable management of the environment and reuse of land.

Performance highlights

In the application case of the 60th Redevelopment Zone in the Asia New Bay Area of Kaohsiung, soil washing technology can significantly improve remediation efficiency when treating large-scale contaminated sites and also contributes to achieving sustainable environmental management and land reuse.

Soil thermal treatment

Description of Remediation Techniques

- Thermal desorption is an ultimate soil remediation approach that uses heat to destroy contaminants. It involves heating the contaminated soil to a high temperature, often exceeding the boiling point of organic contaminants. The process turns any organic substance attached to soil particles into a gas form, which can then be collected and treated using a gas treatment system to ensure conformity with emission standards. This approach is suitable for soil that has a high level of organic contamination.

Performance highlights

Since 2017, CPC has initiated the tendering process for the soil thermal treatment facility at the Kaohsiung Refinery, providing administrative and technical support to assist with the construction and trial operation of the facility. The thermal treatment facility was completed in 2022 and obtained a fixed pollution source operation permit the following year. As of 2024, the outsourcing operation tendering has been completed and is expected to play a key role in the remediation process of the Kaohsiung Refinery.

Green remediation and land revitalization

Description of Remediation Techniques

- Green and Sustainable Remediation (GSR) is a remediation approach that takes into consideration environmental, social, and economic benefits at the same time. Its purpose is to lessen the overall footprint and impact on the environment, while at the same time ensuring that the remediation efforts are in line with society' s common interest and pose minimal negative impact on the economy. In this remediation approach, the use of biological agent alone is a critical technology, because the process depends on microorganisms and their metabolites to break down or convert the contaminants, and thereby achieve the purpose of remediation. The biological agent typically uses specific strain of microorganism or enzyme that directly breaks down the contaminants, or improves the soil condition in such a way that improves activities of native microorganisms. Not only is this technology friendly to the environment, but it also offers high cost effectiveness and is effective against various forms of organic contaminants, such as petroleum hydrocarbons and other hazardous chemical substances. Through the use of biological agent, CPC demonstrates how the idea of GSR can be enforced in the actual remediation of a contaminated site for the sustainability of the environment.

Performance highlights

CPC' s Environmental Protection Division Soil and Water Center continues to improve contaminated soil treatment technologies and is committed to shortening the duration of bioremediation, thereby implementing the concept of a circular economy. In 2024, approximately 28 metric tons of green agents were produced and applied at the Fongde Bioremediation Site and other contaminated sites to enhance bioremediation efficiency. Assisted CPC SHELL LUBRICANTS COMPANY LTD. in the treatment and removal of contaminated soil at Land Lot Nos. 173 and 173-1, completing the remediation of 2,269 metric tons of contaminated soil between 2023 and 2024.

In-situ chemical oxidation

Description of Remediation Techniques

- The chemical oxidation treatment method involves the addition of oxidants and utilizes redox reactions to destroy or convert pollutants into harmless or low-hazard substances. Chemical oxidation treatment can be performed in-situ or ex-situ. Due to the fast reaction rate, it offers advantages in terms of processing time.

Outsourced treatment

Description of Remediation Techniques

- Highly contaminated soil or highly concentrated contaminated soil (sludge), which may not be effectively treated by other methods, will be directly outsourced to qualified treatment organizations for processing.

2.3.5 Air Pollution Management and Environmental Regulatory Compliance

Material topic: Compliance with environmental laws

Policy

CPC, in coordination with the Ministry of Environment's "Air Pollution Control Action Plan," is promoting various air pollution improvement projects.

Management Approach

To effectively comply with environmental regulations and improve pollution remediation and control, CPC not only regularly tracks the latest updates to various regulations but also ensures that each business unit adopts the best available control technologies and establishes autonomous inspection mechanisms to promptly address problems. In addition, CPC regularly invites experts to conduct environmental inspections and has established an environmental audit team. All audit records are entered into the environmental audit system and tracked until improvements are completed, ensuring that the practical work of each unit complies with regulatory requirements.

Action Plan

- In 2024, the primary type of environmental fine received by CPC was related to air pollution violations. CPC will continue to carry out multiple pollution prevention efforts, strictly implementing control and improvement measures for air pollutant emissions and adjusting response strategies as necessary to prevent similar violations.
- By establishing procedures related to environmental protection and reviewing and updating them regularly, CPC aims to prevent environmental pollution incidents.

2024 Actual Performance

- A total of 31 air pollution improvement projects have been completed.
- From 2017 to 2024, a total budget of NT$9.553 billion has been invested.

Goals

- Reduction of volatile organic compound leakage rate.
- Complete 38 air pollution improvement projects by 2031

The main air pollutants at CPC's various plants include nitrogen oxides (NOx), sulfur oxides (SOx), volatile organic compounds (VOCs), and total suspended particulates (TSP). Emission sources include stacks, flare towers, storage tanks, equipment components, and loading operations.

Air pollutant emissions at CPC's main production facilities

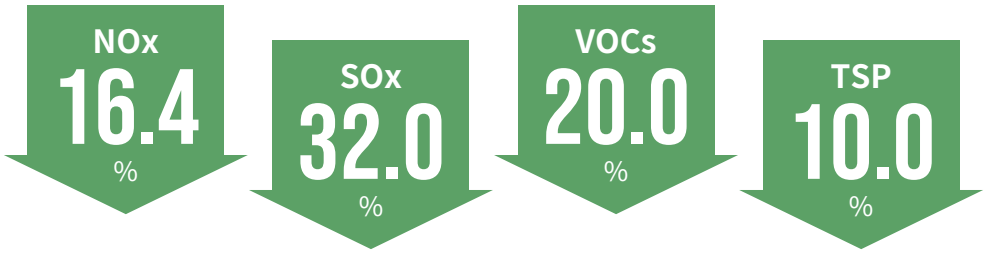
Unit: tonnes

2022	2023	2024
NOx		
2,966.6	2,642.0	2,774.4
SOx		
1,017.7	907.6	834.8
VOCs		
1,415.8	1,319.5	1,290.3
TSP		
207.7	217.3	221.7

Note 1: Data reflects the combined annual emissions from CPC's three refineries and two natural gas plants (Taoyuan Refinery, Dalin Refinery, Linyuan Petrochemical Plant, Taichung LNG Plant, and Yung-An LNG Plant). In compliance with Ministry of Environment's Regulations Governing Report of Emission from Stationary Pollution Source in Public and Private Areas and related rules.
Note 2: Emission volumes for 2022 and 2023 are approved volumes, and the emission volume for 2024 is the reported volume.
Note 3: No data was reported for PM10 and H2S.
Note 4: CPC has 3 refineries located in densely populated areas (townships where operational sites are located with a population over 50,000): Taoyuan Refinery is located in Guishan District, Taoyuan City, with a nearby population of approximately 186,000; Dalin Refinery is located in Xiaogang District, Kaohsiung City, with a nearby population of approximately 154,000; Linyuan Petrochemical Plant is located in Linyuan District, Kaohsiung City, with a nearby population of approximately 68,000.

Accordingly, CPC proposed improvement plans from five major aspects, planning to invest NT$11.327 billion in refining and petrochemical plants from 2017 to 2031, with a target to complete a total of 38 air pollution improvement projects. As of 2024, 31 projects have been completed, which are expected to significantly reduce pollutant emissions.

Expected Benefits of Air Pollution Improvement Projects



Air Pollution Improvement Measures and Effectiveness

Incorporation of advanced procedures and equipment into the production process
- By introducing advanced procedure integration and control systems, CPC is able to improve the stability of its operations
- Adopt best available control technology (BACT) and low-leakage equipment components

Process Production Improvements
- Adjust operation and program of existing equipment for optimal performance
- Improve combustion technology for higher combustion efficiency

Air pollution improvement plan Completed 31 projects

Use of clean fuel
- Transition into gas fuel for existing and new boiler equipment to significantly reduce emission of pollutants and burden to the environment

Installation of Air Pollution Control Equipment
- TSP: Install static electricity- or bag-based dust collector
- SOx: Install fume gas desulfurization (FGD) equipment
- NOx: Adopt selective catalytic reduction (SCR) or low NOx burner (LNB)
- VOCs: Progressively transition into low-leakage components and adopt oil and gas recovery equipment

Waste gas recovery and reuse
- Install Flare Gas Recovery System (FGRS) at refineries and petrochemical plants, so that exhaust generated from plant operations can be recovered and reused in the production process

CCPC continues to strengthen the improvement of VOC leakage from equipment components through setting management targets (quarterly leak detection rate of 0.18%, repair rate of 70%, and self-inspection rate of 13%), establishing a high-leakage-risk component list, and promoting a self-inspection management system for equipment components. Meetings are held regularly to track implementation outcomes. The leakage rate of CPC equipment components has significantly improved.

Concrete Measures for Environmental Pollution Management

Technology and environmental protection meeting	Hold regular environmental management meetings. Track the status and improvement progress of air pollution, water pollution, waste, and soil and groundwater remediation operations in all units.
Factory self-inspection and maintenance	Persistent enhancements are being made to the self-inspection and repair of equipment components at various work sites, so as to minimize leak of volatile organic compounds (VOCs).
Process Safety Management	Enhance operator proficiency and discipline management to reduce problems caused by improper on-site operations.
Regular Environmental Audits	Conduct monthly audits of the actual operation conditions of each unit' s processes and follow up on the implementation of improvements until deficiencies are corrected.
Regulatory Education and Training	CPC trains internal employees on environmental regulations and offers courses on environmental safety and health certification for improved compliance awareness.
Environmental Professional Training	Conduct thematic training on environmental issues. Course content covers topics such as air pollution, water pollution, and toxic chemical substances to enhance professional knowledge in environmental pollution.

nvironmental Law Violations and Countermeasures

In 2024, CPC had a total of 18 major penalty cases for violating air pollution prevention regulations, with total fines amounting to NT$22.435 million. Corresponding environmental education training hours were also imposed. All violations were immediately addressed with response measures and improvement plans upon occurrence. For details on major penalties and improvement plans, please refer to Appendix 5: Environmental Information.

Note: Major penalty cases are defined according to the S&P Corporate Sustainability Assessment as those with a penalty amount exceeding NT$300,000.

2.4 Biodiversity

2.4.1 Commitment, management framework, and goals of natural governance

CPC Ecological Commitment

While CPC serves as the nation' s stable energy supplier, it is fully aware that its operational activities are closely connected to natural resources and heavily reliant on the stability of the natural environment. Therefore, CPC must carefully manage ecological impacts to ensure the sustainable use of resources. In light of this, CPC actively engages in biodiversity conservation and management, committing to minimizing its impact on the natural environment throughout its operational lifecycle in order to achieve the goal of coexisting with nature.

CPC follows the framework of the Taskforce on Nature-related Financial Disclosures (TNFD) to systematically identify and assess ecological risks and opportunities, integrating them into the Company' s risk management and decision-making processes. At the same time, CPC also uses the United Nations Sustainable Development Goals (SDGs) as an action guide, specifically aligning with Goal 14 "Conserve and sustainably use the oceans, seas and marine resources" and Goal 15 "Protect, restore and promote sustainable use of terrestrial ecosystems." CPC promotes a diverse strategy covering conservation actions, educational outreach, research collaborations, and information disclosure to build an ecologically friendly operational environment, demonstrating its responsibility and action in safeguarding natural capital.

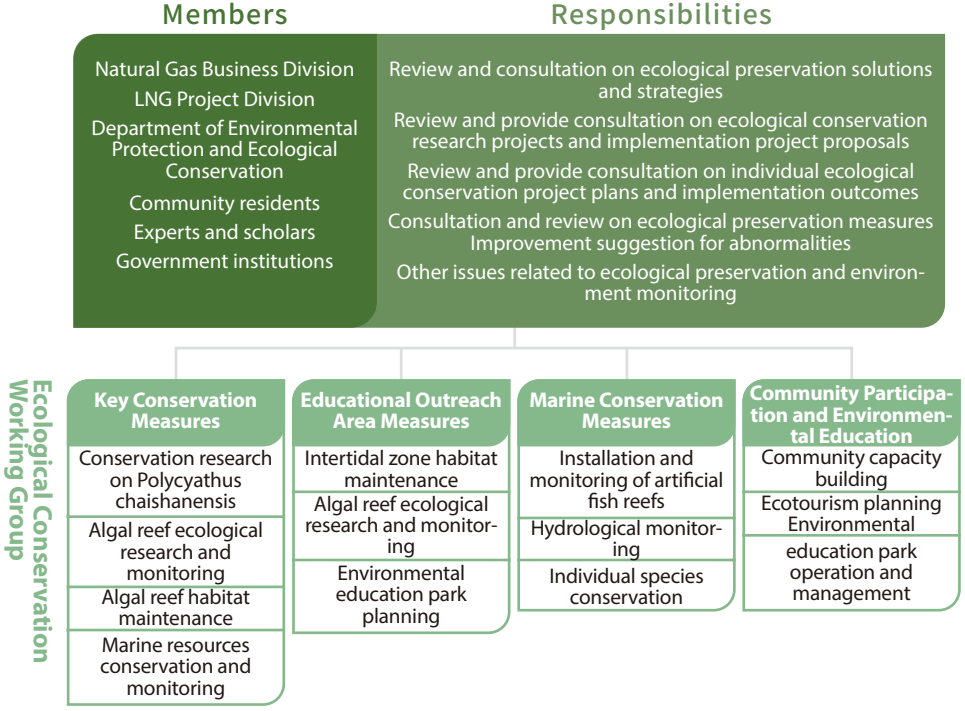
CPC's biodiversity actions

Ecological survey	Identification of risks and opportunities	Strategy and management	Negotiation and communication
Using assessment tools available locally and abroad, CPC conducts ecological surveys on marine and terrestrial life near all of its business locations nationwide and builds a database to keep track of how business operation impacts or is dependent upon nature	Based on CPC' s dependency and impact on nature, the Company analyzes how business operation may be prone to risk or give rise to opportunities	Depending on the industry it operates in and its impact on key natural environments, CPC devises appropriate impact mitigations, operational goals, and management indicators	Understand stakeholders' concerns regarding the impact of operations on nature and strengthen communication with stakeholders to raise public awareness and participation in ecological conservation.
See 2.4.3 CPC Ecological Conservation Actions	See 2.4.2 Identification of Nature-related Risks and Opportunities	See 2.4.3 CPC Ecological Conservation Actions	See 2.4.4 Ecological Conservation Promotion and Social Engagement

Guantang Industrial Park Ecological Conservation Committee

To support the government's 2025 energy transition policy goal of natural gas accounting for 50% of power generation, the third LNG terminal is being constructed in Guanyin District, Taoyuan City. In response to public concern over the algal reefs and coastal ecology within the Guantang Industrial Park area, CPC upholds a transparent and responsible attitude, establishing the impartial third-party organization "Guantang Industrial Park Ecological Conservation Executive Committee." This committee acknowledges the demands of the public and professional groups for the protection of the algal reef ecosystem, and is responsible for reviewing and supervising the park' s ecological conservation plans and implementation strategies. It also promotes environmental education to enhance community awareness of ecological conservation, aiming to realize CPC' s vision of co-prosperity and coexistence with the algal reef ecosystem through a series of concrete actions.

Guantang Industrial Park (Port) Ecological Conservation Committee



Looking ahead, CPC will continue to follow domestic ecological conservation regulations and international initiatives, actively respond to the expectations of external stakeholders, deepen various ecological conservation efforts, and simultaneously strengthen its natural resource management capabilities. CPC will gradually establish a comprehensive natural capital management framework, incorporate ecological risks and opportunities into the corporate decision-making system, and continue to contribute to the conservation of both marine and terrestrial ecosystems.

2.4.2 Identification of Nature-related Risks and Opportunities

To strengthen the identification and management of dependencies and impacts on natural capital, CPC adopts the LEAP methodology (Locate, Evaluate, Assess, Prepare) proposed by the Taskforce on Nature-related Financial Disclosures (TNFD), using a systematic approach to assess the impact and related risks of CPC' s operational activities on biodiversity and ecosystem services.

Through the LEAP framework, CPC will carry out spatial localization and natural capital inventories for major operational sites, assess interactions with the natural environment, further identify biodiversity-related risks and opportunities, and propose concrete response measures. This aligns with the global disclosure needs for biodiversity risk and opportunity management and responds to TNFD' s principles of information transparency and actionability, highlighting CPC' s tangible efforts in advancing management and disclosure of natural capital issues.

Locate

CPC' s operational activities include crude oil exploration and refining, petrochemical feedstock production, and energy transition management. All activities along the value chain are highly dependent on natural resources and ecosystem functions. This year' s analysis focuses on three types of CPC' s major operational sites—fuel supply service centers, refineries, and LNG receiving terminals—and the areas within a 5 km radius around them. This covers CPC' s upstream, midstream, and downstream value chain activities and serves to identify CPC's ecological hotspots.

Shenao Port Fuel Supply Service Center

Shenao Port is located in Ruifang District, New Taipei City, in northern Taiwan, about 6 nautical miles east of Keelung Port. It is CPC' s dedicated petroleum and gas terminal for northern Taiwan, with a water area of approximately 200 hectares. It serves as a dedicated berth for LPG and aviation fuel, supplying energy for residential and industrial use in the north.

Taoyuan Refinery Plant

The Taoyuan Refinery is located in Guishan District, Taoyuan City, and occupies an area of about 480 hectares. Geographically, it lies within the Nankan River watershed and on the southwest side of the Linkou Plateau. It preserves about 200 hectares of secondary forest and mainly refines crude oil into various petroleum products for northern Taiwan.

Yongan LNG Receiving Terminal

The Yongan Receiving Terminal is located in Yongan District, Kaohsiung City. The port' s outer breakwaters measure approximately 1,200 meters to the north and 2,200 meters to the south, enclosing a marine area of about 160 hectares. Its main role is to receive LNG from transport vessels. The LNG is offloaded and stored in storage tanks via pipelines, gasified when needed, and then transported via pipeline to end users.

Shimen Fuel Supply Service Center

The Shimen Fuel Supply Service Center is located in Qidu District, Keelung City, situated between Yangmingshan National Park and the areas of Qidu (Keelung), Shiding (New Taipei). It preserves about 70 hectares of secondary forest. Its main role is to supply essential fuel for residential use in northern Taiwan. Its main facilities include administrative offices, pump rooms, storage tanks, pipelines, and filling stations.

During the Locate stage, CPC refers to the IUCN Protected Area Categories and the Ministry of the Interior's National Land Use Zoning Information to analyze the ecosystem sensitivity of operational sites, and to the Biodiversity Research Institute of the Ministry of Agriculture's Taiwan Biodiversity Network Data to assess whether the surrounding areas include species listed as Vulnerable (VU), Endangered (EN), or Critically Endangered (CR) under domestic or IUCN Red List criteria. These two dimensions serve as the basis for assessing the ecological sensitivity of CPC's key sites.

Criterion 1: Ecosystem Sensitivity	
Sensitivity Levels	Classification Basis
Very High (VH)	IIUCN Protected Areas Categories I–IV
High (H)	· National Conservation Areas Category I (but not IUCN I–IV) · IUCN Protected Areas Categories V–VI · Disaster-prone areas, such as geologically sensitive zones, debris flow potential streams
Medium (M)	· National Conservation Areas Category II · National Conservation Areas Category IV
Low (L)	Land use types not included above

Criterion 2: Species Sensitivity	
Sensitivity Levels	Classification Basis
Very High (VH)	Number of species > 5 (Q3)
High (H)	5 (Q3) ≥ number of species > 3 (Q2)
Medium (M)	3 (Q2) ≥ number of species > 1 (Q1)
Low (L)	1 (Q1) ≥ number of species

Upon analysis, for ecosystem sensitivity: only the area within 5 km of the Shenao Port Fuel Supply Service Center is categorized as High (H) due to its location within a Class I Marine Resource Zone. All other sites are categorized as Low (L) in ecosystem sensitivity. However, in terms of species sensitivity, all four key sites fall under the High (H) sensitivity category. Accordingly, CPC will continue to monitor and maintain species richness to avoid impacts on surrounding ecosystems caused by its operational activities.

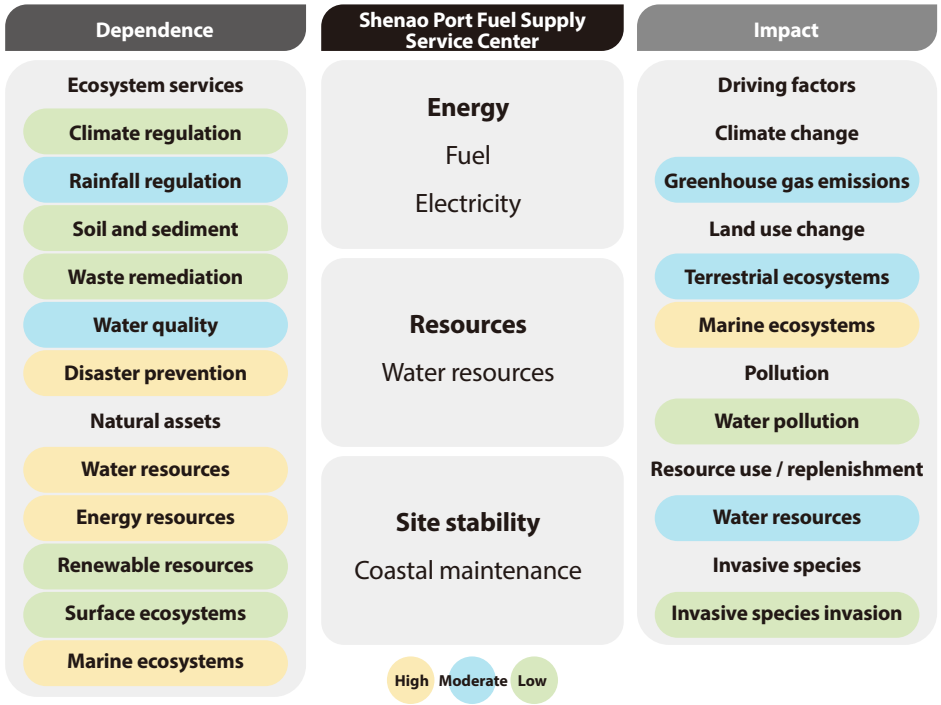
	Criterion 1: Ecosystem Sensitivity	Criterion 2: Species Sensitivity
Shenao Port Fuel Supply Service Center	High (H)	High (H)
Shimen Fuel Supply Service Center	Low (L)	High (H)
Taoyuan Refinery Plant	Low (L)	High (H)
Yongan LNG Receiving Terminal	Low (L)	High (H)

Evaluate

CPC applied the ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) tool, co-developed by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and the United Nations Environment Programme Finance Initiative (UNEP FI), to preliminarily screen the potential dependence and impact of supply centers, refineries, and receiving terminals on nature.

Shenao Port Fuel Supply Service Center

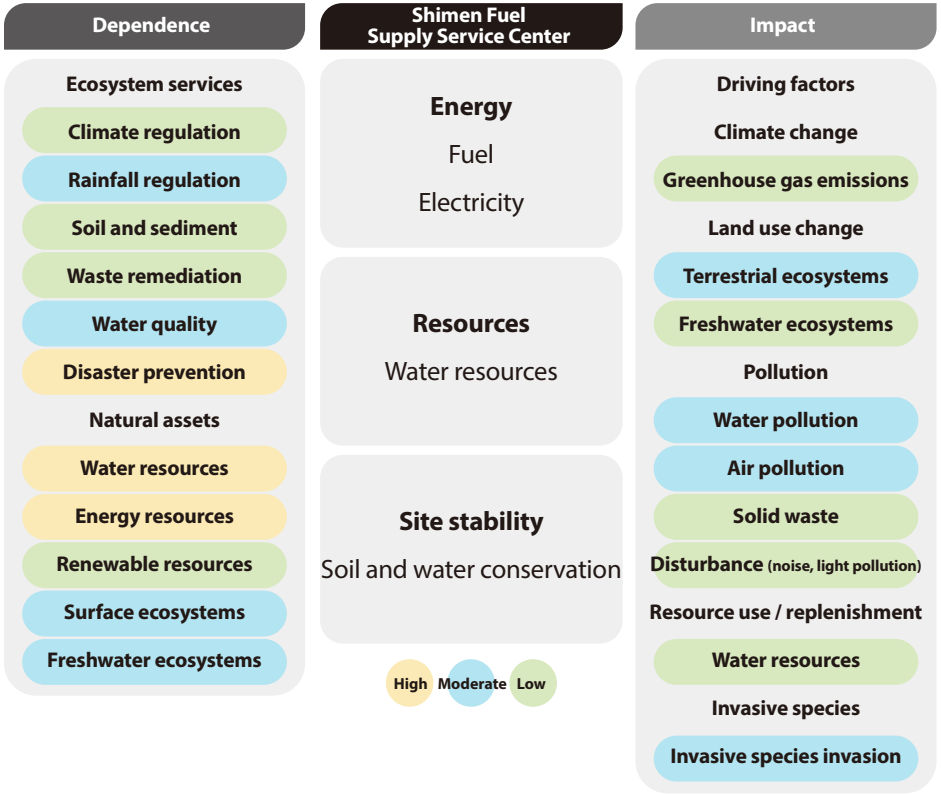
The Shenao Port Fuel Supply Service Center relies on water resources and marine ecosystems to support operational activities such as vessel navigation, oil and gas offloading, and port facility operations. The marine ecosystem also provides important ecosystem services to the Shenao Port Fuel Supply Service Center, such as climate regulation and coastline protection. The Shenao Port Fuel Supply Service Center avoids causing water pollution incidents during its operations and is committed to maintaining the ecology within the port and along the coastline, actively engaging in marine ecological conservation.



Shimen Fuel Supply Service Center

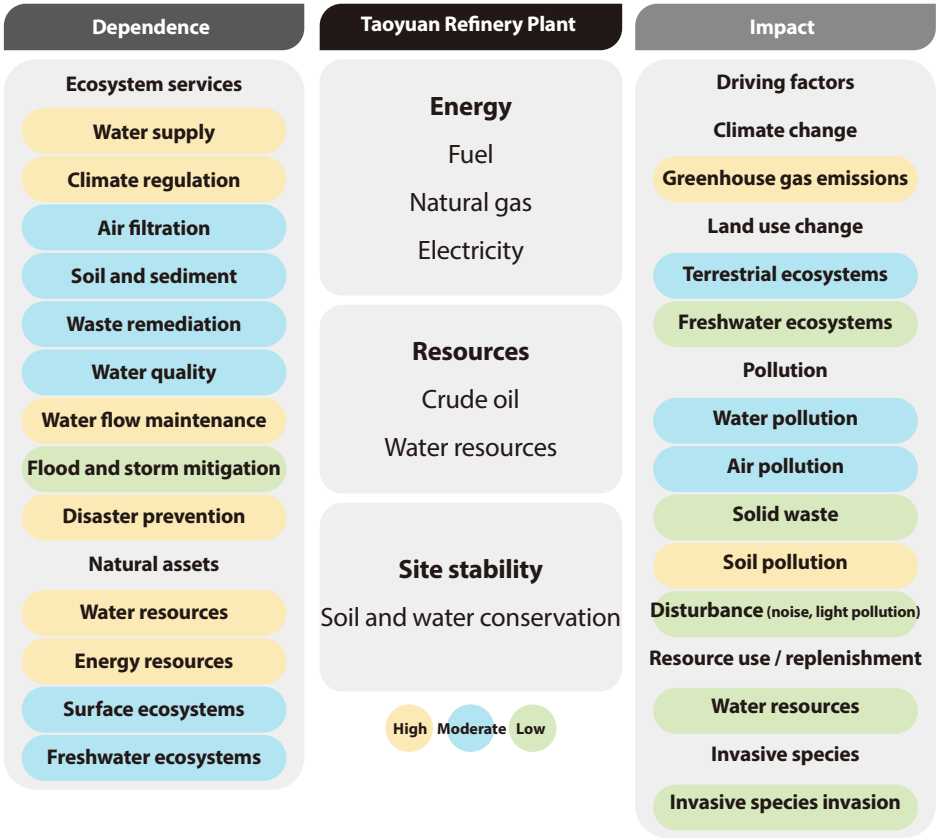
CPC's Shimen Fuel Supply Service Center's primary mission is to provide essential fuel for livelihood in the northern region. It relies on fuel, electricity, and water resources to maintain daily operations. During operations, personnel movement and equipment operation generate carbon dioxide emissions, and equipment oil leaks may cause water and soil pollution, or VOC leakage from storage tanks may occur. Equipment replacement also produces solid waste. CPC will ensure that soil and water conservation facilities are properly implemented throughout the site to maintain normal operations in all operating areas.

In addition, as the natural environment accounts for a large proportion of the Shimen Oil Supply Service Center site, the invasion of alien species mainly comes from aquatic fish and amphibians such as the spotted tree frog. CPC will also shoulder the responsibility of maintaining the surrounding environment of the site, continuously monitor the ecology of surrounding species, and take corresponding protective actions.



Taoyuan Refinery Plant

Taoyuan Refinery is a traditional petrochemical industry refinery, and it is inevitable that during the production process, greenhouse gas emissions, VOC emissions, and occasional exceedances in wastewater discharge standards or oil leaks may result in soil contamination. In recent years, the Taoyuan Refinery has actively invested in improving production equipment, significantly reducing greenhouse gas emissions, and continuously monitoring air and wastewater discharge quality to comply with regulatory standards, thereby reducing the environmental and biodiversity impacts of its production operations.



Yongan LNG Receiving Terminal

Yongan LNG Receiving Terminal relies on water resources and marine ecosystems to facilitate vessel navigation, oil and gas unloading, and the operation of port facilities, and also uses water resources for LNG regasification. Moreover, marine ecosystems provide the Yongan LNG Receiving Terminal with important ecosystem services, such as climate regulation and coastal protection. During its operations, the Yongan LNG Receiving Terminal avoids causing water pollution incidents and is committed to preserving the ecology within the port and along the coastline, actively engaging in marine ecological conservation.

Dependence	Yongan LNG Receiving Terminal	Impact
Ecosystem services	**Energy**	Driving factors
Water supply	Fuel	Climate change
Climate regulation	Electricity	Greenhouse gas emissions
Rainfall regulation	**Resources**	Land use change
Soil and sediment	LNG	Terrestrial ecosystems
Waste remediation	Water resources	Marine ecosystems
Water quality	**Site stability**	Pollution
Water flow maintenance	Coastal maintenance	Water pollution
Disaster prevention		Resource use / replenishment
Natural resources		Water resources
Water resources		Invasive species
Energy resources		Invasive species invasion
Surface ecosystems		
Freshwater ecosystems		
Marine ecosystems		

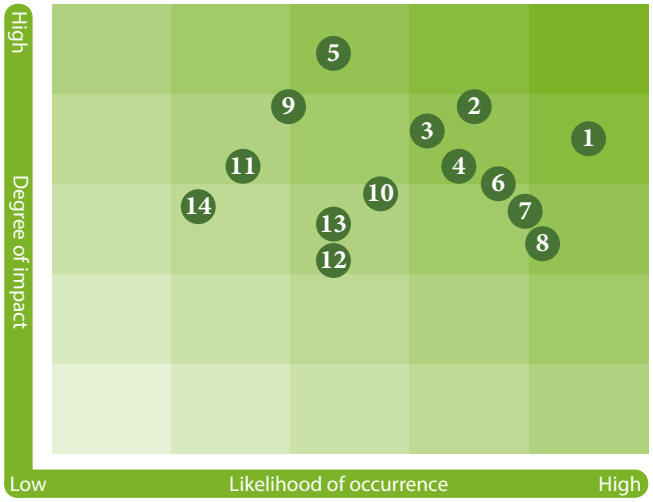
High Moderate Low

Assess

In the Assess stage, CPC evaluated and listed the potential nature-related risks and opportunities within its business and upstream and downstream value chains. Based on the "likelihood of occurrence" and "degree of impact" of each risk and opportunity, CPC created a nature-related risks and opportunities matrix to identify major nature-related risks and opportunities.

Physical risk	Immediate Risks	· Short-term natural hazard events, such as typhoons, heavy rainfall, and earthquakes, may lead to operational disruptions or equipment damage. · Plant construction and operations have caused serious impacts on terrestrial and marine ecosystems, leading to increased environmental restoration and compensation costs.
	Long-Term Risks	Extreme heat caused by climate change and long-term air pollution-related health hazards may negatively affect plant operations, production facilities, and employee health.
Transformational risks	Policy	Rising requirements in domestic biodiversity and environmental regulations—failure to comply may result in penalties or litigation.
	Technology	In order to reduce the environmental harm caused by products or activities, it is necessary to improve relevant production technologies or invest in related research.
	Market	Market preference for more environmentally friendly products or companies implementing ecological conservation.
	Corporate Reputation	Corporate actions that affect nearby habitats or local communities may lead to negative public perception and protests.
	Environmental Responsibility	Companies must take responsibility for maintaining the ecological environment surrounding their operational sites, or they may face lawsuits from environmental groups or media scrutiny.

CPC Biodiversity Risk Matrix Diagram



Physical risk	
1 Operational stability impacted by climate change.	Long-Term Risks
2 Extreme weather disasters lead to increased production costs	Long-Term Risks
3 Typhoons cause equipment damage and delays in operations	Long-Term Risks
5 Climate disasters cause supply chain disruptions	Immediate Risks
9 Aging equipment leaks and pollutes the environment	Long-Term Risks
11 Environmental pollution leading to adverse impacts on the operational site	Long-Term Risks
14 Overexploitation or degradation of marine resources	Immediate Risks
Water shortages lead to insufficient water supply in the supply chain	Immediate Risks

Transformational risks	
4 Failure to properly maintain the ecological environment	Environmental Responsibility
6 External attention to CPC's actions in maintaining the surrounding environment	Corporate Reputation
7 Increasingly stringent regulations on pollution control and ecological conservation	Policy
8 Increase in environmental protection technology R&D costs	Technology
10 Damage caused to nearby ecological conservation areas	Environmental Responsibility
12 Rising requirements for the quality of ecological environment disclosures	Policy
13 Decrease in market value due to negative nature-related image	Market

Prepare

Risk Type	Risk Indicators	Risk Description	Opportunity Response Strategies
Environmental	1 Climate change impacts operational stability and increases production costs 3 Typhoons cause equipment damage and delays in operations	Typhoons or extreme weather events damage plant environment and equipment	Formulate disaster prevention guidelines and regularly conduct disaster (flood) drills to enhance disaster awareness and skills, accelerating recovery through prevention, mitigation, and response strategies
	9 Aging equipment leaks and pollutes the environment	Leakage from unloading equipment, refining equipment, storage tanks, and pipelines causes environmental pollution of the air and marine areas	Reduce equipment leakage risk through regular inspections, use of detection instruments, and replacement of aged or damaged components
	14 Overexploitation or degradation of marine resources	Plant violations cause marine environmental destruction and pollution, leading to depletion of ecological resources or imbalance of systems	Maintain and monitor the marine environment to reduce habitat destruction; promote ecosystem protection, restoration, and regeneration through coral ecosystem surveys and habitat improvement actions
Environmental Responsibility	4 Failure to properly maintain the ecological environment	Plant violations causing environmental destruction, pollution, and losses to surrounding residents entail compensation risks, including restoration costs and losses related to property and public health	Reduce equipment failure risk through proactive management; support surrounding residents in engaging in health-promoting activities to mitigate compensation risks
	10 Damage caused to nearby ecological conservation areas	Plant sites located in or adjacent to ecological conservation or sensitive areas (e.g., Taoyuan Refinery within the Taoyuan Pond Plain Wetland Conservation Corridor, Shimen Oil Supply Service Center adjacent to the North San Guan Focus Area of the National Ecological Green Network) risk damaging these protected zones if mismanaged	Promote ecosystem protection, restoration, and regeneration through environmental maintenance, greening, minimizing habitat destruction, installing eco-friendly facilities, and habitat creation

Risk Type	Risk Indicators	Risk Description	Opportunity Response Strategies
	1 External attention to CPC's actions in maintaining the surrounding environment	Negative nature-related news damages the Company' s brand value and reputation, potentially causing clients to reduce or cease cooperation or even divest	· Strengthen communication with surrounding environmental protection groups and community residents to foster mutual cooperation and understanding, enhancing public recognition of the Company · Implement nature-positive ecological conservation plans and measures presented with scientific data to help enhance corporate image and reputation
Policy	7 Increasingly stringent regulations on pollution control and ecological conservation	If plant sites fail to comply with relevant regulations on environmental impact assessments, occupational safety, environmental protection, and ecology, it may lead to operational interruptions, affecting the Company's revenue, contractors, and employees' rights and interests.	By formulating standard operating procedures, strengthening employees' competencies and awareness of legal compliance, fines can be reduced.
	12 Rising requirements for the quality of ecological environment disclosures	Due to the nature of CPC's industry, its operations may potentially impact ecosystems and increase external stakeholders' concerns regarding natural capital risks.	Efforts will continue to enhance actions related to ecosystem protection, restoration, and regeneration, and align with international frameworks related to natural ecology to improve the quality of ecological environment disclosures.
Technology	8 Increase in environmental protection technology R&D costs	Although establishing automated monitoring systems will increase operational and labor costs, it enables timely detection and resolution of environmental pollution issues.	By implementing technologically advanced environmental automatic monitoring systems, CPC ensures it does not cause environmental impacts while also striving to balance operational efficiency and environmental protection, thereby enhancing overall environmental risk management capabilities.
Market	13 Decrease in market value due to negative nature-related image	As an energy enterprise with high natural dependence, CPC may attract public attention and investor concerns in the event of related negative incidents.	CPC carries out biodiversity promotion projects, applies for OECM designation, and engages in discussions with banks for green and sustainable financing to obtain conservation-related funding, which will be invested in environmental sustainability actions to shape a corporate image that values ecological conservation.

2.4.3 CPC Ecological Conservation Actions

To strengthen understanding of natural ecosystems and fulfill the Company' s environmental protection commitments, CPC continuously promotes ecological surveys covering terrestrial and marine areas. For key sites involved in refining, supply, and storage operations, CPC has launched an ecological inventory project that includes biodiversity monitoring, habitat environment assessment, and documentation of protected species. The goal is to gradually establish a science-based ecological database. This foundational data will also serve as a basis for future implementation of an "ecological audit mechanism" to verify whether operational activities pose risks of ecological degradation to nearby natural environments, thereby enhancing environmental risk identification and early warning capabilities in plant site management.

At the same time, in response to increasingly severe challenges facing marine ecosystems, CPC has promoted coral conservation actions in Yongan, Kaohsiung, focusing on the cultivation and restoration of protected species such as Polycyathus chaishanensis. In 2024, CPC successfully cultivated 220 coral specimens across 74 species, including three specimens of the protected species Polycyathus chaishanensis, demonstrating the Company' s concrete actions and long-term commitment to biodiversity preservation and marine sustainability.

Taoyuan Refinery Ecological Survey Project

A total of **208** species of vascular plants were recorded
Protected species such as the pangolin, crested serpent eagle and collared scops owl were identified

Little Tern Breeding Survey Project

Identified **279** adult birds (the highest number on record)
Breeding success rate reached **60%**

Shenao Port Supply Center Ecological Survey Project

Identified **132** species of stony corals across **37** genera
Coral coverage reached as high as **47.6%**
The survey indicated that the coral reefs in the area have spawning potential

Shimen Oil Supply Center Ecological Survey Project

Identified **11** species of mammals across **10** families
Identified **11** protected animal species

West Coast Coral Survey Project

Identified the Polycyathus chaishanensis, a protected species of coral
Identified **130** species of reef-building corals at the Yongan LNG Terminal

Yongan Coral Ark Project

Successfully cultivated **74** species, totaling **220** coral colonies
Restored **3** colonies of Polycyathus chaishanensis coral

Ecological Survey Plans at CPC's Key Plant Sites

TCPC Plant Ecological Inventory Plan

Terrestrial ecological surveys

Taoyuan Refinery Plant

1. Plan improvements to plant perimeter walls, establish ecological corridors to increase interaction between internal and external animal populations.
2. Plan ecological habitat creation focused on native butterflies in the plant, including the planting of suitable nectar and host plants.
3. Improve stream and river channels within the plant, including modifying concrete embankment structures, conducting regular desilting, and enhancing substrate diversity.
4. Conduct regular ecological surveys and monitoring of plant green belts, remove fallen or dead trees to promote forest regeneration, and use native plants for landscaping and greening.

Shimen Fuel Supply Service Center

1. Install eco-friendly facilities and establish ecological corridors.
2. Plan ecological habitat creation and expand habitat area.
3. Continuously monitor ecological changes in the reservoir area and strengthen the removal of invasive alien species.
4. Enhance forest area management within the reservoir zone using Decision Support System management.

Third LNG Receiving Terminal

1. Conduct algal reef ecological monitoring, including biotic components (benthic organisms, fish, birds, algae, Polycyathus chaishanensis) and environmental factors (water quality, light attenuation, heavy metals, siltation, habitat types, pesticides) to understand environmental and ecological changes in the algal reef zone.
2. Conduct habitat creation for little terns, including setting up fences, placing decoy birds and shelter tiles, and regularly monitoring population changes.
3. Plan habitat improvement projects, remove marine debris, and perform sand dredging.

Marine ecological surveys

Shenao Port Fuel Supply Service Center

1. Plan regular coral reef surveys in marine areas to understand coral ecological changes in the port area.
2. Plan coral habitat improvement projects, including the removal of marine debris, ghost nets, and harmful organisms.
3. Plan coral cultivation programs to restore rare and vulnerable coral species damaged by natural disasters, enhance biodiversity, and reinforce coral reef ecosystem functions.

Yongan LNG Terminal

1. Plan regular coral reef surveys in marine areas to understand coral ecological changes in the port area.
2. Plan a coral ark conservation base project to relocate temperature-sensitive or scarce coral species from the wild to coral cultivation facilities, thereby conserving more coral species.
3. Plan habitat improvement projects, including the removal of marine debris and ghost nets.

Taoyuan Refinery Biological Resource Survey Plan

This ecological survey plan focuses on the vegetated greenbelt preserved at the Taoyuan Refinery, conducting a survey of the biological community composition within the plant site, including vascular plants, mammals, birds, amphibians, and fish. Through the establishment of long-term forest plots and the investigation of environmental factors, the survey integrates animal community composition with habitat preferences and seasonal changes, aiming to establish a comprehensive inventory of plant and animal species at the site and an assessment of vegetation carbon sequestration. The goal is to provide a reference for the management and environmental sustainability strategy of the Taoyuan Refinery.

Costs invested
NT$3,950,000

Survey Results

The survey identified 208 species of vascular plants across 87 families and 151 genera, including 1 near-threatened (NT) species, 1 vulnerable (VU) species, and 2 endangered (EN) species.
In terms of animals, infrared automatic cameras recorded six species including the Formosan ferret-badger, masked palm civet, Formosan pangolin, and red-bellied squirrel, as well as five species of bats. Bird species included osprey, crested honey buzzard, crested serpent eagle, crested goshawk, Besra, kestrel, collared scops owl, and the Taiwan blue magpie, among other protected wildlife species.

Future planning

Short-term: Create butterfly habitats and construct diverse stream habitats within the plant.

Mid-term: Periodically monitor ecological and species composition changes and foster forest canopy development to promote natural regeneration of forest within the plant.

Long-term: Maintain the forest environment at the plant site using the Ministry of Environment' s forest carbon sink methodology, obtain green carbon credits, and develop management strategies aligned with the OECM (Other Effective area-based Conservation Measures) approach.

Taiwan blue magpie

Kestrel

Sylvirana guentheri

Little tern breeding and survey program

Costs invested
NT$1,400,000

The little tern breeding survey plan was conducted at Chuwei Fishing Port, Hsu-Chuo Port, Baiyu Coast and Datan G1, G2 zones. Depending on the environment, fixed-point or mobile monitoring was carried out to record egg-laying dates, hatching dates, nest environments, and distances between nests, in order to understand the distribution of little terns in the area and analyze their breeding habitat preferences based on ground composition, topography, vegetation presence, and other features.

Survey Results

In 2023, a large number of little tern nests were discovered for the first time in the Datan G3 zone. The census showed that the number of adult little terns in the Taoyuan area in 2023 was the highest in recent years (279 individuals). In 2024, the Datan G3 zone was included in the monitoring area for the first time, and the survey found a total of 178 little tern nests in the zone, with a breeding success rate of approximately 60%.

Future planning

Monitoring of little terns will continue in the future, with efforts made to maintain their breeding habitats (e.g., strengthening access control, cleaning up garbage, and putting up warning signs to remind the public to avoid entering key breeding areas), in the hope of attracting more little terns to breed and thrive in the Datan G3 zone.

Shimen Fuel Supply Service Center Biological Resource Survey Plan

Costs invested
NT$1,460,000

This ecological survey plan was commissioned to a biodiversity consulting company and the Department of Forestry at National Chung Hsing University to conduct a baseline survey of biological resources, including vegetation and plant community ecology, mammals (medium- and large-sized mammals, small rodents, insectivores, and bats), birds, reptiles, amphibians, and fish. The survey report was reviewed by experts and scholars from the Taiwan Biodiversity Research Institute of the Ministry of Agriculture, National Pingtung University of Science and Technology, and the Chinese Forestry Association (including the commissioned team and records from the survey report review meeting) to ensure the professionalism of the report.
Through a year-round, four-season baseline survey of biological resources, the natural forest structure and carbon sequestration capacity of the reservoir area were understood, which will aid in the planning of future forest management actions.

Survey Results

The survey at the plant site recorded the Aidia canthioides, listed as Vulnerable (VU), and Nageia nagi, listed as Endangered (EN), in the Red List of Taiwan vascular plants, as well as threatened (NT) species such as the Rhus sylvestris and Liodendron. The forest plant community is mainly characterized by the Morris Persimmon–Common Schefflera type, with the overall forest currently in the competitive exclusion phase of forest succession.
The animal survey recorded 11 species of mammals across 10 families, with the Formosan Reeve's Muntjac being the most common. Eleven protected species were also recorded, including the crab-eating mongoose, pangolin, masked palm civet, and birds of prey such as the brown wood owl, collared scops owl, black kite, crested pigeon, and crested goshawk. Additionally, amphibians such as the Taipei tree frog and crustaceans endemic to Taiwan, such as the Neocaridina ketagalan, were also recorded.

Future planning

Short term: Conduct nurturing and replanting for the forest ecology within the plant area.
Add eco-friendly facilities and create habitats to promote biodiversity.

Mid-term: Implement environmental maintenance and monitor changes in the number and distribution of biological populations, guiding toward net positive biodiversity development.

Long term: Aim for a healthy forest to maintain carbon sink functions and ecosystem service functions of the forest.

Shenao Port Fuel Supply Service Center Ecological Survey

Costs invested
NT$3,930,000

This project commissioned a professional marine ecological research team to conduct a total of two coral ecological surveys in six major areas inside and outside Shenao Port. Investigators used scuba diving or snorkeling to take environmental images in each area. The captured images were marked using image annotation tools, and AI-based automated substrate classification and coral identification technologies were employed to build a deep learning model to identify substrate types and calculate hard coral coverage, which supports the development of ecological research technologies and the establishment of a marine ecological data system for the Shenao Port area.
In addition to the basic coral ecological survey, this survey project also recorded coral sexual reproduction cycles and spawning events. From March to August 2024, six sexual reproduction cycle surveys and ten spawning event records were conducted. This marks the first time that a survey was conducted on the sexual reproduction cycle of the critically endangered coral species Acropora japonica, listed on the IUCN Red List.
By surveying coral ecology in surrounding marine areas, monitoring marine environmental factors, and studying the sexual reproduction cycles of mature coral species, CPC aims to establish scientifically grounded protection and management measures, laying the foundation for future coral conservation planning.

Survey Results

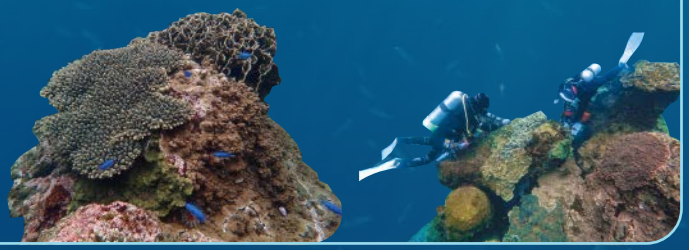
Through analysis of the coral ecological survey at Shenao Port Supply and Transport Service Center, it was found that there are 132 species across 37 genera of hard corals growing in the area, with the highest coverage rate reaching 47.6%. The corals are healthy and form large colonies. The reproductive survey results show potential for spawning.

Future planning

Short term: Establish baseline data for coral ecological surveys in the port area.

Mid term: Conduct regular monitoring of coral ecology in the port area and develop coral cultivation techniques to conserve rare and environmentally sensitive coral species.

Long term: Apply for recognition as a marine Other Effective area-based Conservation Measure (OECM) area in accordance with the standards set by the Ocean Affairs Council for identifying OECMs outside of Marine Protected Areas.



ECPC Key Plant Ecological Restoration Actions

Yongan Coral Ark Project

Costs invested
NT$9,580,000

This ecological survey project commissioned National Sun Yat-sen University to conduct a coral resource survey and habitat analysis at the Yongan Receiving Terminal, identifying as many as 130 species of hard corals growing in the area, with reef-building potential, including the protected wild species Polycyathus chaishanensis. To expand the habitat advantages provided by the Yongan Receiving Terminal, a coral ark conservation base project has been planned. Coral species vulnerable to bleaching and death caused by ocean warming from Taiwan' s surrounding waters are relocated into the Yongan Receiving Terminal for conservation work, to serve as seeds for future coral restoration.

Survey Results

Two coral cultivation systems were completed, cultivating a total of 74 species and 220 coral colonies, including 3 colonies of the protected species Polycyathus chaishanensis transplanted with approval from the competent authority. In addition, research has been conducted on the impact of environmental factors such as light and water temperature on coral bleaching, and regular monitoring of the survival status of 130 coral species within the waters of the receiving terminal is carried out to ensure that the terminal's operations do not impact coral ecology.

Future planning

Short term: Establish baseline data for coral ecological surveys in the port area.

Mid term: Conduct regular monitoring of coral ecology in the port area and develop coral cultivation techniques to conserve rare and environmentally sensitive coral species.

Long term: Apply for recognition as a marine Other Effective area-based Conservation Measure (OECM) area in accordance with the standards set by the Ocean Affairs Council for identifying OECMs outside of Marine Protected Areas.

2.4.4 Ecological Conservation Promotion and Social Engagement

Taiwan's First Ecological Conservation Trust Fund to Promote Marine Public Welfare Conservation Actions

In 2023, CPC obtained approval to establish an ecological conservation trust fund in accordance with the "Regulations for Permission and Supervision of Marine Public Welfare Trusts", and launched Taiwan's first "Ecological Conservation Public Welfare Trust Fund." CPC also formulated the "Operational and Utilization Guidelines for CPC Corporation Ecological Conservation Public Welfare Trust Fund" to demonstrate its determination to protect ecology. It plans to allocate NT$200 million per year, totaling NT$1 billion over five years, to support various domestic ecological conservation actions and related research projects, further advancing ecological conservation progress in Taiwan.

In 2024, CPC completed the establishment of the Ecological Conservation Public Welfare Trust Fund Management Advisory Committee and signed an implementation contract for the Ecological Conservation Public Welfare Trust Fund with E.SUN Commercial Bank's Trust Department, officially launching the fund's operational procedures. At the same time, CPC has also applied for permission to establish the public welfare trust with the Ocean Conservation Administration under the Ocean Affairs Council. The fund may only be used to promote public marine conservation actions after receiving said permission.

Uses of the charitable trust

CPC Ecological Protection Practices
CPC promotes ecological conservation research, ecological restoration, and environmental education work related to important production operations or engineering facilities. Priority will be given to counties and cities where the Third LNG Receiving Terminal development area is located.

Support for Domestic Conservation Actions
Promote environmental protection and ecological conservation research in Taiwan (including offshore islands), build a healthy and sustainable environment, and implement necessary measures or related projects to achieve high environmental quality and environmental education.

Total: **NT$1 BILLION**

Progress

Short-term
Obtain public welfare trust approval from the Ocean Conservation Administration of the Ocean Affairs Council.

Medium-term
Accept application and review requests for cases that meet the requirements of "Guidelines on Ecosystem Preservation Fund"

Long term
Organize ecosystem restoration (preservation)/environmental protection progress announcement events to communicate performance of the charitable trust

CPC Ecological Map App and Guantang Ecological Conservation Website Encourage Public Participation in Ecological Conservation

To promote participation in ecological surveys among the public and CPC staff, and to raise public awareness of ecological conservation, CPC developed the "CPC Ecological Map" app. Users can use their mobile phones to photograph wildlife observed at work sites or in their daily surroundings and upload the images to a database. A professional ecological team then identifies and verifies the species, providing users with accurate species information. This enhances the public's ecological knowledge and promotes the concept that everyone can be a "citizen scientist."

CPC Ecological Map App

Available on the App Store

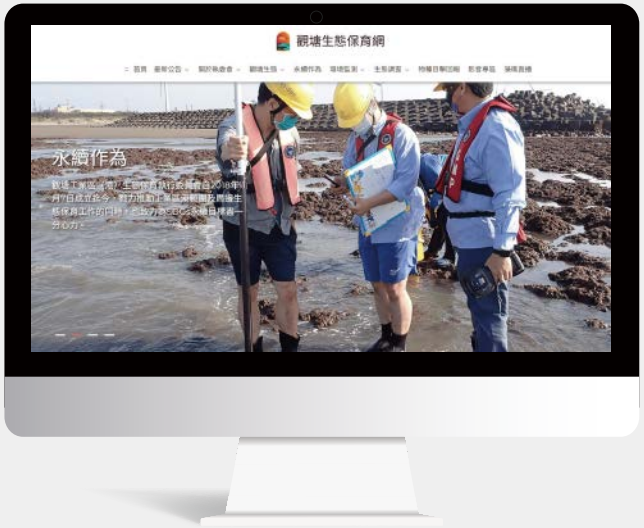
GET IT ON Google Play

Downloaded **949** times

Valid biological records: **5,625**
(as of 2024)

Additionally, in accordance with the resolution of the Guantang Industrial Park (Port) Ecological Conservation Executive Committee, and to help the public understand CPC' s efforts in coral reef ecological conservation and the committee' s third-party oversight role in proposing and implementing various coral reef conservation measures, the Guantang Ecological Conservation Website (https://cpcguantang.tw/) has been established as a public outreach platform.
This website includes multiple sections such as information disclosure, monitoring records, ecological introductions, and live video streams. It helps the public understand the current status of coral reefs, mitigates conflict between conservation and development, and serves as a tool for environmental education.

Guantang Ecological Preservation Portal



Transparency
CPC and the Executive Committee's various conservation efforts

Visual Representation
Presentation of environmental monitoring data and ecological survey results

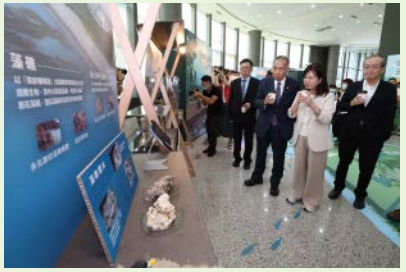
Live Coral Reef Broadcasts
Disclosing and clarifying project progress and real-time environmental conditions

- Newly addedecological survey records of crustose coralline algae, birds, fish, benthic animals, and Polycyathus chaishanensis.
- Newly added algal reef environmental monitoring data for water quality (including temperature, salinity, pH value, dissolved oxygen, turbidity, conductivity, and various nutrients), light attenuation coefficient, sedimentation level, heavy metals, and pesticide monitoring results.

The website has received over 280,000 views (as of 2024).

CPC 78th anniversary "Ecological Conservation Special Exhibition" combines interactive experiences to showcase biodiversity across plant sites

To demonstrate its commitment to ecological conservation, CPC hosted a month-long "Discovering the Beauty of CPC Ecology" special exhibition during its 78th anniversary. The exhibit focused on the ecological resources of CPC' s nine major plants and depots, featuring interactive ecological zones for the public to explore. Visitors could closely observe rare wildlife specimens and experience the biodiversity within various sites. For example, the "Brilliant New Life Under the Sea" zone themed around the Shen' ao Supply Center included a marine coral tank that introduced the public to the various beautiful coral species inhabiting the port.



Publication of Encountering "You Sheng Mei Di" — CPC Ecological Map: A First Exploration of Hidden Sanctuaries

In 2024, CPC published CPC Ecological Map: A First Exploration of Hidden Sanctuaries, which faithfully documents the species of flora and fauna observed in the environments surrounding CPC facilities across Taiwan, as well as CPC's ecological protection measures. This publication not only discloses CPC's commitment to the natural environment, but also serves to educate the public on Taiwan's precious species and promote the richness of Taiwan's ecology.

This book is the first volume in the Encountering "You Sheng Mei Di" series. In the future, CPC will continue to monitor and safeguard the ecosystems surrounding its facilities, invest appropriate resources to fulfill its ecological conservation commitments, and further uncover the ecological beauty of each site, thereby making meaningful contributions to enhancing biodiversity.

Promoting Algal Reef Education Plans to Deepen Ecological Awareness Among Elementary and Junior High School Students

In collaboration with Asia University, CPC is promoting algal reef ecological education by developing creative and interactive teaching plans. These cover topics such as reef formation, ecological observation practices, and ecological role-play. The aim is to use accessible learning methods to enhance students' understanding of and awareness about algal reef conservation, thereby realizing environmental education and encouraging societal participation.

Industry-Academia Collaboration Algal Reef Ecology Popular Science Knowledge

Teaching Plan 1: The Magical Birth Journey of Algal Reefs

This plan allows students to observe small algal reef blocks and create clay models to understand the formation, structure, and types of algal reefs. Through hands-on exploration, students learn about the natural processes that form algal reefs and gain deeper insight into reef ecosystems.

Teaching Plan 2: Algal Reef Treasure Hunt

This field activity guides students to observe and record common organisms in algal reef areas. They learn how to conduct biological observations and photograph organisms in the field, cultivating observation and documentation skills. Back in the classroom, students categorize and compare the organisms they photographed, strengthening their knowledge of reef species. They also share their favorite species, expressing their care and wishes for algal reef biodiversity.

Teaching Plan 3: Algal Reef Ocean Drift

Through the "Algal Reef Ocean Drift" game, students role-play as organisms living in algal reefs. By experiencing reef life and understanding reef ecosystem functions, students are guided to reflect on the importance of protecting these ecosystems. These activities teach students the ecological roles of algal reefs and foster a proactive attitude toward their conservation.

2024 Performance 3 environmental education projects completed in partnership with Asia University Total participants: 166

CPC, upholding its long-term commitment to ecological conservation, seeks to transform Taiwan's valuable ecological information into accessible and relatable knowledge through diverse outreach channels. This not only demonstrates CPC's efforts to protect nature but also enhances public appreciation for Taiwan's biodiversity, building a future of sustainable coexistence with all.

03 CPC and Social Co-prosperity Happy Enterprise CPC

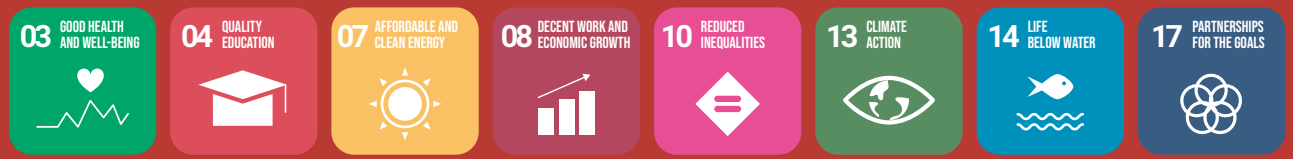
Chapter summary

CPC has always viewed human resources as its most precious capital, as the contribution of its employees is essential to corporate sustainability. CPC is committed to ensuring employees' work safety and creating a satisfying work environment. The organization also makes ongoing improvements to the selection, education, and recruitment of talents, and helps each employee develop a sustainable career path.
Furthermore, CPC contributes proactively to the common good by heeding society' s needs, responding to United Nations' Sustainable Development Goals (SDGs), and taking real actions to eliminate uneven distribution of resources. Through communication of mutually beneficial values, the organization hopes to build a solid foundation upon which society may progress.

Reader Priorities

• Communities • Employees • Partners • Public representatives • NPOs/NGOs

Corresponding SDGs:



CPC's performance highlights

- Satisfaction score Record-high blood donation 124,647.5 million c.c.
- The average total training hours per employee was approximately 48.74 hours
- The proportion of senior female executives was approximately 20.69%
- The proportion of male employees taking parental leave was approximately 40.54%
- Sponsorship to sports talents 31 athletes and sports teams from 16 schools
- Assisted in selling 3.4 metric tons of agricultural products
- Local charity donations amounted to NT$436 million
- Cleared 61,291 kilograms of marine debris
- The average years of service before retirement was approximately 40.13 years
- 99.96% of employees under collective bargaining agreement

3.1 Human Rights Protection and Inclusive Prosperity

Since its establishment, CPC has been committed to creating a healthy workplace environment centered on people. It adheres to various international human rights conventions such as the United Nations Global Compact, the Universal Declaration of Human Rights, and the International Labour Organization Declaration on Fundamental Principles and Rights at Work, to protect employees' legal rights and treat all employees with dignity and respect. As a key state-owned enterprise, CPC respects and protects the fundamental human rights of all stakeholders (including employees) throughout its operations and makes every effort to prevent any possible human rights violations. In 2024, there were no major human rights-related complaints at CPC.

3.1.1 Enforcement of human rights policy

CPC's human rights management policy

Policy	Description	Applicable subjects	2024 execution status	Future planning
Employees' freedom of association	Protect employees' right to union association and collective bargaining, and provide a diverse range of communication channels and platforms that help maintain a harmonious relationship between labor and management.	**All employees**	· CPC respects employees' choices to form, join, or refuse to join labor unions or other types of employee organizations. · Supports the freedom of workers to assemble and associate, and has signed a collective agreement with the Taiwan Petroleum Workers' Union.	Continues to uphold employees' freedom of assembly and association, and provides diverse channels for employee communication.
Respect for diversity and equality	Employees involved in the same line of work are compensated equally, and are not differentiated by ethnicity, thoughts, religion, political association, locality, place of birth, gender, sexual orientation, marital status, appearance, disability, or union membership.	**All employees**	· CPC promotes diversity and equality, and discourages all forms of discrimination. · CPC is dedicated to protecting maternal rights, and introduces protection measures for female employees who work in places that pose risk to maternal health. · CPC goes to great lengths to ensure that the workplace is free of harassment, whether sexual, mental, physical, or verbal, and any form of abuse and intimidation; we are committed to creating a dignified, safe, and equal work environment. · To improve CPC' s sexual harassment handling mechanism, in 2024, the Company prepared relevant psychological, legal, or medical consultation services and social welfare resources needed by individuals involved in sexual harassment cases, and formulated the "Directory of Service Resources for Sexual Harassment Prevention." · In 2024, a total of 76 training and awareness sessions were held, with 6,557 participants.	CPC continues to provide gender equality education and promote diversity and equality awareness for new recruits, supervisors at all levels, and employees. Articles on gender equality are also regularly published in CPC' s Petroleum Newsletter to strengthen awareness of gender equality and sexual harassment prevention, aiming to guide employees to voluntarily treat diverse genders with respect and create a gender-diverse workplace environment.
Prohibition against child labor	Elimination of all possibility of child labor	**Job seekers**	· CPC specifically prohibits use of child labor and duly complies with local government rules on work age. · All personnel have to undergo background check before recruitment. · In 2024, CPC did not have any incidents or disputes related to the inappropriate employment of child labor.	The Company continues to strictly limit the age for employing workers to comply with the regulations of local governments.
Prohibition of forced labor	Elimination of all forms of forced and compulsory labor	**All employees**	· CPC observes local employment regulations and international rules, and does not force or coerce anyone to perform work activities against their will. · In 2024, there were no instances of forced labor at CPC.	The Company continues to strictly comply with government labor laws and international standards, and does not force or coerce any unwilling individuals to perform labor.

Human Rights Protection Education and Training Status

CPC organizes training courses to promote employees' awareness toward the mainstream values on gender equality and human rights. Videos on anti-discrimination in the workplace and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) are used as teaching materials to help employees learn the common forms of discrimination in the workplace. When new employees report for duty, they receive courses introducing the work environment as well as the mechanisms for sexual harassment prevention and complaint filing. Each year, supervisors at all levels and employees participate in training on sexual harassment prevention and gender equality. Regular promotions and prevention efforts are also implemented, such as posting declaration posters in workplaces stating the rejection of sexual harassment behavior.

Human rights training hours and trainee count – 2022-2024

	2022		2023		2024	
Training hours for human rights education and training (training on human rights-related policies, such as sexual harassment prevention) (hours)	♂ 5,315	♀ 2,025	♂ 8,684	♀ 2,914	♂ 18,534.5	♀ 5,549.5
No. of employees subjected to human rights training (persons)	♂ 1,321	♀ 343	♂ 2,144	♀ 668	♂ 5,126	♀ 1,431
Total employee count (persons)	♂ 14,096	♀ 2,586	♂ 14,479	♀ 2,663	♂ 14,039	♀ 2,598
Percentage of employees subjected to human rights training (%)	♂ 9.37	♀ 13.26	♂ 14.81	♀ 25.68	♂ 36.51	♀ 55.08
Total average training hours[Note] (hours)	4.41		4.12		3.67	

Note: Total average training hours = hours of human rights training/No. of employees subjected to human rights training

3.1.2 Diverse and inclusive workplace

CPC' s main business activities are resource exploration, oil refining, manufacturing of petrochemical products, and petrol station service. Although past data has indicated male as the dominant gender in CPC' s workforce for an extended period of time, the organization views itself as a gender-friendly business and offers equal recruitment, promotion, and education opportunities for all genders. The Company does not differentiate by gender in any way, and strives to open up career paths for outstanding employees of all genders. The number of female engineers hired in recent years has increased progressively, which is an affirmation for the progress that CPC has made in promoting a gender-equal workplace.

Ratio of Female to Male Employee Compensation

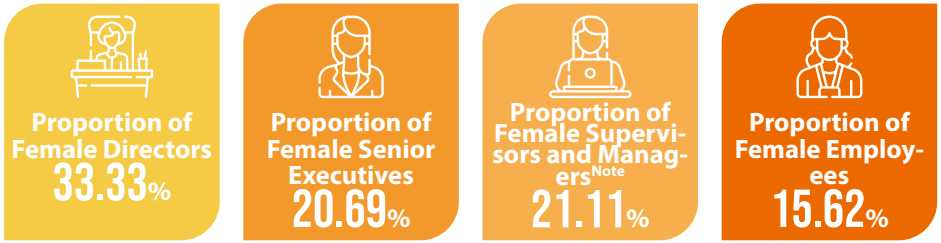
CPC sets compensation and bonuses based on the position grade held, without any difference due to gender or other conditions.

Ratio of Average Female to Male Salary in 2024

Region	Employee category	Average salary - males (NTD)	Average salary - females (NTD)	Female-to-male ratio
Taiwan	Employee category Managerial personnel	112,941	113,297	1.00
	Non-managerial personnel	63,688	64,836	1.02

Female empowerment

CPC belongs to the petrochemical industry and primarily recruits personnel who graduated from science and engineering departments of colleges and universities, with many serving in on-site units. Therefore, the proportion of male employees is relatively high. However, CPC does not engage in differential treatment or discrimination based on gender.



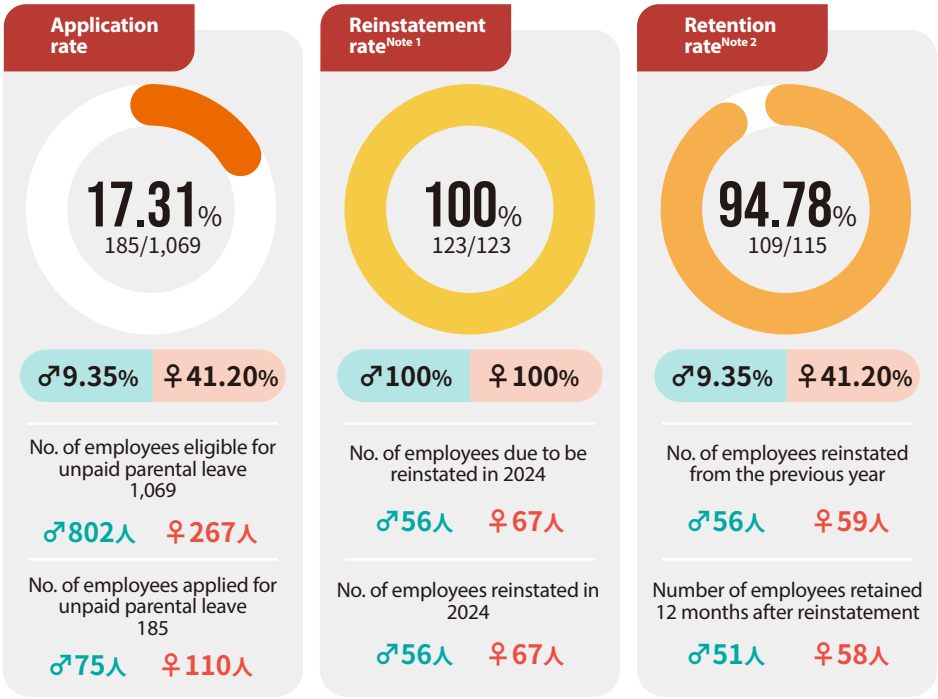
Note: Female supervisors and managers include appointed personnel in positions such as team leader and manager.

Creating a gender-friendly workplace

To help employees balance family and work, CPC supports employees applying for parental leave without pay. In addition, in line with government childcare policies to reduce the pressure on dual-income families between work and family responsibilities, CPC also provides related support measures to create a gender-friendly workplace environment, including the establishment of high-quality certified breastfeeding (nursing) rooms.

CPC strengthens its parental leave without pay system to help employees balance career development and family caregiving responsibilities. In 2024, the number of employees eligible to apply was 1,069, with a total of 185 employees actually applying for parental leave without pay. The reinstatement rate reached 100%. Among them, the retention rate of employees who returned to work the previous year reached 94.78%. CPC will continue to provide a stable and friendly work environment, support employees' parenting needs, and fulfill its long-term commitment to gender equality and family-friendly practices.

CPC Applications for Parental Leave Without Pay, Reinstatement, and Retention Status



Note 1: Reinstatement rate = No. of employees actually reinstated in the year of report (2024)/No. of employees due to be reinstated in the year of report (2024)
Note 2: Retention rate = No. of employees retained for one full year after being reinstated in the previous year (2023)/No. of employees reinstated in the previous year (2023)

High-Quality Childcare Environment

CPC independently established three childcare facilities: the Kaohsiung Refinery Employees' Non-profit Kindergarten, Miaoli CPC Employees' Non-profit Kindergarten, and Chiayi CPC Employees' Non-profit Kindergarten. In 2023, CPC also launched a childcare center for employees' children at its headquarters building. The facility uses eco-friendly green building materials and natural lighting. It includes three activity classrooms, a shared activity room, a health room combined with a breastfeeding room, and is equipped with an independent kitchen providing freshly prepared meals daily. A variety of childcare activities are regularly arranged, and technology is utilized, such as an electronic communication app, patented anti-pinch doors, and baby crib breathing monitoring mats, to provide a safe and comfortable childcare environment. As of 2024, the total number of children in care was 42.

Childcare Facilities and Measures

Number of independently established childcare facilities

Number of facilities (units)

4

No. of children under care (persons)

243

Number of partnered nearby childcare institutions

Number of facilities (units)

17

No. of children under care (persons)

16

CPC Headquarters Childcare Center for Employees' Children

Gender equality

Progress of the Gender Equality Team

Projects Promoted in 2024

1. Held 6 lectures related to breaking gender stereotypes, such as gender-equal division of housework and adaptation to family roles, to promote substantive equality in gender status and create a gender-equal social environment.
2. Convened 2 meetings of the CPC Corporation Gender Equality Team.
3. In 2024, recruitment flyers used female employees as the main visual theme.

2024 Gender-Related Course Participation Ratio by Gender

Male (Number/Percentage)
135 people | 52.12%

Female (Number/Percentage)
124 people | 47.88%

2024 Promotion Results of a Diverse and Inclusive Workplace

Diverse and Inclusive Workplace

For employees raising children under the age of 3, a program allows them to apply for a one-hour reduction in working hours per workday. As of 2024, there were a total of 1,252 employees at CPC Corporation with children under the age of 3, among whom 1,099 applied for this program, including 813 men and 286 women. The total number of applicants accounted for approximately 87.77% of employees with children under 3, with an approval rate of 100%.

As for leave for accompanying prenatal check-ups, as of 2024, a total of 371 employees at CPC Corporation applied for prenatal and paternity leave, with an average of approximately 6.02 days per person.

3.2 Friendly Workplace

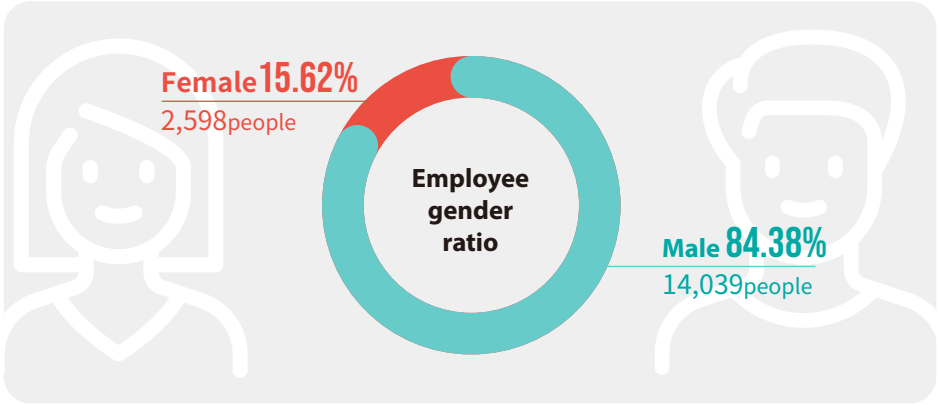
CPC Corporation has established clear regulations for employee recruitment. Compensation follows the principle of equal pay for equal work, without differentiation based on race, ideology, religion, political affiliation, place of origin, birthplace, gender, sexual orientation, marital status, appearance, or physical or mental disability.

3.2.1 Human resources management

Talent Recruitment and Management Policy

	Policy	Description
Promotion mechanism	Diversified recruitment channels	Through diverse talent recruitment channels, the Company seeks to recruit the talent needed for its development, such as through staff recruitment exams, employee recruitment exams, university scholarship employment, and vocational high school-industry cooperative education programs.
	Fair employment and equal working environment	All recruitment channels follow the principles of openness and fairness. After hiring, the Company ensures fairness in salary, benefits, training, and promotion opportunities, providing an equal working environment.
	Employment protection for disadvantaged groups	For external recruitment exams, applicants who are Indigenous peoples or persons with disabilities are offered a 50% discount on registration fees and bonus points on written exams. Gas stations also recruit part-time student workers with disabilities to protect the employment rights of disadvantaged groups.

2024 Employee Statistics by Contract



Year	Full-time staff	Contract workers	Interns	(Unit: persons)
2022	16,613	69	1,153	
2023	17,076	66	1,009	
2024	16,570	67	854Note	

Note: The actual number of student workers is 854, which is equivalent to approximately 854 employees.

Future planning

Short-Term Goals (1 to 3 years)

Continue to recruit new personnel, strengthen manpower allocation and utilization, and address the current talent gap.

Mid-Term Goals (3 to 5 years)

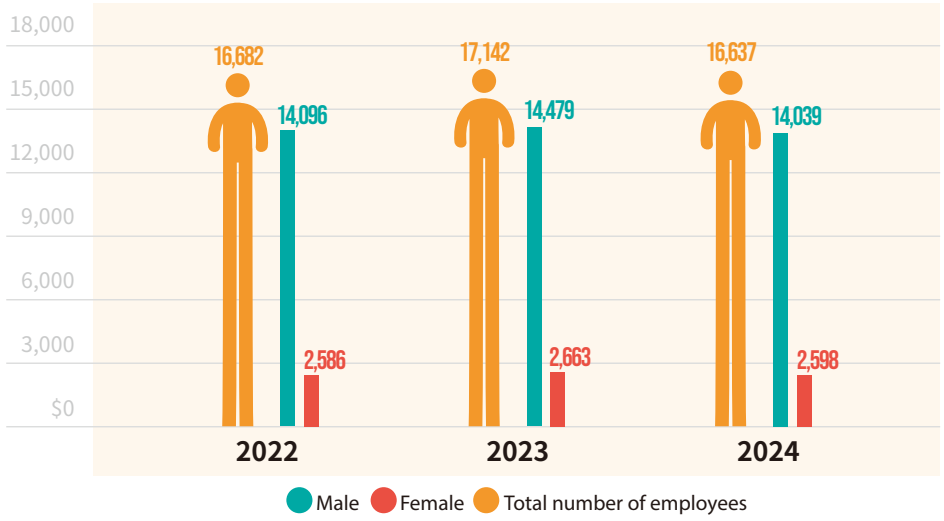
In response to future business transformation and organizational change, recruit and cultivate professional talent in various fields in advance to help employees find suitable roles for Company development.

Long-Term Goals (over 5 years)

Adjust human resource management strategies in a timely manner in line with the Company's vision and development direction to pursue long-term and stable corporate development.

Employee Headcount and Gender Ratio

(Unit: persons)



Year/Gender		2022	2023	2024
Employee count	Female (persons)	2,586	2,663	2,598
	Male (persons)	14,096	14,479	14,039
	Total number of employees (persons)	16,682	17,142	16,637

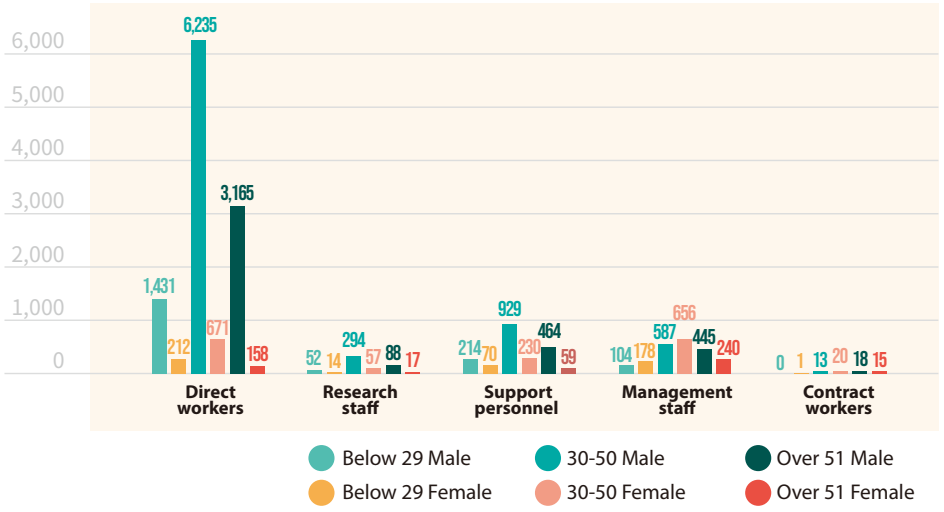
			2022		2023		2024	
			Persons	Persons Percentage (%)Note 2	Persons	Persons Percentage (%)Note 2	Persons	Persons Percentage (%)Note 2
Permanent employmentNote4	Full-time staff	♀	2,549	15.27	2,627	15.32	2,562	15.40
		♂	14,064	84.32	14,449	84.30	14,008	84.19
	Part-time employeesNote	♀	0	0	0	0	0	0
		♂	0	0	0	0	0	0
Temporary employeesNote1		♀	37	0.22	36	0.21	36	0.22
		♂	32	0.19	30	0.17	31	0.19

Note 1: Part-time staff are those who work for fewer hours than full-time staff on a weekly, monthly, or yearly basis; temporary employees are contract workers or those who have signed contracts to work for a defined duration (i.e. fixed term); employees with no guaranteed hours refer to those who are not guaranteed a minimum or fixed number of work hours on a daily, weekly, or monthly basis (such as interns).
Note 2: The percentage is calculated based on the number of male and female employees as a percentage of the total number of employees.
Note 3: CPC has no employees under zero-hour contract arrangements.
Note 4: Permanent employment refers to full-time or part-time employees who have signed an open-ended (i.e., indefinite) contract.

	Employee category	2022	2023	2024
Non-employee workers (persons)	Service contractors	7,818	9,586	10,037註2
	Dispatched labor	0	0	0

Note: The number of contractors is calculated as total work hours in 2024 (20,073,520) ÷ 8 hours ÷ 250 working days = 20,073,520 ÷ 8 ÷ 250 = 10,037 persons.
Note: Non-employee workers include cleaners, security officers, and drivers.

(Unit: persons)

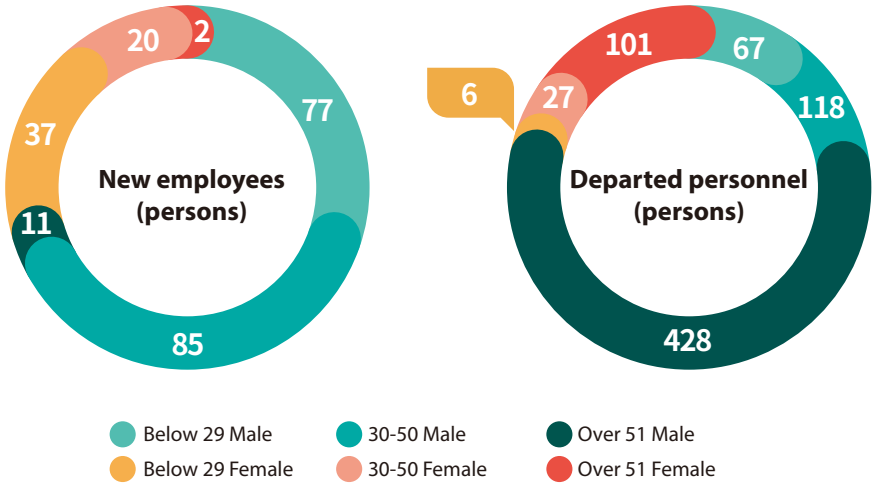


2024 Data by Personnel Category

Age and gender/ Employee category		Direct workers (persons)	Research staff (persons)	Support personnel (persons)	Management staff (persons)	Contract workers (persons)	Number of Employees by Age Group (persons)	Proportion of Employees by Age Group
Below 29	♂	1,431	52	214	104	0	2,276	13.68%
	♀	212	14	70	178	1		
30-50	♂	6,235	294	929	587	13	9,692	58.26%
	♀	671	57	230	656	20		
Over 51	♂	3,165	88	464	445	18	4,669	28.06%
	♀	158	17	59	240	15		
Total		11,872	522	1,966	2,210	67	16,637	100%

Total (persons): 16,637 (including contract/temporary staff)

Number of New and Departing Employees, Age and Gender Distribution



2024 New/Departing Employee Statistics

Item		New employees (persons)	New hire rate (%)	Departed personnel (persons)	Turnover rate (%)[Note2]
Below 29	♂	77	0.46	67	0.40
	♀	37	0.22	6	0.04
30-50	♂	85	0.51	118	0.71
	♀	30	0.18	27	0.16
Over 51	♂	11	0.07	428	2.57
	♀	2	0.01	101	0.61
Total		**242**	**1.45**	**747**	**4.49**

Note 1: New hire rate = [Number of actual new hires in the reporting year (2024)] / Total number of employees in the reporting year (2024)] × 100%
Note 2: Turnover rate = [Number of resignations + number of retirements in the reporting year (2024)] / Total number of employees in the reporting year (2024)] × 100%

Employee Education Level and Employment Statistics for Persons with Disabilities and Indigenous Peoples

2024 Employee Education Level Statistics

(Unit: persons)

Gender	Doctoral Degree	Master's Degree	University	College	Senior high school / Vocational school and below	Total
♂	152	2,754	6,923	1,208	3,002	**14,039**
♀	28	681	1,499	109	281	**2,598**
Total	**180**	**3,435**	**8,422**	**1,317**	**3,283**	**16,637**

2024 Employment Status of Persons with Disabilities and Indigenous Peoples

Percentage of employees with disabilities among all employees (including PT workers)
4.71%

825人

Percentage of indigenous employees among all employees (including PT workers)
0.56%

99人

Statistics on Local Residents in Management Positions

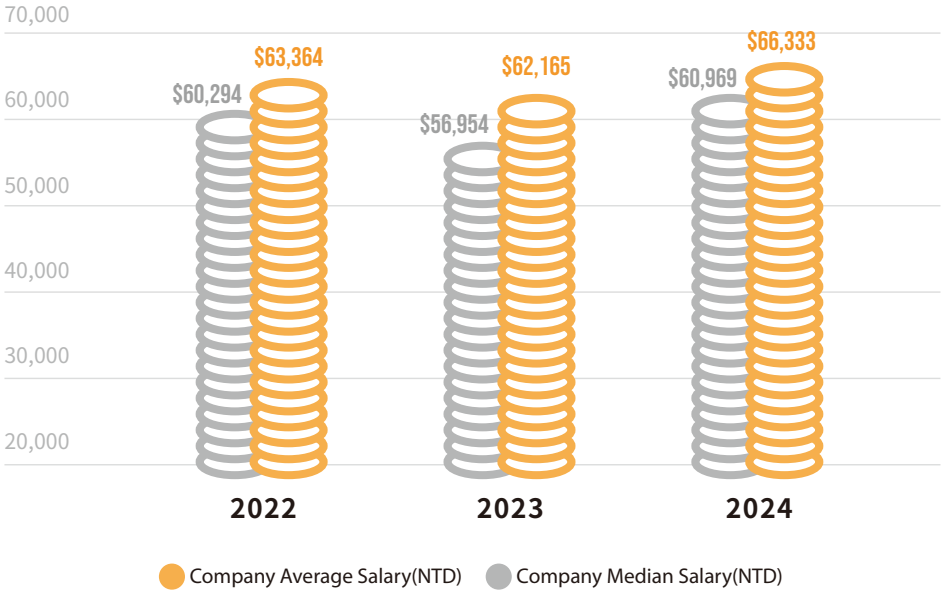
Count
232人

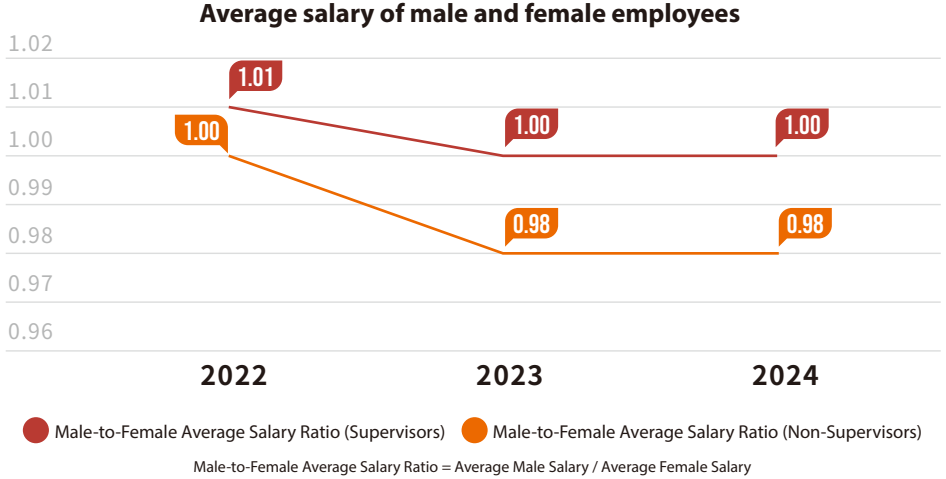
Proportion
100%

3.2.2 Employee salary and benefits

Employee Compensation Policy

CPC Corporation, Taiwan is a state-owned enterprise under the Ministry of Economic Affairs. Its compensation policy is implemented in accordance with the "Regulations for Personnel Employment in Enterprises Affiliated with the Ministry of Economic Affairs" and the "Guidelines for Salary and Compensation Management for Enterprises Affiliated with the Ministry of Economic Affairs." Performance bonuses are handled in accordance with the "Implementation Guidelines for Performance Bonuses in Enterprises Affiliated with the Ministry of Economic Affairs." In 2024, the starting salary for entry-level male and female employees at CPC Corporation, Taiwan is NT$32,101, which is higher than Taiwan's statutory minimum wage of NT$27,470.





	Gender	2022	2023	2024
Average salary for managerial roles (NTD)	♂	109,020	107,984	112,941
	♀	108,338	108,372	113,297
Average salary for non-managerial roles(NTD)	♂	60,185	59,660	63,688
	♀	60,313	60,654	64,836

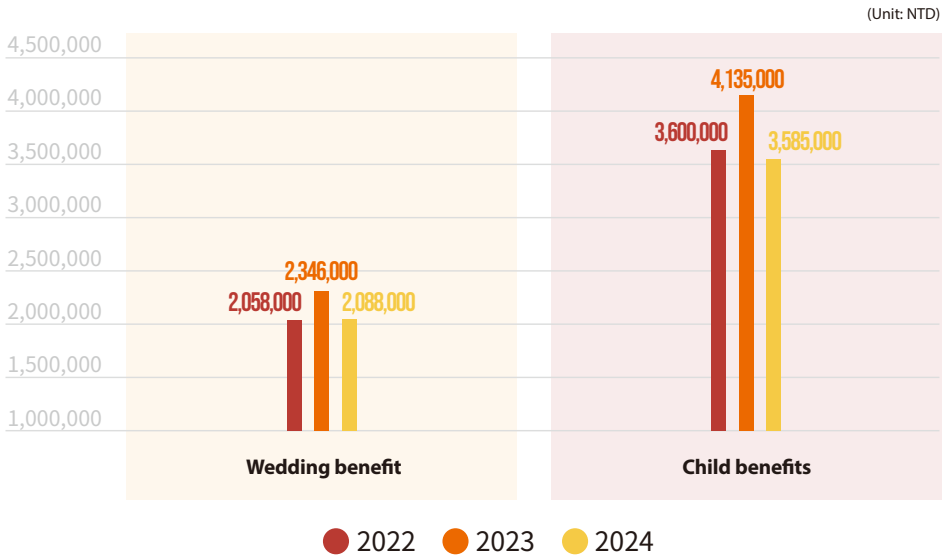
Annual compensation ratio

Annual total compensation ratio (Annual total compensation ratio = highest personal annual income / median annual income of all CPC employees)	3.60
Percentage change of annual total compensation (Percentage change of annual total compensation = percentage increase of annual income for the top-earning individual / percentage increase of median annual income across all CPC employees)	0.28 NOTE

Note: As the former Chairperson resigned on November 4, 2024, the highest-paid individual was the newly appointed Chairperson (previously the President) who took office on November 4, 2024. However, their 2024 income was still less than the former Chairperson's full-year 2023 income; therefore, this item is negative.

Employee welfare

To further improve the work environment, we release a range of bonuses based on the overall performance of business units and the contribution and performance of individual employees. We also make contributions to the welfare fund according to the "Employee Welfare Fund Act" and co-establish EWC with TPWA to organize various types of benefits and recreational activities.

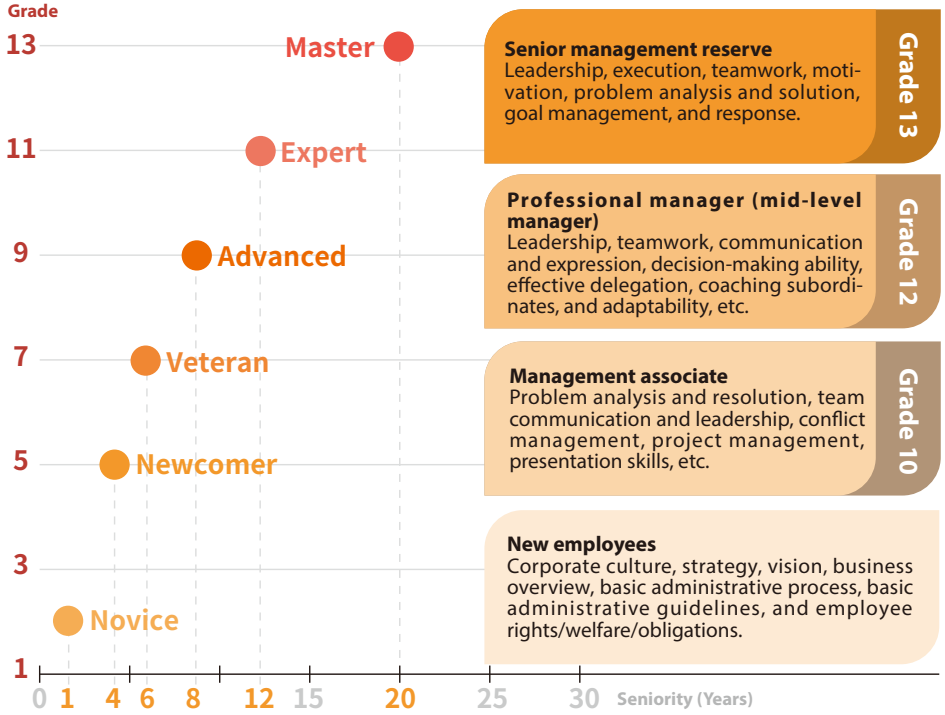


Item	Benefit description	Quantitative data on performance outcomes(NTD) 2022	2023	2024
Wedding benefit	**Each employee is entitled to wedding subsidy of NT$6,000.**	2,058,000	2,346,000	2,088,000
Child benefits	**Each employee or their spouse is entitled to birth subsidy of NT$10,000 for every birth.**	3,600,000	4,135,000	3,585,000

3.2.3 Talent development

CPC, in order to cultivate human resources and enhance professional skills, as well as to align with the promotion system and implement the principles of selection, training, and utilization, has established a comprehensive training framework in response to business development needs. The Company has conducted research on the professional competencies of key professional positions. In line with the promotion and implementation of digital transformation and the 5G AIoT application project, CPC formulated the AI Talent Development Plan in December 2024, drafting six diverse training measures to cultivate related professionals and address the gap in AI technology capabilities.

Comprehensive talent development framework



Mastery level	Seniority (Years)	Grade
Novice	1	Grade 2
Newcomer	4	Grade 5
Veteran	6	Grade 7

Mastery level	Seniority (Years)	Grade
Advanced	8	Grade 9
Expert	12	Grade 11
Master	20	Grade 13

Statistics on employee training

In 2024, the total average training hours at CPC were approximately 48.74 hours. The total average training hours for female employees were about 50.50 hours, slightly higher than 48.41 hours for male employees, indicating that CPC does not differentiate or discriminate based on gender in talent cultivation.

In 2024, CPC' s training budget was approximately NT$146 million. CPC organized 3,552 in-house training sessions, with a total of 125,956 training participants. Female participants accounted for approximately 16.89% of the total, which is higher than the proportion of female employees in the Company at 15.62%.

Employee Education and Training Indicators

Training Indicators	2022	2023	2024
Total employee training expense(NT$ million)	144.48	144.62	145.63
Total hours of employee training (hours)	825,242.80	893,783.30	810,834.70註
Total employee training expense/total revenue (%)	0.01	0.01	0.01
Total employee training expense/total employee count (NTD/person)	8,669.22	8,436.59	8,735.00

Note: The total training hours in 2024 decreased compared to 2023 due to training course scheduling; however, the execution rate of each unit still met the target.

2024 Employee Training Category Statistics

Training Type	Training classes (classes)	Total Number of Participants (Person-times)	Gender			
			Male (Person-times)	Percentage of males (%)	Female (Person-times)	Percentage of males (%)
Supervisor training	32	1,209	1,005	83.13	204	16.87
Professional training	2,459	73,930	63,137	85.4	10,793	14.6
Second specialty training	65	4,262	3,654	85.73	608	14.27
Self-motivation training	4	38	31	81.58	7	18.42
Internal instructor training	1	5	5	100	0	0
Other training	920	46,013	36,474	79.27	9,539	20.73
Orientation training	71	499	380	76.15	119	23.85
Skill qualification training	0	0	0	0	0	0
Total	**3,552**	**125,956**	**104,686**	**83.11**	**21,270**	**16.89**

2024 Employee Education and Training Category Statistics

Employee category	Trainee count (persons)	Training hours (hours)	Average training hours[Note] (hours)
Managerial personnel	3,341	126,247	7.59
Non-managerial personnel	13,020	684,587.70	41.15
Total	16,361	810,834.70	48.74

Note: Average training hours = total training hours / number of employees.

Employee Training Promotion Measures

Senior management skill development map

The Company has designed a series of training courses based on the senior manager skill model that target specifically the management reserves. These courses aim to improve trainees' skills with respect to "leadership," "execution," "teamwork," "motivation," "problem analysis and solution," "goal management," and "response."

2024 Results

In the past five years (2020 to 2024), a total of 149 successors for senior executive positions have been trained, among whom 84 have been promoted to senior executive roles, with a promotion rate of approximately 56.37%.

Orientation for new recruits

Seminars for new recruits were organized in 2024 and were delivered online via CPC-Live in conjunction with classroom sessions. This combination increased interaction between the instructor and trainees in such a way that improved training effectiveness and enabled new recruits to become familiar with the tasks assigned in shorter time. Trainees were required to complete an online exam at the end of each course by scanning a QR code. Online courses have been made available on CPC E Library where employees can access and learn at their convenience.

2024 Results

Two seminars for new recruits were organized in 2024; they were delivered through E+C (e-learning＋classroom), a combination of digital and physical teaching, using a diverse range of learning tools. Interactive group courses have also been arranged to facilitate interaction between trainees. Enrollment count for the seminars totaled 163.

CPC E Library

Developing multiple hybrid course programs such as E+C (e-learning + classroom), synchronous + asynchronous, offline and online, self-learning and co-learning, to accelerate the transformation of training models and embrace diverse learning formats in the age of digital technology.

2024 Results

- To enhance new employees' professional competencies in refining and environmental protection, CPC developed six multimedia courses; outsourced the production and revision of 179 hours of streaming video materials; and produced 109 hours of in-house materials.
- CPC E Library recorded 363,032 user logins, with a total of 88,168 unique course participants and 1,924,779 total course attendances, accumulating 821,084 total hours.
- CPC-Live continued to support key operations and link to external course resources, with a total of 183 live (or transferred) broadcasts, 466 hours in total, and 8,412 participant attendances.

Fostering certified professionals

Assisting employees and related industry personnel in becoming familiar with the professional inspection and testing of gas station vapor recovery equipment, while also helping trainees obtain training qualification certificates issued by the central competent authority or its commissioned institutions, contributing efforts toward environmental protection.

2024 Results

Between 2013 and 2024, the courses trained a total of 519 individuals. Currently, all refueling nozzles have been equipped with gas vapor recovery device, which contributes significantly to vapor recovery and improving air quality near petrol stations.

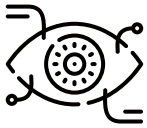
Training course application optimization

Equipment upgrade

Since 2018, tablet computers have been gradually procured. In 2024, 20 supervisor training sessions were equipped with tablets, enabling trainees to use electronic handouts on tablets instead of traditional printed black-and-white materials. This not only facilitates the creation of presentations and assignments during the training period, but also enhances overall learning effectiveness. At the same time, it implements environmental protection concepts and contributes to the care of the planet.

Digitalization of certificates

In 2024, the digitalization of training certificates was implemented, with a total of 5,154 electronic certificates issued. These certificates are integrated with CPC' s Human Resource Training Information System, allowing trainees to query, download, and use them independently.



AI recognition check-in

In 2024, AI recognition was introduced for trainee check-in to improve check-in efficiency and reduce paper-based sign-ins.

Performance evaluation and promotion

CPC has implemented a set of "Managers and Workers Performance Evaluation Guidelines" to ensure that employees' work performance is properly reflected during evaluation, and that the process serves as an incentive for excellence. Vice presidents and level 1 units are required to set performance measurements and targets based on board-approved performance evaluation guidelines for responsibility centers, which serve as reference for future performance evaluation.

Annual performance evaluations are carried out according to CPC' s "Notes on Worker Performance Review and Bonus Allocation," and employees are entitled to a performance bonus equal to 0 to 1 month' s salary depending on performance grade. Employees that have performance rated D are dismissed. The performance evaluation does not discriminate by gender or other differences; with the exception of new recruits (interns), 100% of employees are subject to performance evaluation each year.

Retirement System

CPC handles employees' retirement, compassionate compensation, redundancy, and privileged departure in accordance with "Regulations Governing Employee Retirement, Compassionate Compensation, and Redundancy for Subordinates of the Ministry of Economic Affairs" and "Notes on Downsizing for Subordinates of the Ministry of Economic Affairs." In 2024, the total number of departures and retirements was 737, of which 498 were retirements, accounting for approximately 67.57% of all departures and retirements.

Percentage of retirees relative to total departures

2022	2023	2024
Persons 475	Persons 523	Persons 498
Percentage 71.43%	Percentage 64.01%	Percentage 67.57%

3.3 Workplace Health and Safety

Material Topic: Workplace safety management

Policy

CPC adopts "Total work safety, risk management, and healthcare" as the guiding principles for its safety and health policy.

Management Approach

- CPC has successfully implemented and obtained certification for the Taiwan Occupational Safety and Health Management System (TOSHMS) and ISO 45001. Annual audits are conducted to ensure continuous compliance and improvement.
- Full-scale implementation of PSM began and was completed in 2021. Since then, CPC has assembled a PSM system consultant team comprising domestic scholars and experts, and arranged a series of PSM audits, counseling, training, and conferences and made improvements to the PSM framework based on recommendations of these scholars/experts.

Action Plan

- Strengthening Occupational Safety Inspections: A total of 48 occupational safety inspections were planned for the year, with enhanced random checks focusing on common types of occupational accidents. Unannounced inspections and walk-through management were also conducted at various units.
- Improving Personnel Safety Knowledge: Occupational safety certification training was established to strengthen employees' occupational safety and health knowledge. Contractors are required to pass a skills verification training (scaffolding three-in-one and equipment assembly/disassembly) before entering the worksite to enhance workers' professional skills.
- Enhancing Disaster Prevention and Response Capabilities: Digital technology is being implemented in fire suppression and disaster response to improve rescue efficiency and ensure operational safety for personnel.
- Optimizing Process Safety Management: An investigation was conducted into the implementation of safety management for high-risk pipeline segments at three refining and petrochemical plants, with improvement recommendations made and follow-up conducted on implementation status.
- Implementing Technological Safety Measures: The introduction of 5G AIoT into safety management is actively promoted, including the integration of work permits with access control and contractor management systems, intelligent patrol systems, AI-assisted monitoring for high-risk operations, and high-risk process pipeline monitoring modules.

2024 Actual Performance

- Total expenditure on occupational safety and health: NT$2.247 billion
- Occupational safety inspections: 48
- Disaster prevention and rescue drills: 345
- Occupational safety and health training sessions: 178
- Contractor skill training participants who passed: 1,096

Goals

Short-term

- Continue enforcement of systematic management practices on contractor safety and health performance assessment, and enhance professional skill training for contractors
- Enforce work safety and health training and continue implementation of safety and health certification, credit and on-job training system
- Continue execution of work safety protections and emergency response drill

Medium-term

- Implement production safety management (PSM) system and make optimizations to 15 basic system functions
- Incorporate use of AI technologies for improved work safety management and reduced chances of accident
- Reduce comprehensive injury index

Long term

Sustain the pursuit of total industrial safety and zero industrial accidents.

3.3.1 Workplace safety management

CPC has an "Occupational Health and Safety Committee" in place to oversee matters concerning employees' safety and health, such as safety and health training, health management, contractor management, and occupational hazard investigations and reports.

Occupational Health and Safety Governance Framework

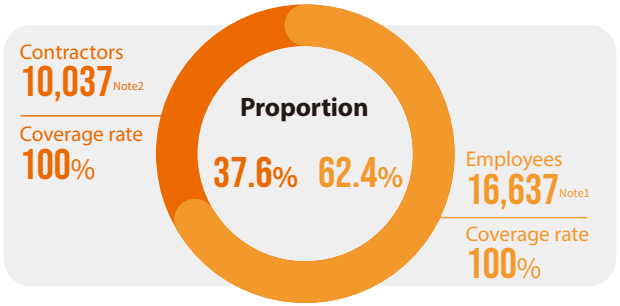
Occupational Health and Safety Committee

The committee has 26 seats, including the president as the committee chair and 25 representatives from different units as members; 9 seats (35%) are allocated to workers' representatives, which is more favorable than what the laws require. The Occupational Health and Safety Committee convenes 4 meetings each year.

2024 Discussion items

A total of 13 proposals were discussed in 2024, among which 8 proposals were raised by labor representatives, accounting for 61.5%. The discussed proposals were closely related to employees' workplaces and rights, including the installation of plant staircases and tank crossover platforms, employee assistance programs, automatic fire inspection systems, and emergency medications for acid and alkali exposure, to ensure that employees work in a safe and healthy environment.

Percentage of workers covered by occupational safety and health management system



Note 1: Employee count (including contract employees) is based on data as of December 2024.
Note 2: The number of contractors is calculated as total work hours in 2024 (20,073,520) ÷ 8 hours ÷ 250 working days = 10,037 persons.

Occupational Safety Inspections and Drills

Due to the high risks involved with oil refining and petrochemicals, CPC complies strictly with the Occupational Safety and Health Act and related laws, and has assembled separate audit teams for refinery, excavation, marketing, and construction activities, whose responsibilities are to perform safety and health audits onsite on a monthly basis. Each unit is also responsible for performing daily inspections and enforcing risk-based audits within their work sites.

Occupational safety and health training	Number of sessions held in 2024 **178** sessions

Occupational safety and health education and training

CPC has implemented a set of "Worker Safety, Health, and Environmental Protection Training Guidelines" to improve workers' professional capacity with respect to work safety and health and increase the effectiveness of training efforts. Training requirements are surveyed on a yearly basis to ensure that every job position has access to occupational safety and health certification training, credit courses, and on-the-job training.

Occupational Safety Inspections and Drills

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2024 execution status

Occupational safety inspections 48 times

Disaster prevention and rescue drills 345 sessions

Expanded emergency response drill 4 times

Unannounced emergency response drills 5 times

Special training completion percentage 100%

No. of security guards 19

Subjected to special training 19

Note 1: All CPC security guards are outsourced labor.
Note 2: This data pertains to security guards at CPC's headquarter.

3.3.2 Employee safety protection

CPC is committed to building a workplace safety culture that is centered around people. By adopting "total involvement, risk management, and healthcare" as the core value and "absolute work safety and zero hazard" as the ultimate goal, CPC continues working with employees and contractors to create a safe, healthy, and comfortable work environment. Its dedication to reducing occupational accidents has enabled the organization to keep the frequency-severity indicator below the industry average for 28 consecutive years.

Year	CPC	Industry-wide
2022	0	0.35
2023	0.06	0.4
2024	0.01	0.38

Occupational injury

Worker category	Occupational injury			Calculation of absenteeism rate (A.R.)			Calculation of disabling injury frequency rate (F.R.)			Calculation of disabling injury severity rate (S.R.)		
Injury count	Number of severe occupational injuries	Fatalities Count	Fatalities Disabling Injury Frequency Rate (F.R.)	Total absent days	Total work days	Absenteeism rate (%) (A.R.)	Total disabling injuries	Total work hours	Disabling injury frequency rate (F.R.)	Total days lost to injury	Total work hours	Disabling injury severity rate (S.R.)
Employees 4	0	0	0	57,014.44	4,159,250	1.37%	4	35,150,827	0.11	80	35,150,827	2
Non-employees 4	0	3	0.14	No available statistics			7	20,073,520	0.34	18,024	20,073,520	897

Work injury description
Being struck, caught, entangled, falling, tumbling, struck by falling objects, drowning, contact with high or low temperatures, and contact with hazardous substances

Whether resulted in personnel death
Yes

Description
1. Formula for calculations; include permanent and non-permanent employees
   · Absenteeism rate (A.R.) for employees and non-employees = [total absent days (including unpaid leave, sick leave, and work injury leave)] / [total work days * total employee count]. Disabling injury frequency rate (F.R.) = (number of disabling injuries×10^6) / total work hours [rounded down to two decimal places]
   · Disabling Injury Severity Rate (S.R.) = (Total number of lost workdays due to injury × 10^6) / Total work hours [Round to the nearest integer, discard decimals]
   · The absenteeism rate is calculated based on employee absences due to loss of work ability, not limited to occupational injuries or illnesses.
2. It excludes approved holidays or leave, such as folk festivals, training, maternity/paternity leave, and compassion leave. Absenteeism includes unpaid leave, sick leave, and compensation leave for injuries at work.
3. The number of days lost from the inability to work by employees due to work-related injuries or diseases.
4. Work-related diseases shall be determined based on the diagnosis of occupational specialists of a hospital.
5. Disabling injuries do not include minor injuries, i.e. injuries healed on the same day, and after which employees can return to work the next day.
6. Total lost days include the sum of days lost due to four types of disabling injuries: death, permanent total disabilities, permanent partial disabilities, and temporary total disabilities.
7. Both deaths and permanent total disabilities are calculated as 6,000 days lost.
8. The definition of severe occupational injury refers to injuries that result in the worker being unable or unlikely to recover to their pre-injury health condition within six months, excluding fatalities.

Major Penalty Items
We constantly implement various plans to improve workplace safety, contractor management, and OHS. We also educate all units to implement such improvements and adopt best practices.

2024 Penalties Imposed by Competent Authorities	Total number of penalty cases(cases)	Total penalty amount (NT$10,000)
	13	149

Number of major incidents (cases)[note]		Incident description	Follow-up improvement and mitigation measures
Single penalty exceeding NT$300,000	1	Failure to implement measures to prevent hazardous material leakage from the ethylene product chiller pipeline, resulting in a pipeline leak and fire, in violation of Article 6 of the Occupational Safety and Health Act. Penalty amount: NT$300,000.	· Implement engineering improvements to reinforce the connection between pipes and sleeves. · Include regulations on the use of safety tools in the insulation repair work instructions. · Conduct synchronized inspections and inventory management of similar equipment within the plant.
Fatalities Non-employees under organizational control	3	Drowning accident of a Thai contractor from HWANG CHANG GENERAL CONTRACTOR CO., LTD. during caisson work at Taipei Port, LNG Project Division.	· Established standard operating procedures for caisson jacking operations. · Increased safety and health training for jacking operations, including execution judgment and timing, command systems, and personnel evacuation.
		Fatality from hydrogen sulfide inhalation due to improper blind flange removal by a contractor at the Taoyuan Plant of the Refining Business Division.	· Implemented pipeline valve shut-off, pressure relief and residue removal (gas), purging, and continuous environmental monitoring. · Ensured proper use of self-contained breathing apparatus and equipment checks.
		Fatal accident involving a Thai contractor from HWANG CHANG GENERAL CONTRACTOR CO., LTD. during withdrawal operations when struck by a steel beam due to rogue waves at the LNG Project Division's port construction site.	· Occupational safety and health management plan includes setting alert and action thresholds for wave height, area-specific safe standard operating procedures through job safety analysis. · Deployed marine weather monitoring personnel.

Note: Major incidents refer to events causing death, disabling injury of three or more individuals in a single incident, or a single penalty exceeding NT$300,000.

CPC's employee safety protection guidelines, procedures, and principles

Occupational safety and health consultation and communication procedures

Establishing standard communication channels among internal departments, as well as setting up mechanisms to receive and respond to messages conveyed by external stakeholders, allows employees and external parties to fully understand CPC's commitment to continuous improvement in safety and health, thereby achieving the goal of community harmony.

Prevention against abuse when performing duties guidelines

Outlines the reporting channels, grievance procedures, and solutions in cases when employees are intimidated, threatened, or attacked while performing duties. It is intended to provide assurance for employees' safety and health.

Occupational illness management policy

The policy introduces enhanced management and prevention of occupational illness for employees' health. For any suspected case of occupational illness, an investigation team will be assigned immediately to evaluate the situation and make proper work arrangements depending on the employee's health state and capacity. Assistive tools will be provided as deemed necessary to perform works.

Work safety accident investigation and management principles

We have defined processes for reporting, investigation, report writing, statistics production, and follow-up of accidents. We have also designed the online "Hazards and Emergency Report Form" on the intranet to promptly capture the actuality of accidents occurred in all units.

2024 Occupational Safety Week: "Technology for Disaster Prevention, Green Energy Safety, Sustainable Workplace"

During CPC' s 2024 Occupational Safety Week, seminars were held inviting occupational safety and health professionals from various sectors to discuss and exchange views on the current status and future prospects of occupational safety and health at home and abroad. These discussions promote communication among individuals from academic, research, and practical backgrounds, enhance the level of occupational safety and health technology within the Company and domestic enterprises, and ensure the safety and health of workers across all sectors.

5G AIoT Application – Robotic Dog

Through implementation of the 5G AIoT project, talent training, and creation of smart traffic network, CPC actively adopts digital technologies and supports technological integration. By engaging the industry, the government, the academia, and research institutions in close collaboration, CPC takes progressive steps toward its vision for sustainability transformation and smart production, and prepares the organization for the arrival of the digital era.

Out of support for the nation' s development policies, CPC works closely with the Export Processing Zone Administration, MOEA, to make more efficient use of resources and land across all plant sites and to support the expansion of Kaohsiung Software Technology Park with the hope of enabling growth of the high-tech industry. By "bringing in industry leaders," CPC aims to increase the growth of new business ventures within the park. In a collaboration with AI startups at Kaohsiung 5G AIoT Innovation Park, the Department of State-owned Enterprise Affairs, and Kaohsiung City Government, CPC organized several intelligent work safety conferences and exhibitions where new businesses are able to showcase their progress. Meanwhile, CPC continues to strengthen cooperation with other industry participants such as Formosa Chemicals & Fibre Corporation and Formosa Petrochemical Corporation on exploring the potential of applying AI technology in corrosion monitoring and predicting the useful life of bearing. CPC has invested resources to introduce advanced tools such as robotic dog inspections and construction site safety image recognition systems to achieve a more efficient and safer working environment. These tools will significantly enhance the ability to identify and prevent potential workplace hazards. In 2024, the robotic dog completed 67 routine inspections at the water supply plant of the Linyuan Refinery. Plans are in place to introduce explosion-proof robotic dogs for use in more work environments.

3.3.3 Workplace health protection

Employee health and care

Step 1

Employee Health Management Plan

On-site health service

To implement occupational disease prevention, graded health management, job placement, and other physical and mental health protection measures, the company engages employed or contracted physicians to provide on-site health services. In 2024, a total of 1,241 on-site health service sessions were conducted.

Environmental monitoring project for identification of hazard factors

To prevent employees from exposure to various work-related hazard factors, we have established the Work Environment Monitoring Plan and implemented work environment monitoring to prevent hazards.
In 2024, we performed work environment monitoring on chemical hazard factors (organic solvents, specialty chemicals, dust, and CO2) and physical hazard factors (noise exposure and wet-bulb globe temperature [WBGT] index). The monitoring results are within the permissible exposure limits.

Health seminars and health promotion events

CPC arranges seminars of various themes that provide employees with the proper knowledge needed to maintain and manage health at work. Activities such as smoking cessation class, weight loss class, fitness class, aerobic program and hiking have been arranged to help employees develop healthy habits.
In 2024, a total of 257 health promotion activities and seminars were held.

Annual employee health checkup

To provide workers with a safe and healthy work environment, CPC arranges health examinations for employees on a yearly basis. In 2024, 16,020 employees took the general health examination and 3,119 employees took the special health examination for engaging in works involving noise, dust, organic solvents, specialty chemicals, ionized radiation, and abnormal pressures.

In accordance with regulations, special health examination results are categorized into levels for health management. In 2024, a total of 12 individuals were classified under Level 4 management. For Level 4 cases, the company arranges for on-site visits by occupational medicine specialists to assess workplace hazard factors and implement hazard control and related management measures.

Step 2

Employee Health Management

To further enhance the statistical analysis capability of health management, employee health examination results are analyzed annually to identify the top six abnormal items.

Step 3

Adjust and Plan the Employee Health Management Plan for the Following Year

In 2024, the top six abnormal items were body weight, chest X-ray, total cholesterol, low-density cholesterol, waist circumference, and diastolic blood pressure. Based on these, related health seminars and promotion activities were planned and implemented, serving as an effective reference for employee health management.

Employee Care

CPC Clinic

CPC has family clinics established at Taipei CPC Building, Taoyuan Refinery, Exploration and Production Department Miaoli Branch and Kaohsiung Refinery to provide employees with reliable and accessible medical service. Services provided at these clinics include general healthcare for adults and children; some would even offer health checkup and vaccination, and have been a major support to employees' physical and mental health.

Health consultation services

CPC invites occupational health specialists to provide one-on-one health consultancy service onsite on a monthly basis. The scope of consultancy covers general illness, abnormal workload, occupational illness, ergonomics, maternal health protection (for female workers who are pregnant or have given birth for less than one year), health checkup review, and health promotions. The process and outcome of consultancy are kept confidential .

Employee assistance program

CPC uses surveys to understand employee needs and arranges corresponding service measures from three aspects: work, life, and health. CPC has internal personnel dedicated to the Employee Assistance Program, responsible for planning, promotion, and resource referral. Psychological counseling and legal consultation services are provided by external professional organizations (personnel).

Employee assistance program

Work aspect

2024 Results

A total of 162 seminars and courses were held

The number of participants totaled 7,613 person-times.

Description
Includes workplace adaptation for new recruits, career development, retirement planning, flexible work hours, sexual harassment complaint, employee grievance, and prevention and handling of illegal workplace violations.

Lifestyle aspect

2024 Results

A total of 199 seminars and courses were held

The number of participants totaled 12,277 person-times

Description
Includes legal consultation, worker education, club activities, competitions, nursery room, childcare service, parenting education, and life management.

Health aspect

2024 Results

A total of 227 seminars and courses were held

The number of participants totaled 9,810 person-times

Description
Includes mental consultation, maternal health consultation, medical consultation, onsite medical service, stress management, emotion management, health checkup, nutrition, smoking/alcohol cessation, weight loss class, and fitness training.

Execution of EAP

2024 Results
CPC conducts annual employee surveys to assess awareness and satisfaction regarding the Employee Assistance Program, facilitating continuous improvement and promotion; in 2024, awareness reached approximately 96.09%, and over 85% of users gave positive feedback on related services.

3.4 Labor-Management Communication and Collective Bargaining

3.4.1 Employee communication channels

Employees' opinion channels and resolution

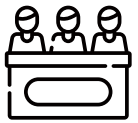
CPC values employee rights and upholds the principles of integrity, transparency, timeliness, and positivity as its foundation for communication. Safeguarding the legitimate rights of employees is a top priority, and the "Employee Grievance Handling Guidelines" have been established. Employees who disagree with disciplinary decisions, or whose rights have been infringed due to inappropriate company regulations, administrative measures, illegal acts, abuse of power, or misconduct, may seek relief in accordance with these procedures.

Sexual Harassment Prevention and Grievance Channels

CPC has established a set of "Sexual Harassment Prevention, Complaint and Discipline Guidelines" and assembled a "Sexual Harassment Complaint Review Committee" to handle sexual harassment claims. A dedicated webpage and hotline have also been set up to handle sexual harassment cases. In 2024, a total of 15 sexual harassment complaints were accepted, all of which have been reviewed, with continued follow-up and concern for the parties involved.

Additionally, CPC organizes training courses to promote employees' awareness toward the mainstream values on gender equality and human rights. Videos on anti-discrimination in the workplace and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) are used as teaching materials to help employees learn the common forms of discrimination in the workplace. When new employees report for duty, they receive courses introducing the work environment as well as the mechanisms for sexual harassment prevention and complaint filing. Each year, supervisors at all levels and employees participate in training on sexual harassment prevention and gender equality. Regular promotions and prevention efforts are also implemented, such as posting declaration posters in workplaces stating the rejection of sexual harassment behavior.

2024 Employee Grievance Handling Committee Operations



Employee Grievance Committee

CPC has established an Employee Grievance Handling Committee comprising 7–9 members, including the spokesperson, relevant department heads, and union chairperson and representatives.

Number of cases reviewed

Two grievance cases were received (one not accepted), and two telephone inquiries were handled.

Outcome

Complainants accepted the grievance outcomes.

Sexual Harassment Grievance Mechanism Channels

Hotline

For grievances that are raised through the telephone, the unit-in-charge will inquire about missing details and help the plaintiff complete the complaint form before forwarding it to the Complaint Review Committee.

2024 outcomes and performance explanation

Plaintiffs were first offered care and emotional support and subsequently given a detailed explanation of the investigation process. All plaintiffs were satisfied with the outcomes of their complaint.

Written correspondence

Submit either directly or indirectly through the plaintiff's department to the Complaint Review Committee. Once the Complaint Review Committee receives a complaint form, the task force will call the plaintiff to offer care and emotional support while at the same time confirming details of the written form and inquiring for incomplete details to facilitate the investigation.

2024 outcomes and performance explanation

Currently, all cases of complaint have been raised through correspondence, and the plaintiffs found the outcomes of their complaints to be acceptable.

Fax

A dedicated line has been made available to receive complaints for confidentiality.

2024 outcomes and performance explanation

Currently, all complaints are mailed directly to the Complaint Review Committee.

3.4.2 Collective Bargaining

CPC values employee needs and holds annual labor relations seminars to enhance labor-management communication, foster suitable labor relations and working conditions, and promote business development and employee welfare, thereby creating profits and sustainable operations.

Topic	Proposals discussed at labor–management meetings in 2024
Optimization of Business Travel and Transportation Reimbursement Mechanisms	To improve convenience and efficiency of business travel, CPC adjusted transportation reimbursement policies, including: allowing selection of Taipei or Nangang HSR stations, accepting other payment proofs for lost tickets, integrating taxi fares into the attendance system travel request form, and implementing a taxi reimbursement mechanism during typhoon emergency response duty periods.
Enhancement of Employee Training and Certification Incentives	To encourage employees to pursue further studies and professional skill improvement, proposals were made to revise related incentive guidelines. For occupational safety and health certifications and technician skill examinations, the number of subsidies was adjusted based on the difficulty of the certifications, and academic and practical test fees were subsidized separately, offering more flexible incentives.
Improvement of Internal Resource Utilization Management	The policy for borrowing computer classrooms in the Information Division at Headquarters was optimized by improving the registration process, enhancing the transparency and convenience of equipment usage, and ensuring employees can efficiently utilize company resources.

Resolution of employment disputes

CPC complies with labor regulations. Aside from disputes over the inclusion of night duty pay and overtime pay in salary calculations, there were no other major labor disputes.

Item	Night Shift Pay Dispute	Night shift pay was included in the calculation of overtime compensation.
Handling Status	With Executive Yuan approval, it was included in average wage calculations for retirement pensions effective November 1, 2022.	Meanwhile, night shift pay continues to be excluded from salary when calculating overtime pay due to the salary-only system that applies to all state-owned businesses under MOEA. CPC currently observes rules of both the MOEA and the Executive Yuan in this respect.

Collective bargaining agreements

CPC adheres to international labor conventions and domestic labor union laws. Mechanisms for communication with unions include: three labor representatives (accounting for 20%) on the Board of Directors, regular labor-management meetings at each business unit, ad hoc collective bargaining agreement negotiation meetings, and inviting the union chairperson to attend expanded business briefings, thereby ensuring employee voices are fully heard. In 2024, no operating site or supplier violated freedom of association or collective bargaining rights.

Starting in May 2024, six collective bargaining agreement negotiation meetings were held to discuss renewal matters with representatives from both parties. In 2024, a total of 24 labor-management meetings were held, and one labor-management dialogue meeting between CPC and the Taiwan Petroleum Workers' Union was conducted. To create a more favorable communication environment and bridge, three sessions were held on labor regulations and financial supervision, basic labor-management consultation affairs, and labor-management relations seminars to promote labor-management harmony.

Number and Proportion of Employees Covered by Collective Agreements

Item	2022	2023	2024
Number of employees (persons)	16,293	17,142	16,637
Number of union members (persons)	16,286	17,135	16,630
Proportion of employees covered by collective agreements (%)	99.96	99.96	99.96

Note: Working conditions and employment terms for employees not covered by collective agreements are not subject to other collective agreements.

CPC has signed a collective bargaining agreement with Taiwan Petroleum Workers' Union for the protection of employers' and employees' interests and for improved work efficiency. The agreement contains 55 articles in 9 chapters and covers topics including "Labor–management negotiation and cooperation," "Compensation, work hours, break time, and leave of absence," "Employee welfare, training, and union activities," "Recruitment, transfer (relocation), resignation, and retirement," "Performance evaluation, reward, discipline, complaint, and promotion," "Safety, health, and compensation and compassionate pay for occupational hazard," and "Resolution of employment dispute."

Main governing laws of collective bargaining agreement

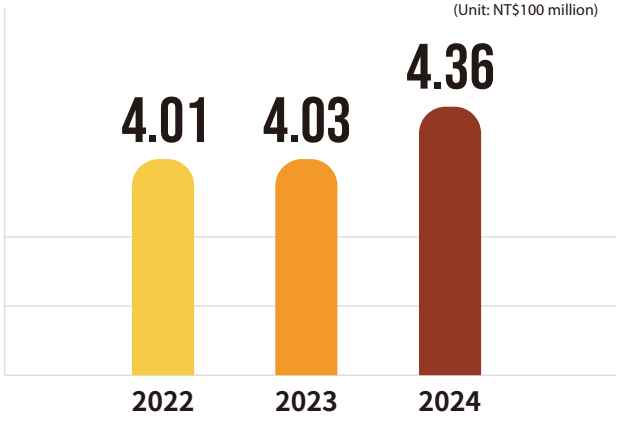
- The Labor Standards Act and related regulations
- Labor Union Act
- Collective Agreement Act
- Act for Settlement of Labor–Management Disputes
- Regulations for Implementing Labor–Management Meeting
- Regulations for Implementing Worker Education
- Ministry of Labor Notes on Consensual Work Hour Reduction Between Labor and Management Due to Economic Challenges
- Occupational Safety and Health Act and related regulations
- Rules on Occupational Safety and Health Facilities
- Organization Regulations on Employee Welfare Committee
- Employee Welfare Fund Act
- CPC Corporation Work Rules
- Principles and Leave Policy for CPC Corporation, Taiwan Employees Participating in Petroleum Union (Branch) Statutory Meetings and Other Activities
- Statutory Meetings, Voluntary Meetings, and Activities of Taiwan Petroleum Workers' Union (and Branches)
- CPC Corporation Work Safety Accident Investigation and Management Principles

3.5 Social inclusion

As a member of society, CPC is committed to being a promoter of a prosperous and harmonious life. While pursuing profits, it remains dedicated to fulfilling its corporate social responsibility and strives to strengthen harmonious relations with community residents by formulating neighborhood engagement plans. Through the influence of its various operating sites, CPC addresses social issues and bridges resource gaps. Starting from its core energy business, CPC engages in all-age energy education, cultural and artistic events, community care, sports promotion, material donations, employing individuals with developmental delays at gas stations, and industry-academia collaboration with science classes. It maintains close ties with local communities and residents, continuously giving back to hometowns and local areas. Adhering to a people-oriented core philosophy and the value of mutual prosperity, CPC lays a solid foundation for social progress. In 2024, it provided (donated) a total of 6,831 items, amounting to NT$436 million.

CPC's Social Welfare Contributions Over the Past 3 Years

(Unit: NT$100 million)



3.5.1 CPC's social influence

Millions of CCs of Passion—Fueled by CPC

CPC recognizes "blood donation as a life-saving act" and has long been organizing blood donation events and supporting local blood donation centers with supplies in an attempt to relieve blood bank shortage. Continuing the noble tradition of alleviating blood shortages across various regions in past years, CPC held the "CPC Million CC Passionate Blood Donation Campaign" again in 2024. A total of 19 units across the Company mobilized, collecting 49,859 bags, amounting to 12,464,750 c.c. of blood, once again surpassing the 10-million-CC milestone.

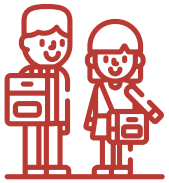
Employee donation attempts – 2024
32,302 Times
2013-2024 Total 154,230

Total bags of blood donated – 2024
49,859 bags
2013-2024 Total 237,647 bags

Total blood donated – 2024
12,464,750 c. c.
2013-2024 Total 59,411,750 c.c.

Spreading Love Through Energy, Igniting Children's Futures

CPC has been working with World Vision Taiwan since 2010 to rally employees into donating NT$1,000 per month to underprivileged children. In 2024, employees donated a sum of NT$2.436 million to help 203 children learn, grow, and live a healthy and happy childhood.



In 2024, assisted 203 children with schooling.

Purchase of domestic agricultural produce; double the effort, double the charity

On April 3, 2024, a strong earthquake in Hualien caused agricultural damage across Taiwan. In response to the limited resources of disadvantaged groups, CPC took concrete action to support Taiwanese farmers by purchasing agricultural products from affected farmers—such as pumpkins and pomelos, which were in peak season—and donating them to social welfare organizations to benefit underprivileged communities. In addition to caring for the disadvantaged, CPC also assisted Taiwanese farmers.

Approximately 3.4 metric tons of agricultural products were sold with CPC's assistance in 2024.

Spreading Love Through Song — Rare 25

CPC used music as a medium to compose a melody of love and care for underprivileged groups. The "2024 Rare 25 United in Song Charity Concert" was organized by the Taiwan Foundation for Rare Disorders, with CPC as a co-organizer. The CPC Choir was invited to perform, hoping to convey love and compassion through beautiful singing, using touching melodies to warm every corner of society. The concert aimed to support rare disease patients battling illness, offering comfort through music and helping them build confidence and a sense of achievement. It also sought to give more people the opportunity to appreciate the wonderful voices of those living with rare diseases.

Donated to organize the concert: donation amount NT$200,000, total number of participants: 800 People

Lighting Up Digitally Disadvantaged Areas – CPC Is With You

CPC actively supports activities of indigenous peoples, and has long been hiring indigenous people above the minimum requirements. By offering employment opportunities, CPC contributes to interracial harmony of the society. In 2024, a total of 42 subsidy (donation) cases were provided for Indigen ous Peoples activities, amounting to NT$2.84 million. The number of Indigenous employees hired was 99, accounting for approximately 0.56% of all employees (including student workers).

2024 subsidy (donation) cases 42

Subsidy (donation) amount NT$2.84 million

Lighting Up Digitally Disadvantaged Areas – CPC Is With You

For many years, CPC has made unscheduled donations of renewed computers to remotely located schools and underprivileged groups out of corporate social responsibilities and its mission to recycle and reuse resources, while at the same time giving financially challenged households the opportunity to learn advanced technology and knowledge. In 2024, CPC donated a total of 465 renewed computers to remotely located junior high schools, elementary schools, local government offices, local health offices, and police precincts for use in education and administrative services.

In 2024, the total number of donated refurbished computers reached 465 units.

"Net Zero Plastic Reduction, Forest Love for the Earth" Sapling Donation Activity

CPC holds a conviction toward "green coexistence" and supports "422 Earth Day" each year by giving away seedlings at 100 direct stations nationwide. Through this gesture, we encourage everyone to join us in planting trees for the mitigation of Earth' s rising temperature. In 2024, CPC continued to donate saplings to the "Taiwan Horticultural Therapy Association" for instructional use and initiated the "Charity Dragon Donation" sapling donation activity for employees at the CPC Building. Charity sales and sapling exchange events were held, and all donated goods and proceeds were given to the "Huashan Social Welfare Foundation" and the "Donghua Toy Paradise Logistics Center," encouraging employee participation and sharing love with society.

61,200 tree seedlings were given away in 2020-2024

More than 20,000 people participated in the event, collecting 10,577 receipts and 53,498 batteries.

3.5.2 Support for Slow Angels

CPC sponsors elite sports and brings Slow Angels to the world

CPC has long sponsored the cheerleading team of the National Miaoli Special School. This team is composed of 20 intellectually disabled students from the junior high and vocational high school divisions in a mixed-age formation. In 2023, the team represented Taiwan for the first time at the Special Olympics division of the World Cheerleading Championship in the United States and won a silver medal. In 2024, they represented the nation for a second time and competed again in the World Cheerleading Championship, ultimately winning the gold medal in the Special Olympics division with a near-flawless performance. This marked the first time in the history of the competition that a non-U.S. team won the championship. CPC helped fuel the dreams of these angels with developmental delays, enabling the children to achieve their dreams.

2024
GOLD MEDAL
in the Paralympics Division of the ICU World Cheerleading Championships

CPC Ignites Hope, Making Dreams Come True for Angels with Developmental Delays

The sequel to CPC' s microfilm series "Fly Slowly" records the long-standing collaboration between the National Miaoli Special Education School and CPC in nurturing children with developmental delays to serve at CPC gas stations. The school's vocational training equips these children with the necessary skills for the workplace, enabling them to smoothly transition into employment. The film depicts how the school's cheerleading team once represented Taiwan in Florida, USA, to compete in the 2023 ICU World Cheerleading Championships. With CPC' s sponsorship supporting elite athletes, the team achieved an excellent result by winning the silver medal in the Special Olympics division of the cheer competition. The 30-second version of "Fly Slowly" has garnered over 1.4 million views on YouTube and won the Silver Award at the "2024 8th Taipei Golden Eagle Microfilm Festival." Through micro movie, CPC presents successful stories of corporate sustainability efforts and conveys sustainability awareness to the general public in a way that is receptive to all.

"Fly Slowly" 30-second version

"Fly Slowly" full version

Slow Angel workers
529 people

Charity gas stations
36 stations

Partnered institutions
10 institutions

3.5.3 Environmentally Friendly Initiatives

Embrace the Ocean, Move Forward Sustainably

CPC has long held mountain and water cleanup events in well-known scenic areas, trails, and beaches across Taiwan and has continued ecological conservation efforts around its plant areas. Since 2020, in line with the Executive Yuan-approved "Salute to the Sea" policy, CPC has established a patrol mechanism and upholds the principles of "scheduled cleanup, immediate cleanup, and emergency cleanup" to continuously maintain the condition of CPC-managed seawalls. Regular coastal cleanups are conducted at Taoyuan Shalun and Kaohsiung Yong'an plants (Taoyuan Guantang and Hualien Qixingtan are self-managed by CPC), along with joint beach cleanup events.

In 2024, CPC held a joint beach cleanup event under the theme "Embrace the Ocean, Move Forward Sustainably." At four locations, more than a thousand participants were led by Chairman Shun-Chin Lee, President Chen-Jen Fang, Vice President Po-Tung Lo, and Spokesperson Ke-Ru Lin, showcasing CPC' s commitment to marine conservation and fulfilling its environmental impact assessment promise to harmonize the construction of the third LNG terminal with the environment. Each region featured unique on-site activities. In the southern region at the Yongan site in Kaohsiung, the Yongan District Farmers' and Fishermen's Association was invited to set up a booth promoting locally farmed grouper raised using Diamond Water from the Yongan Plant. In the northern region at the Guantang site in Taoyuan, local development association environmental education experts were invited to lead ecological tours. In the eastern region at the Hualien site, a booth promoted CUP&GO drive-thru coffee. On the outlying island of Penghu, fun and collaborative activities were introduced. Through concrete action, CPC hopes to demonstrate its commitment to environmental protection and love for the earth, enhance interaction and communication among employees, their families, and local residents, and awaken public awareness of marine conservation to jointly protect our beautiful homeland.

All company employees, friends, and family participated in the joint beach cleanup, with approximately 1,032 people attending.

Coastal maintenance and joint beach cleanup removed a total of 61,291 kilograms of marine waste.

From 2019 to 2024, more than 7,354 people participated.

Coastline in undeveloped areas of Guantang

At a frequency of 3 to 5 times a month, CPC cleared 53,800 kg of waste in 2024. This coastal area is subject to quarterly review based on Taoyuan City Government' s Sustainable Coastline KPI, and all items of the "Coastal cleanliness indicator" had met requirements.

Coastline in Yongan Section, Yongan District

In addition to conducting regular coastal maintenance, the Yongan Plant has, since 2017, adopted a section of the Yongan District coastline. At least twice a month, staff are assigned to clean and maintain the adopted area, and the results are recorded on the EcoLife "Clean Home, Green Life" website. In 2024, 6,135 kilograms of waste were removed, with approximately 720 staff participating throughout the year.

Taoyuan City, Shalun Section 5–6

Since 2024, the Taoyuan Refinery has adopted sections 5–6 of the Shalun coastline and its adjacent roads in Dayuan District, Taoyuan, covering a total length of approximately 2.2 km. Regular cleanups are conducted once or twice a month. In 2024, the Taoyuan Plant participated in the "Taoyuan-Hsinchu-Miaoli Joint Beach Cleanup" event, removing approximately 450 kilograms of waste from its adopted area.

Coastline from Hualien Qixingtan to Deyan Fish Farm

Adopted the coastline from Hualien Qixingtan to Deyan Fishing Ground, dispatching staff to clean and maintain the area at least once a month. In 2024, over 172 participants were mobilized, and 196 kilograms of general waste were removed.

For more information, please refer to the"CPC Monthly".

3.5.4 Lifelong Energy Education

The petrochemical industry is vital to foundational industries and national security, serving as the mother of industries. In response to the critical issue of achieving net-zero emissions, with the pressure of transformation imminent, and an urgent need for talent in the petrochemical sector, CPC has long collaborated with schools to establish industry–academic training programs. These efforts build bridges between industry and academia, cultivate talent proficient in petrochemical theory, energy foundations, and practical workforce capabilities. At the same time, CPC recruits outstanding students, setting a model for "retaining talent locally," "nurturing talent for industries," and "creating local job opportunities" — a model that inspires other state-owned enterprises to follow suit, driving a positive trend in industry–academic cooperation. With a commitment to making energy education a lifelong endeavor, the Petroleum Exploration Hall provides environmental education courses and exhibition activities tailored for all ages, narrowing the gap between the public and energy. In addition to planting the ideas of sustainability and environmental protection deeply in people's hearts, these efforts also deepen public identification with CPC's brand image.

Energy education through CPC Petroleum Discovery Museum

CPC uses the Petroleum Discovery Museum as a corporate showcase and as a bridge between the company and society. Through digital interactive multimedia and engaging interactive guided tours, complex petroleum knowledge is transformed into accessible popular science, creating an energy education space that combines enjoyable learning with in-depth exploration. Through its energy and environmental courses and hands-on experiences, CPC continues to raise environmental awareness and instill related values among people of all ages. In 2024, the Petroleum Exploration Hall once again responded to the National Science and Technology Council's "Kiss Science" initiative by partnering with the University of Taipei to develop a table game and mobile app themed "Hydrogen Energy and Geothermal Energy" (titled "Oi Oil Battle"), allowing participants to shift from being mere recipients of knowledge to active "science communicators" — thereby enhancing the public's understanding of popular science and making a concerted contribution to energy education in Taiwan.

In 2024, a total of 32,900 visits were recorded, with a cumulative total of 150,000 visits from 2019 to 2024, receiving widespread public acclaim.

Please see the "Petroleum Communications Monthly" for more information

CPC Loving the Earth, Moving Toward Sustainability

Since 2013, CPC has been organizing the "Green Giant Dragon Summer Camp" every summer, promoting diverse environmental, cultural, and energy education. By 2019, more than 22,000 elementary school students had participated in the summer camp. Although suspended due to the COVID-19 pandemic, the program resumed in 2024 with an upgraded version called "Green Giant Dragon 2.0 – Green Giant Dragon Eco-Excursion," focusing on four core values: "Ecological Care," "Sustainable Travel," "Local Identity," and "Support for the Disadvantaged." This program invites disadvantaged elementary school students to join the Green Giant Dragon in exploring the precious ecological resources of the Taoyuan coastline and the Guanyin Algal Reef.
Through guided tours and hands-on ecological exploration along the Taoyuan coastline, the Green Giant Dragon Eco-Excursion creates an immersive learning environment for children. By allowing them to experience nature through sight, sound, smell, taste, and touch, it aims to inspire responsible environmental action. The program operates in cooperation with local communities, channeling economic benefits back to Yongxing Community in Taoyuan to help sustain local conservation efforts and support the community's industries.

Held ten sessions of the Green Giant Dragon Eco-Excursion
A total of 242 disadvantaged children and accompanying staff participated.

Please see the "Petroleum Communications Monthly" for more information

Chemical engineering science course through industry–academia collaboration

CPC supports the government's policies on industry–academia collaboration and contributes its expertise to training entry-level operators for the petrochemical industry and creating employment opportunities for local young adults. Since the 2021 academic year, CPC has been working with Kaohsiung Municipal Siaogang Senior High School to host chemical engineering science courses through industry–academia collaboration. These chemical engineering science courses have been organized to cater to equality in students' right to education, and do not discriminate against any family-related factors. A scholarship program has also been set up to subsidize underprivileged students for NT$2,000 per student, per month. Additionally, the collaboration program pays NT$6,000 in rewards every semester to each of the top 10 students with the highest 5-subject average score as a form of encouragement. Students of the collaboration program are given a certificate of completion upon graduation, and are offered the opportunity to take part in CPC's open recruitment, which recruits up to 10 candidates based on the assessment results.
CPC's chemical engineering science courses industry–academia cooperation project aims to raise pre-employment training quality and build long-term talent pipelines. By fostering alliances between state-owned enterprises and the education sector, the project strengthens industry–academic cooperation, cultivates national industrial talent, promotes closer connections between CPC and local communities, and serves as a model for CPC's commitment to supporting local education and community development — achieving a win–win–win outcome.

Taipower-CPC Electrical and Mechanical Engineering Class Industry–Academia Cooperation Project

CPC, Taipower, and National Kangshan Agricultural and Industrial Vocational Senior High School have collaborated to establish the "Taipower-CPC Electrical and Mechanical Engineering Class" in 2024, offering one class with 28 students (18 for Taipower, 10 for CPC). The industry-academia collaboration program will continue in 2025. CPC provides scholarships for five students each semester, at NT$6,000 per person. Upon graduation, these students can participate in the open recruitment process for CPC new hires under the neighborhood program, with the principle of admitting five candidates. CPC is committed to forming alliances with the education sector, strengthening industry-academia cooperation, cultivating national industrial talent, and promoting local prosperity.

"Sustainable Taiwan Creative Lesson Plans" Identifies Education Pioneers

For nine consecutive years, CPC has responded to CommonWealth Magazine' s "Sustainable Taiwan Creative Lesson Plans" initiative (originally called "Smiling Taiwan Creative Lesson Plans" and renamed in 2024), inviting teachers across Taiwan to utilize local resources, highlight local culture, and connect with an international perspective. The initiative aims to integrate the United Nations Sustainable Development Goals (SDGs) into teaching, write lesson plans that foster global citizenship, and build a solid foundation for local sustainable education. Through the "CPC Green Energy Education Award," a total of 17 winners from elementary, junior high, and senior high/vocational school levels have been selected, planting the seeds of energy education.

Column: Social impact assessment of the industry–academia collaboration with Linyuan Senior High School

Highlight

Project SROI was assessed at NT$3.36, meaning that every NT$1 that CPC invests in would generate NT$3.36 of social return

Outcome

- 5 terms to date since 2014
- Trained 395 students
- Increased admission rate of Linyuan Senior High School by 7 times
- 80% acceptance rate by national universities
- 85 served at CPC upon graduation

In 2014, CPC made an attempt that was unprecedented among state-owned enterprises and signed an industry–academia collaboration agreement with Linyuan Senior High School in Kaohsiung City for the introduction of "chemical engineering science course," which is intended to train entry-level operators for the petrochemical industry and offer training for specialist skills. CPC provides living subsidies to top-performing students from low-income households every school term, and offers them flexible options to seek employment and higher education by guaranteeing employment in the future. With the right incentives, CPC hopes to inspire students' thirst for knowledge, cater to their career paths, and keep top-performing students locally at Linyuan Senior High School.

3.5.5 Sports promotion

CPC sponsors Taiwan's elite athletes

Sports not only reflect a nation' s soft power but also relate to the health and quality of life of its people. CPC is dedicated to discovering and supporting elite athletes, extending its support to sports teams from both public and private schools across the country. It also provides grants for athletes with disabilities to bravely challenge themselves, conveying the belief that "sports are a right everyone can enjoy" and ensuring equal sporting opportunities for people with disabilities. Considering the lack of resources in rural areas, CPC also expands its support to sports teams in remote areas, bringing care and opportunities for children across Taiwan to find self-confidence and a sense of achievement.

Moreover, CPC actively sponsors major sports events in Taiwan, promoting national participation in sports. Within the company, CPC organizes regular sports events and encourages the establishment of sports clubs to foster a culture of fitness and safeguard employee health. In local communities, CPC promotes participation in sports by supporting neighborhood sports tournaments, strengthening connections with local residents, and fulfilling its corporate social responsibility through diverse and meaningful action.

CPC Concrete Practices in Promoting Sports Development

- Support for exercising habits
  Annual sports sponsorship amount: NT$46.8 million
- Sponsorship for prominent local sport events
  Supported 547 sports events or competitions, with a total sponsorship of nearly NT$25 million
- Rewarding elite athletesAwarded grants to 31 athletes and 16 school sports teams, with total sponsorship of NT$21.8 million

CPC has received the Sports Activist Award – Gold Medal for the seventh consecutive year, and since the award' s establishment, CPC has received a total of ten Gold Medal Awards in the sponsorship category, as well as one Long-term Sponsorship Award. CPC hopes that through supporting athletes, the "circulation of kindness" will continue to flourish, allowing athletes to pass down their sports and life experience beyond training and competition, keeping Taiwan's legendary sports stories alive.

CPC wins Sports Activist Award – Gold for 7 consecutive years

A total of 10 Gold Medal Awards in the sponsorship category and 1 Long-term Sponsorship Award

Supporting elite athletes in the Paris Olympics

In line with the national focus on sports development, CPC has identified and supported elite athletes with great potential, and has been recognized multiple times with the "Sports Activist Award" by the Sports Administration, Ministry of Education. In recent years, elite athletes sponsored by CPC have achieved outstanding results, including the Chinese Taipei team' s victory at the WBSC Premier12 Baseball Tournament. Among the team, six players, including Yu-min Lin, came from CPC' s long-term sponsored Kainan University baseball team. In addition, seven elite athletes sponsored by CPC, including Chia-hung Tang and Nien-chin Chen, represented Taiwan in the Paris Olympic Games. For these athletes, earning the right to compete on the world' s highest sporting stage is a source of pride for Taiwan. Their fighting spirit in sports is deeply admired and serves as an example for all. CPC applauds their performance and thanks them for bringing glory to the country, making CPC proud as well.

Appendix 1: GRI Index

Statement of usage	CPC follows the GRI Standards for the disclosure of information dated January 1 to December 31, 2024.
Application of GRI 1	GRI 1: Foundation 2021
Applicable GRI Industry Standards	GRI 11 Oil and Gas Sector (2021)

GRI Standards	Serial No.	Disclosures	Corresponding Section	Page	Remarks
GRI 2: General Disclosures 2021	**The organization and its reporting practices**				
	2-1	Organizational details	1.1.1 Introduction to CPC	28	
	2-2	Entities included in the organization's sustainability reporting	1.1 Our T-CPC	28	
	2-3	Reporting period, frequency and contact point	Introduction_Scope of Report and Reporting Period; Contact	03、04	
	2-4	Restatements of information	Introduction_Scope of Report and Reporting Period	03	
	2-5	External Validation and Assurance	Introduction_Report Profile	03	
	Activities and workers				
	2-6	Activities, value chain and other business relationships	1.1.1 Introduction to CPC	28	
			1.2 Sustainable supply chain	38	
			1.5 Services and Innovation	57	
	2-7	Employees	3.2.1 Human resources management	122	
	2-8	Workers who are not employees	3.2.1 Human resources management	122	
	Governance				
	2-9	Governance structure and composition	1.1.2 Directors overview	31	
	2-10	Nomination and selection of the highest governance body	1.1.2 Directors overview	31	
	2-11	Chair of the highest governance body	1.1.1 Introduction to CPC	28	
	2-12	Role of the highest governance body in overseeing the management of impact	1.1.4 Sustainable governance	37	
			1.4.2 Anticorruption	52	
	2-13	Delegation of responsibility for managing impacts	Introduction_Material topics of sustainability for the year	11	
			1.1.4 Sustainable governance	37	
	2-14	Role of the highest governance body in sustainability reporting	1.1.4 Sustainable governance	37	
	2-15	Conflicts of interest	1.1.2 Directors overview	31	
	2-16	Communication of critical concerns	1.3.3 Response to significant events	46	
	2-17	Collective knowledge of the highest governance body	1.1.2 Directors overview	31	
	2-18	Evaluation of the performance of the highest governance body	1.1.2 Directors overview	31	
	2-19	Remuneration policies	1.1.2 Directors overview	31	
	2-20	Process to determine remuneration	1.1.2 Directors overview	31	
	2-21	Annual total compensation ratio	3.2.2 Employee salary and benefits	125	
	Strategy, policies and practices				
	2-22	Statement on sustainable development strategy	Introduction_CPC's sustainability roadmap	09	
	2-23	Policy Commitment	1.1.4 Sustainable governance	37	
	2-24	Embedding policy commitments	1.1.4 Sustainable governance	37	

GRI Standards	Serial No.	Disclosures	Corresponding Section	Page	Remarks
GRI 2: General Disclosures 2021	2-25	Processes to remediate negative impacts	Introduction_Stakeholder communication	15	
			1.4.3 Whistleblowing system and whistleblower protection	54	
	2-26	Mechanisms for seeking advice and raising concerns	1.4.3 Whistleblowing system and whistleblower protection	54	
	2-27	Compliance	1.4.1 Compliance	51	
			2.3.3 Discharge and management of effluents and waste	94	
			2.3.5 Air Pollution Management and Environmental Regulatory Compliance	101	
			3.3.2 Employee safety protection	132	
			Appendix 6: Environmental Information	157	
	2-28	Membership of associations	1.5.4 External Cooperation	64	
	Stakeholder engagement				
	2-29		Introduction_Stakeholder communication	15	
	2-30		3.4.2 Collective Bargaining	138	

GRI 11 Oil and Gas Sector 2021

GRI Standards	Serial No.	Disclosures	Corresponding Section	Page	Remarks
GRI 3: Material Topics 2021	3-1	Process to determine material topics	Introduction_Material topics of sustainability for the year	11	
	3-2	List of material topics			
Non-material topic: Energy and Greenhouse Gases					
GRI 11.1 GHG emissions	11.1.2	302-1: 2016 Energy consumption within the organization	2.3.1 Use and management of energy	91	
	11.1.3	302-2: 2016 Energy consumption outside of the organization		Information unavailable	The 2024 data on external energy consumption is expected to be unavailable prior to the publication of the report and is therefore omitted.
	11.1.4	302-3: 2016 Energy intensity	2.3.1 Use and management of energy	91	
	11.1.5	305-1: 2016 Direct (Scope 1) GHG emissions	2.1.4 Climate change goals, indicators, and management performance	79	
	11.1.6	305-2: 2016 Energy indirect (Scope 2) GHG emissions	2.1.4 Climate change goals, indicators, and management performance	79	
	11.1.7	305-3: 2016 Other indirect (Scope 3) GHG emissions	2.1.4 Climate change goals, indicators, and management performance	Information unavailable	The 2024 data on external energy consumption is expected to be unavailable prior to the publication of the report and is therefore omitted.
	11.1.8	305-4: 2016 GHG emission intensity	2.1.3 Analysis of climate change risk and opportunity scenarios	72	
Non-material topic: Climate change strategies					
GRI 11.2 Climate adaptation, resilience, and transition	11.2.2	201-2: 2016 Financial implications and other risks and opportunities due to climate change	2.1.2 Risks and opportunities of climate change	67	
	11.2.3	305-5: 2016 Reduction of GHG emissions	2.1.4 Climate change goals, indicators, and management performance	79	

GRI Standards	Serial No.	Disclosures	Corresponding Section	Page	Remarks
Environmental pollution prevention (Material Topic 1)					
GRI 3-3☆	11.3.1	Management of material topics	Introduction_Material topics of sustainability for the year	11	
GRI 11.3 Air emissions	11.3.2	305-7: 2016 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	2.3.5 Air Pollution Management and Environmental Regulatory Compliance	101	
	11.3.3	416-1: 2016 Assessment of the health and safety impacts of product and service categories	1.5.1 No. 1 in Quality	57	
Non-material topic: Ecological and environmental preservation					
GRI 11.4 Biodiversity	11.4.2	304-1: 2016 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	2.4 Biodiversity	103	
	11.4.3	304-2: 2016 Significant impacts of activities, products, and services in biodiversity	2.4 Biodiversity	103	
	11.4.4	304-3: 2016 Habitats protected or restored	2.4 Biodiversity	103	
	11.4.5	304-4: 2016 IUCN Red List species and national conservation list species with habitats in areas affected by operations	2.4 Biodiversity	103	
Management of waste and hazardous substances (Material Topic 4)					
GRI 3-3☆	11.5.1	Management of material topics	Introduction_Material topics of sustainability for the year	11	
GRI 11.5 Waste	11.5.2	306-1: 2020 Waste generation and significant waste-related impacts	2.3.3 Discharge and management of effluents and waste	94	
	11.5.3	306-2: 2020 Management of significant waste-related impacts	2.3.3 Discharge and management of effluents and waste	94	
	11.5.4	306-3: 2020 Waste generated	2.3.3 Discharge and management of effluents and waste	94	
	11.5.5	306-4: 2020 Waste diverted from disposal	2.3.3 Discharge and management of effluents and waste	94	
	11.5.6	306-5: 2020 Waste directed to disposal	2.3.3 Discharge and management of effluents and waste	94	
GRI 11.6 Water and effluents	11.6.2	303-1: 2018 Interactions with water as a shared resource	2.3.3 Discharge and management of effluents and waste	94	
	11.6.3	303-2: 2018 Management of water discharge-related impacts	2.3.3 Discharge and management of effluents and waste	94	
	11.6.4	303-3: 2018 Water withdrawal	2.3.2 Water consumption and management	92	
	11.6.5	303-4: 2018 Water discharge	2.3.2 Water consumption and management	92	
	11.6.6	303-5: 2018 Water consumption	2.3.2 Water consumption and management	92	
Business continuity management (Material topic 9)					
GRI 3-3☆	11.7.1	Management of material topics	Introduction_Material topics of sustainability for the year	11	
GRI 11.7 Closure and rehabilitation	11.7.2	402-1: 2016 Minimum notice periods regarding operational changes	1.3.4 Risk control	47	
	11.7.3	404-2: 2016 Programs for upgrading employee skills and transition assistance programs	3.2.3 Talent development	126	
GRI 11.8 Asset integrity and critical incident management	11.8.2	306-3: 2020 Significant spills	2.3.3 Discharge and management of effluents and waste	94	

GRI Standards	Serial No.	Disclosures	Corresponding Section	Page	Remarks
Workplace Health and Safety (Material Topic 8)					
GRI 3-3☆	**11.9.1**	Management of material topics	Introduction_Material topics of sustainability for the year	11	
GRI 11.9 Occupational health and safety☆	**11.9.2**	403-1: 2018 Occupational health and safety management system	3.3.1 Workplace safety management	130	
	11.9.3	403-2: 2018 Hazard identification, risk assessment, and incident investigation	3.3.1 Workplace safety management	130	
	11.9.4	403-3: 2018 Occupational health services	3.3.3 Workplace health protection	135	
	11.9.5	403-4: 2018 Worker participation, consultation, and communication on occupational health and safety	3.4.1 Employee communication channels	137	
	11.9.6	403-5: 2018 Worker training on occupational health and safety	3.3.1 Workplace safety management	130	
			3.3.2 Employee safety protection	132	
	11.9.7	403-6: 2018 Promotion of worker health	3.3.3 Workplace health protection	135	
	11.9.8	403-7: 2018 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	1.2.4 Sustainable Supply Chain Management	43	
	11.9.9	403-8: 2018 Workers covered by an occupational health and safety management system	3.3.1 Workplace safety management	130	
	11.9.10	403-9: 2018 Work-related injuries	3.3.2 Employee safety protection	132	
	11.9.11	403-10: 2018 Work-related ill health	3.3.2 Employee safety protection	132	
Issues of non-material topics: employee compensation and protection, supply chain management					
GRI 11.10 Employment practices	**11.10.2**	401-1: 2016 New employee hires and employee turnover	3.2.1 Human resources management	122	
	11.10.3	401-2: 2016 Benefits provided to full-time employees that are not provided to temporary or part-time employees	3.2.2 Employee salary and benefits	125	
	11.10.4	401-3: 2016 Parental leave	3.1.2 Diverse and inclusive workplace	120	
	11.10.5	402-1: 2016 Minimum notice periods regarding operational changes	3.4.2 Collective Bargaining	138	
	11.10.6	404-1: 2016 Average hours of training per year per employee	3.2.3 Talent development	126	
	11.10.7	404-2: 2016 Programs for upgrading employee skills and transition assistance programs	3.2.3 Talent development	126	
			3.3.3 Workplace health protection	135	
	11.10.8	414-1: 2016 New suppliers that were screened using social criteria	1.2.2 Supply chain sustainability assessment	39	
	11.10.9	414-2: 2016 Negative social impacts in the supply chain and actions taken	1.2.2 Supply chain sustainability assessment	39	
Issues of non-material topics: employee human rights protection, diverse and inclusive workplace, anti-competitive behaviors, local community					
GRI 11.11 Non-discrimination and equal opportunity	**11.11.2**	202-2: 2016 Proportion of senior management hired from the local community	3.2.1 Human resources management	122	
	11.11.3	401-3: 2016 Parental leave	3.1.2 Diverse and inclusive workplace	120	
	11.11.4	404-1: 2016 Average hours of training per year per employee	3.2.3 Talent development	126	
	11.11.5	405-1: 2016 Diversity of governance bodies and employees	3.1.2 Diverse and inclusive workplace	120	
	11.11.6	405-2: 2016 Ratio of basic salary and remuneration of women to men	3.1.2 Diverse and inclusive workplace	120	
	11.11.7	406-1: 2016 Incidents of discrimination and corrective actions taken	3.1.1 Enforcement of human rights policy	118	
GRI 11.12 Forced labor and modern slavery	**11.12.2**	GRI 409-1: 2016 Forced or Compulsory Labor	3.1.1 Enforcement of human rights policy	118	
	11.12.3	GRI 414-1: 2016 Supplier Social Assessment	1.2.2 Supply chain sustainability assessment	39	
GRI 11.13 Freedom of association and collective bargaining	**11.13.2**	GRI 407-1: 2016 Freedom of Association and Collective Bargaining	Introduction_Stakeholder communication	11	
			3.4.2 Collective Bargaining	138	

GRI Standards	Serial No.	Disclosures	Corresponding Section	Page	Remarks
Issues of non-material topics: employee human rights protection, diverse and inclusive workplace, anti-competitive behaviors, local community					
GRI 11.14 Economic impacts	**11.14.2**	201-1: 2016 Direct economic value generated and distributed	1.3.1 Financial performance	44	
	11.14.3	202-2: 2016 Proportion of senior management hired from the local community	3.2.1 Human resources management	122	
	11.14.4	203-1: 2016 Infrastructure investments and services supported	1.5.3 No. 1 in contribution	60	
			3.5 Social inclusion	139	
	11.14.5	203-2: 2016 Significant indirect economic impacts	1.5.3 No. 1 in contribution	143	
			3.5 Social inclusion	139	
	11.14.6	204-1: 2016 Proportion of spending on local suppliers	1.2.3 Sustainable purchase	41	
GRI 11.15 Local communities	**11.15.2**	413-1: 2016 Operations with local community engagement, impact assessments, and development programs	1.3.4 Risk control	47	
	11.15.3	413-2: 2016 Operations with significant actual and potential negative impacts on local communities	1.3.4 Risk control	47	
GRI 11.16 Land and resource rights	**11.16.2**	Operating sites that require involuntary relocation	-		No such occurrence in 2024
GRI 11.17 Rights of indigenous peoples	**11.17.2**	411-1: 2016 Incidents of violations involving rights of indigenous peoples	3.1.2 Diverse and inclusive workplace	120	
GRI 11.18 Conflict and security	**11.18.2**	410-1: 2016 Security personnel trained in human rights policies or procedures	3.3.1 Workplace safety management	131	
GRI 11.19 Anti-competitive behavior	**11.19.2**	206-1: 2016 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	1.4.1 Compliance	51	
Anti-corruption measures (Material Topic #7)					
GRI 3-3☆	**11.20.1**	Management of material topics	Introduction_Material topics of sustainability for the year	11	
GRI 11.20 Anti-corruption☆	**11.20.2**	205-1: 2016 Operations assessed for risks related to corruption	1.4.2 Anticorruption	52	
	11.20.3	205-2: 2016 Communication and training about anti-corruption policies and procedures	1.4.2 Anticorruption	52	
			1.2.2 Supply chain sustainability assessment	39	
			1.1.4 Sustainable governance	37	
	11.20.4	205-3: 2016 Confirmed incidents of corruption and actions taken	1.4.2 Anticorruption	52	
Issues of non-material topics: management of payments to the government					
GRI 11.21 Payments to governments	**11.21.2**	201-1: 2016 Direct economic value generated and distributed	1.3.1 Financial performance	44	
	11.21.3	201-4: 2016 Financial assistance received from government	1.3.1 Financial performance	44	
	11.21.4	207-1: 2019 Approach to tax	1.3.2 Tax governance	45	
	11.21.5	207-2: 2019 Tax governance, control, and risk management	1.3.2 Tax governance	45	
	11.21.6	207-3: 2019 Stakeholder engagement and management of concerns related to tax	1.3.2 Tax governance	45	
	11.21.7	207-4: 2019 Country-by-country reporting	1.3.2 Tax governance	45	
GRI 11.22 Public policy	**11.22.2**	415-1: 2016 Political contributions	1.3.1 Financial performance	44	

GRI Standards	Serial No.	Disclosures	Corresponding Section	Page	Remarks
Compliance with environmental laws (Material Topic 2)					
GRI 3-3☆	-	Management of material topics	Introduction_Material topics of sustainability for the year	11	
Sector-specific issue	-		2.3.5 Air Pollution Management and Environmental Regulatory Compliance	92	
Oil industry transformation (Material Topic 3)					
GRI 3-3☆	-	Management of material topics	Introduction_Material topics of sustainability for the year	11	
Sector-specific issue	-		1.5.3 No. 1 in contribution	60	
Compliance (Material Topic #5)					
GRI 3-3☆	-	Management of material topics	Introduction_Material topics of sustainability for the year	11	
Sector-specific issue	-		1.4.1 Compliance	51	
Cybersecurity (Material Topic 6)					
GRI 3-3☆	-	Management of material topics	Introduction_Material topics of sustainability for the year	11	
Sector-specific issue	-		1.5.2 No. 1 in service	57	
Corporate governance (Material Topic #10)					
GRI 3-3☆	-	Management of material topics	Introduction_Material topics of sustainability for the year	11	
Sector-specific issue	-		1.1.3 Corporate governance	34	

Appendix 2: TCFD Index

Aspect	Recommended disclosures	Corresponding chapter in the report	Page
Governance	Describe the board's oversight of climate-related risks and opportunities	2.1.1 Climate change governance	66
	Describe management's role in assessing and managing climate-related risks and opportunities	2.1.1 Climate change governance	66
Strategies	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	2.1.2 Risks and opportunities of climate change	67
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	2.1.2 Risks and opportunities of climate change	67
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios	2.1.3 Analysis of climate change risk scenarios	72
Risk management	Describe the organization's processes for identifying and assessing climate-related risks	2.1.2 Risks and opportunities of climate change	67
	Describe the organization's processes for managing climate-related risks	2.1.2 Risks and opportunities of climate change	67
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	2.1.2 Risks and opportunities of climate change	67
Metrics and targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	2.1.4 Climate change goals, indicators, and management performance	79
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks	2.1.4 Climate change goals, indicators, and management performance	79
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	2.1.4 Climate change goals, indicators, and management performance	79

Appendix 3: SASB Index

SASB Code	Accounting metric	Unit of measurement	Response for metric	Description	Page
EM-RM-110a.1	Gross global Scope 1 emissions, percentage covered under emissions limiting regulations	tCO_2e, %	2022: 97.01%; 2023: 96.5%; 2024: 97.54%		
EM-RM-110a.2	Short-, medium-. and long-term Scope 1 reduction targets and strategies, and description of performance analysis		Corresponds to the following chapters: 2.1.4Climate change goals, indicators, and management performance		
EM-RM-120a.1	Air emissions of NOx, SOx, PM_{10}, H_2S, and VOCs	Tonne	Year / 2022 / 2023 / 2024 NOx: 2,966.6 / 2,642.0 / 2,774.4 SOx: 1,017.7 / 907.6 / 834.8 VOC: 1,415.8 / 1,319.5 / 1,290.3 PM_{10}: - / - / - H_2S: - / - / -	There is no data on PM_{10} and H_2S because reporting is not required; the Company is currently evaluating the need to collect related data for the future	
EM-RM-120a.2	Number of refineries in or near areas of dense population	Quantity (factories)	CPC has 2 oil refineries and 1 petrochemical plat located in densely populated areas (where population of the local town is more than 50,000)	The Taoyuan Refinery is located in Guishan District, Taoyuan City, with a nearby population of approximately 186,000 people; the Dalin Refinery is located in Xiaogang District, Kaohsiung City, with a nearby population of approximately 154,800 people; the Linyuan Petrochemical Plant is located in Linyuan District, Kaohsiung City, with a nearby population of approximately 68,000 people.	
EM-RM-140a.1	Total fresh water withdrawn, water recycled, and water used in regions with high or extremely high baseline water stress	m^3	The total water withdrawal in 2024 was 30,918,886 m^3. Note: This is the total amount of surface water, groundwater, and reclaimed water withdrawn by the two LNG receiving terminals and the three refining and petrochemical plants. The total amount of recycled water in 2024 was 1,621,942,722 m^3. Note: This is the total amount of rainwater, process wastewater, and other recycled water from the two LNG receiving terminals and the three refining and petrochemical plants. Water used in regions with high or extremely high baseline water stress in 2024: 0 m^3	For details, refer to chapter 2.3.2 Water consumption and management	93
EM-RM-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Case count	CPC received 5 penalty from the authority for violation against the Water Pollution Control Act in 2024.	For details, refer to chapter 2.3.3 Discharge and management of effluents and waste	95
EM-RM-150a.1	Amount of hazardous waste generated, percentage recycled	MT/ Percentage	Total volume of hazardous waste: 33,262.46; Percentage of given category relative to total waste: 25.68%; Percentage recycled: 0 %	For details, refer to chapter 2.3.3 Discharge and management of effluents and waste	97

SASB Code	Accounting metric	Unit of measurement	Response for metric			Description	Page
EM-RM-150a.2	Number of underground storage tanks (USTs), number of USTs requiring cleanup, and percentage of UST assurance funds	Quantity (factories)	No. of USTs	No. of USTs requiring cleanup	Percentage of UST assurance funds	UST assurance funds are introduced under U.S. laws, which do not apply to CPC	
			2,963 stations	0	-		
EM-RM-320a.1	Total recordable incident rate (TRIR), fatality rate, and near miss frequency rate (NMFR) for full-time employees and contract employees	Percentage	Total Recordable Incident Rate (TRIR)	Fatality rate	Near miss frequency rate (NMFR)	TRIR = (Total accidents x 200,000)/total work hours; Fatality rate = (Total deaths x 200,000)/total work hours; NMFR = (Number of near misses x 200,000)/total work hours;	
			0.023	0	0.996		
EM-RM-320a.2	Description of practices undertaken to evaluate, supervise, and reduce workers' exposure to long-term health risks	-	1.CPC continues to enforce ISO 45001 certification; it adopts the PDCA model and creates a systematic occupational safety and health management framework to reduce chances of accidents. 2.CPC has introduced a series of work safety and health training to improve employees' knowledge and skills on work safety and health, and encourages employees to take exams for occupational safety and health certifications as part of their professional capacity. 3.Emergency response drills are held on a regular basis to provide employees with relevant information and training on emergencies; all necessary equipment have been made available.			For details, refer to chapter 3.3.2 Employee safety protection	132
EM-RM-410a.1	Percentage of Renewable Volume Obligation (RVO) met through: production of renewable fuels, purchase of separated renewable identification numbers (RIN)	-	CPC only develops renewable fuel and is not involved in the production or sale; for this reason, it has no RVO and is not required to conduct market survey			For details, refer to chapter 2.2 Low-carbon transformation and circular economy	82
EM-RM-410a.2	Total addressable market and share of market for advanced biofuels and associated infrastructure					For details, refer to chapter 2.2 Low-carbon transformation and circular economy	82
EM-RM-520a.1	Total amount of monetary losses as a result of legal proceeding associated with price fixing or price manipulation	Amount	CPC encountered no lawsuit in 2024 that involved manipulation of oil/gas price, and no monetary loss was reported.			For details, refer to chapter 1.4.1 Compliance	51
EM-RM-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Case count	In 2024, there were a total of 18 incidents of fines resulting from violations of air pollution prevention regulations, with total fines amounting to NT$22.435 million. Corresponding hours of environmental education courses were also imposed. Immediate response measures and corresponding improvement plans were implemented for all violations at the time of occurrence.			Relevant content can be found in Section 2.3.5 Air Pollution Management and Environmental Regulatory Compliance and Appendix 5：Environmental Information	102 157
EM-RM-540a.1	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	Percentage	Tier 1 PSE：0.017			(Total Tier 1 PSEs / total work hours) ×200,000 =(3/ 35,150,827) ×200,000	
			Tier 2 PSE：0.006			(Total Tier 2 PSEs / total work hours) ×200,000 =(1/ 35,150,827) ×200,000	

SASB Code	Accounting metric	Unit of measurement	Response for metric	Description	Page
EM-RM-540a.2	Challenges to Safety Systems indicator rate (Tier 3)	Percentage	0.44	(Total Tier 3 PSEs / Total Work Hours) × 200,000 = (78 / 35,150,827) × 200,000 ※In 2024, there were a total of 175 near-miss incidents, of which 78 were process-related near-miss events.	
EM-RM-540a.3	Management system for identifying and mitigating catastrophic risks and back-end risks	Percentage	CPC places great emphasis in developing employees' risk management and crisis handling awareness as part of its efforts to implement proper risk management policies and crisis management systems. This increased awareness is believed to enable more efficient risk management and crisis handling and contribute to business sustainability, which is why every internal unit is bound to follow the risk management system for risk identification, risk analysis, risk assessment, risk handling, communication, negotiation, supervision, and review. Risks are also assessed on the organization level with proper actions taken in response.	For details, refer to chapters 1.3.4 Climate change management and 2.1.1 Mitigation and adaptation to climate change	47 66
EM-RM-000.A	Refining throughput of crude oil and other feedstocks	(10,000kL)	Oil products total sales (including petrochemical products and multilateral trade):28.83 million		
		(100mn m^3)	kLSale of natural gas products:28.049 billion cubic meters		
EM-RM-000.B	Refining operating capacity	(10,000kL)	21.62 million kL		

Appendix 4: Sustainability Disclosure Indicators – Oil and Gas Sector

Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies – Attachment 1-7

No.	Indicator	Indicator category	Unit	Disclosure
I.	Number of refineries in or near areas of dense population	Quantitative	Quantity	For details, refer to EM-RM-120a.2 of the SASB Index
II.	Volume of water withdrawn and consumed	Quantitative	Kilo cubic meters(m^3)	For details, refer to EM-RM-140a.1 of the SASB Index
III.	Weight of hazardous waste produced and percentage recycled	Quantitative	Tonnes (t); percentage (%)	For details, refer to 2.5.3 Discharge and management of effluents and waste and EM-RM-150a.1 of the SASB Index
IV.	Number and percentage of people suffering occupational hazards	Quantitative	Percentage (%); count	For details, refer to EM-RM-320a.1 of the SASB Index
V.	Risk management policy for major incidents	Qualitative description	Not applicable	For details, refer to 1.3.3 Response to significant events and 1.3.4 Risk control
VI.	Production capacity by main product categories	Quantitative	Varies by product type	For details, refer to EM-RM-000.A and EM-RM-000.B of the SASB Index

Appendix 5: Environmental Information

Environmental protection expenses

(Unit: NTD thousands)

Environmental protection expenses	2022	2023	2024
Company operating cost[Note1]	3,500,157	3,032,895	3,338,140
Supplier and customer cost[Note2]	28,613	25,928	92,810
Management activity cost[Note3]	245,722	262,692	281,566
R&D cost[Note4]	85,258	122,164	166,486
Social activity [Note5]	216,283	196,474	124,604
Loss and compensation cost[Note6]	2,958	56,492	69,777
Fees and taxes[Note7]	4,706,728	4,731,669	4,082,419
Total	8,785,719	8,428,314	8,155,802

Note 1: Expenditure on pollution prevention expenditure, global environmental protection, and resource recycling.
Note 2: Expenditure arising from green procurement, resource recovery and recycling, and the products and services offered for the protection of the environment, and additional expenditures incurred on packaging containers for the reduction of environmental impacts.
Note 3: Expenditures related to environmental education and training, certification and license acquisition, environmental monitoring and measurement, environmental impact treatment and disposal, and environmental protection insurance.
Note 4: Expenditure on products researched and developed for environmental protection and expenditure on research to reduce environmental impacts at the product sales stage, and expenditure on environmental impact assessment.
Note 5: Expenditure on nature conservation, afforestation, landscaping and other environmental improvements, expenditures on sponsoring community activities for environmental protection, environmental groups, announcements, environmental protection publicity, and other information.
Note 6: Expenditure on environmental issues, compensation, penalties and lawsuits, and maintenance of urban landscape and living environment quality.
Note 7: Fees regarding the air pollution, soil pollution, water pollution and other fees imposed by the government.

Environmental performance indicators

Indicator	2022	2023	2024
Petrochemical feedstock input (kL) / petrochemical output (kL)[Note1]	0.093	0.096	0.089
crude oil input (kL)/equivalent distillation capacity for refinery (kL)[Note2]	0.213	0.224	0.231
Liquidized energy input (kL)[Note3]/(EDC for refinery + petrochemical output) (kL)	0.001	0.001	0.001
Gasified energy input (kM)[Note4]/(EDC for refinery + petrochemical output) (kL)	0.019	0.020	0.021
Water consumption (M^3)/(EDC for refinery + petrochemical output) (kL)	0.194	0.208	0.206
Electricity consumption (kWh)/(EDC for refinery + petrochemical production) (kL)	12.853[Note7]	13.937	13.783
GHG emissions (MT)[Note8]/(EDC for refinery + petrochemical output) (kL)	0.045	0.048	0.046
Waste (kg)/(EDC for refinery + petrochemical output) (kL)	0.820	1.005	0.696
Effluents (MT)/(EDC for refinery + petrochemical output) (kL)	0.086	0.079	0.081
Total effluent pollutants (kg)[Note5]/(EDC for refinery + petrochemical output) (kL)	0.003	0.005	0.004
VOC emissions (kg)/(EDC for refinery + petrochemical output) (kL)	0.020	0.024	0.022
Air pollutant emissions (kg)[Note6]/(EDC for refinery + petrochemical output) (kL)	0.026	0.026	0.027

Note 1: Petrochemical feedstock input = (naphtha+reformate+xylene mixture) input, petrochemical output is the output of ethylene, propane, butadiene and benzene converted into equivalent distillation capacity (EDC).
Note 2: EDC for refinery refers to the standardized equivalent capacity for the given refinery process.
Note 3: Liquefied energy input=(gasoline+ diesel+ fuel oil) input.
Note 4: Gasified energy input=(NG+ fuel gas) input.
Note 5: Total effluent pollutants = total amount of chemical oxygen demand (COD) + suspended solids (SS) + oil.
Note 6: Air pollutant emissions = total amount of sulfur oxides (SOx) + nitrogen oxides (NOx) + (total suspended particulates (TSP).
Note 7: Taiwan Power Company adjusted electricity rates in 2022, hence amendments were made to electricity yield indicators starting from 2023.
Note 8: CO_2 emissions data covers Scope 1 and Scope 2.

2024 Company-wide Greenhouse Gas Emissions

(Unit: million tons CO2e)

Department/Unit	Scope 1 (Direct Greenhouse Gas) Emissions	Scope 2 (Indirect Greenhouse Gas) Emissions	Total
Dalin Refinery, Refining Business Division	252.10	56.81	308.91
Taoyuan Refinery, Refining Business Division	126.48	16.37	142.84
Linyuan Petrochemical Plant, Petrochemical Business Division	196.93	8.30	205.22
Taichung LNG Refinery, Natural Gas Business Division	0.41	6.86	7.27
Yongan LNG Refinery, Natural Gas Business Division	1.15	9.56	10.70
Other units	14.81	9.86	24.67
Total	591.87	107.75	699.62

Note 1: CPC does not use biofuel.
Note 2: CPC's greenhouse gas (GHG) inventory covers Scope 1 and Scope 2 emissions, and includes the seven major categories of GHGs: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). Scope 2 emission is calculated by adopting a location-based approach.
Note 3: The base year for CPC's GHG emissions reduction target is 2005, with an emission volume of 11.58 million metric tons CO_2e.
Note 4: According to the Ministry of Environment regulations, the Global Warming Potential (GWP) values referenced for 2022 are based on the IPCC AR4 assessment report, and starting from 2023, the GWP values are based on the IPCC AR5 assessment report.
Note 5: The definition of regulated emission sources refers to GHG emission sources that must be inventoried and reported as announced by the central competent authority. From 2022 onwards, the emission sources required to be inventoried and reported include the Taoyuan Refinery, Dalin Refinery, Linyuan Petrochemical Plant, Taichung LNG Plant, and Yongan LNG Plant.
Note 6: CPC adopted the ISO 14064-1 GHG inventory system in 2004 and conducts annual GHG emissions inventories. The inventory process follows the operational control approach

Explanation of Water Pollution Penalty Cases in 2024

Violating department	Cause of penalty	Fines and penalties	Solutions or improvements
Project & Construction Division	Failure to implement the runoff wastewater pollution reduction plan as required	NT$19,500 fine and 2 hours of environmental education	1.Sedimentation basin and interception ditch installed in accordance with the plan. 2.Comprehensive inspection of all construction projects to prevent recurrence of similar incidents.
Dalin Refinery	Failure to notify the competent authority with in 3 hours of the incident	NT$30,000 fine and 2 hours of environmental education	1.Exposed underground pipelines in the valve station area, with regular monitoring of pipeline thickness. 2.Enhanced monitoring of pipeline pressure and flow rate.
Oil Product Marketing Division	Failure to submit a runoff wastewater pollution reduction plan	NT$21,250 fine and 2 hours of environmental education	Comprehensive review of all required declarations before construction and follow-up on implementation status.
Taoyuan Refinery Plant	Water pollution	NT$90,000 fine and 2 hours of environmental education	1.Installation of oil leak detectors, CCTV, and lighting within the plant; permanent deployment of oil containment booms along the route. 2.At the external discharge outlet, permanent deployment of oil containment booms and absorbent booms, with regular inspections and replacement.
	Discrepancy between discharge and approved contents of surface water discharge permit	NT$390,000 fine and 2 hours of environmental education	1.Grouting and sealing of box culverts no longer in use. 2.Application for new runoff wastewater discharge outlet RD07 for box culverts still in use.

Explanation of Major Air Pollution Penalty Cases in 2024

Violating department	Cause of penalty	Fines and penalties	Solutions or improvements
Dalin Refinery	1.Wastewater facilities failed to maintain airtight conditions 2.VOC levels above the standard at the top of the internal floating roof tank 3.Failure to operate equipment in accordance with the permit 4.The steam/exhaust gas ratio of the exhaust gas flare did not comply with regulations 5.Operation of continuous automatic monitoring facilities did not meet requirements	NT$1.7 million fine and 18 hours of environmental education	1.Replaced the iron frame of the water seal tank, sealing joints with FRP. 2.Used two storage tanks simultaneously for oil collection to delay liquid level rise and reduce vapor release. 3.Modified furnace temperature to a staged ramp-up during startup to avoid sudden temperature spikes and nitrogen oxide formation. 4.During major overhaul or related maintenance, shut off the interconnecting valve beforehand to prevent exhaust gas backflow. 5.During inspection by the competent authority, a methane-containing cylinder was used, causing interference in readings; an administrative appeal was filed according to the law.
	Equipment component VOC exceeded standard	NT$1.95 million fine and 14 hours of environmental education	1.Enhanced gas-tight leakage prevention for the oily wastewater discharge outlet after use. 2.Immediately switched out and repaired pumps upon detection of any issues. 3.Frequently used valves have been replaced with low-leakage type valves.
	Operation of continuous automatic monitoring facilities did not meet requirements	NT$960,000 fine and 18 hours of environmental education	1.Software deficiencies have been corrected, and the connection confirmation report has been resubmitted. 2.A dedicated person reviews data submissions daily; if anomalies are found, they are corrected in accordance with the law and immediately reported to the competent authority.
	Black smoke emitted from the exhaust gas flare	NT$600,000 fine and 4 hours of environmental education	1.During maintenance, the compressor's valve stem was inspected and replaced. 2.Before emergency pressure release, the flare management workshop is notified to control the gas discharge rate to avoid black smoke generation.
	1.Equipment component VOC exceeded standard 2.Wastewater facilities failed to maintain airtight conditions	NT$1.875 million fine and 24 hours of environmental education	1.Increased frequency of self-inspections for leaking components. 2.Strengthened personnel inspection records and water seal injection status to maintain airtightness. 3.Used infrared gas imaging camera to enhance detection of wastewater facilities to reduce leakage risks.
Taoyuan Refinery Plant	Insufficient heating value in exhaust gas flare	NT$2.4 million fine and 2 hours of environmental education	1.Exhaust gases are routed through alkali scrubbing and introduced into the gas recovery system to reduce flare usage. 2.Enlarged the drain pipe diameter of the sampling pipeline for the monitoring analyzer to prevent interference from moisture.
	Excess nitrogen oxides in exhaust pipeline emissions	NT$300,000 fine and 2 hours of environmental education	1.The emission limits for each monitored item connected to the stack have been properly set in the DCS alarm system. 2.The maintenance contractor has included the over-limit alarm test items in the maintenance report and implemented monthly testing.
	Failure to notify the competent authority within 1 hour of the incident	NT$1.125 million fine and 2 hours of environmental education	1.Meetings were held to review regulations regarding the timing and recipients of environmental incident notifications. 2.Notification formats and relevant regulations were distributed to all departments to facilitate on-site reporting operations. 3.This case is currently under administrative litigation
	Wastewater facilities failed to maintain airtight conditions	NT$450,000 fine and 2 hours of environmental education	1.Weekly inspections are conducted to ensure the integrity of the sealed aeration tanks; immediate repairs are carried out if sealing performance deteriorates. 2.The cover material was replaced from FRP to 304 stainless steel to prevent damage and deformation.

Violating department	Cause of penalty	Fines and penalties	Solutions or improvements
Linyuan Petrochemical Plant	Black smoke emitted from the exhaust gas flare	NT$675,000 fine and 2 hours of environmental education	1.Added alarms for various levels of anti-surge valve openings. 2.Used the operator training system to conduct emergency response training.
	Black smoke emitted from the exhaust gas flare	NT$900,000 fine and 4 hours of environmental education	1.Protective covers were added to the linkage of lube oil pump P-1503 trip. 2.The automatic start signal location for the standby auxiliary lube oil pump was improved to ensure automatic startup in case of abnormalities.
	Black smoke emitted from the exhaust gas flare	NT$750,000 fine and 4 hours of environmental education	1.During long-term shutdowns, related pipelines are thoroughly purged. 2.A comprehensive review of the compressor interlock system for irrationalities or lack of resilience was conducted, and discussions were held with the original manufacturer to improve compressor reliability.
	Black smoke emitted from the exhaust gas flare	NT$900,000 fine and 4 hours of environmental education	1.An assessment was conducted to modify the interlock system logic to enhance system resilience. 2.Training was conducted on equipment modification procedures.
	1.Equipment component VOC exceeded standard 2.VOC levels above the standard at the top of the internal floating roof tank 3.Failure to operate equipment in accordance with the permit 4.Wastewater facilities failed to maintain airtight conditions 5.Insufficient heating value in exhaust gas flare 6.Failure to submit the turnaround report within the specified time 7.Failure to conduct regular inspections of the emission duct within the specified time	NT$3.83 million fine and 44 hours of environmental education	1.Self-monitoring during startup operations, including inspection of caps and plugs to ensure reset status. 2.Daily inspection using infrared gas imaging camera and FID; inspection frequency increased in high-risk areas. 3.Monthly and quarterly self-management reviews on permit compliance. 4.Installation of a cascade automatic control system for steam/exhaust gas ratio and heating value alarm. 5.Prior to regular emission duct inspections, a formal notification is issued to the jurisdiction for coordination.
	Equipment component VOC exceeded standard	NT$1.125 million fine and 12 hours of environmental education	1.Daily infrared gas imaging camera inspections of components beneath insulation materials to reduce leakage risk. 2.After using open valves, tighten pipe caps or plugs and conduct self-inspection. 3.After maintenance is completed, perform pressure build-up leak detection at high-risk pipeline areas.
	Black smoke emitted from the exhaust gas flare	NT$1.125 million fine and 4 hours of environmental education	1.Consulted the original manufacturer to assess the feasibility of installing anti-detachment devices and upgrades. 2.Completed procedure revision: two personnel are required to perform this test operation.
Oil Product Marketing Division	1.Emission duct exceeded the limit for odorous pollutants 2.VOC levels above the standard at the top of the internal floating roof tank	NT$420,000 fine and 4 hours of environmental education	1.Membrane control equipment has undergone item-by-item maintenance and repair, and the addition of destruction-type control equipment at the back end is being evaluated. 2.Tank drainage, cleaning, and inspection/repair operations have been carried out, and improvements to the sealed tank interconnection system are being evaluated.
Soil and Water Center	1.Failure to effectively treat exhaust gas 2.Control equipment not operating normally	NT$1.35 million fine and 6 hours of environmental education	The related equipment has been decommissioned and is no longer in operation.

Note 1: Major fine cases refer to violations with fines of NT$300,000 or more.

Explanation of Environmental Impact Assessment (EIA) Penalty Cases in 2024

Violating department	Cause of penalty	Fines and penalties	Solutions or improvements
Liquefied Natural Gas Project Division	Failure to execute according to the approved content of the response measures.	NT$300,000 fine and 2 hours of environmental education	A comparison table of the changes was submitted to clearly define the timing and location for vessel withdrawal.

Appendix 6: External Assurance Statement

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INDEPENDENT ASSURANCE OPINION STATEMENT

CPC Corporation, Taiwan 2024 ESG Report

The British Standards Institution is independent to CPC Corporation, Taiwan (hereafter referred to as CPC in this statement) and has no financial interest in the operation of CPC other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of CPC only for the purpose of assuring its statements relating to its ESG report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by CPC. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to CPC only.

Scope

The scope of engagement agreed upon with CPC includes the followings:

1. The assurance scope is consistent with the description of CPC Corporation, Taiwan 2024 ESG Report.
2. The evaluation of the nature and extent of the CPC's adherence to AA1000 AccountAbility Principles (2018) in this report as conducted in accordance with type 1 of AA1000AS v3 sustainability assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

This statement was prepared in English and translated into Chinese for reference only.

Opinion Statement

We conclude that the CPC Corporation, Taiwan 2024 ESG Report provides a fair view of the CPC sustainability programmes and performances during 2024. The ESG report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the CPC and the sample taken. We believe that the performance information of Environment, Social and Governance (ESG) are fairly represented. The sustainability performance information disclosed in the report demonstrate CPC's efforts recognized by its stakeholders.

Our work was carried out by a team of ESG report assurors in accordance with the AA1000AS v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that CPC's description of their approach to AA1000AS v3 and their self-declaration in accordance with GRI Standards were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top level review of issues raised by external parties that could be relevant to CPC's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 10 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness, and Impact as described in the AA1000AP (2018).

Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness, and Impact of AA1000AP (2018) and GRI Standards is set out below:

Inclusivity

This report has reflected a fact that CPC has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the CPC's inclusivity issues.

Materiality

CPC publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of CPC and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the CPC's management and performance. In our professional opinion the report covers the CPC's material issues.

Responsiveness

CPC has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for CPC is developed and continually provides the opportunity to further enhance CPC's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the CPC's responsiveness issues.

Impact

CPC has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. CPC has established processes to monitor, measure, evaluate, and manage impacts that lead to more effective decision-making and results-based management within the organization. In our professional opinion the report covers the CPC's impact issues.

GRI Sustainability Reporting Standards (GRI Standards)

CPC provided us with their self-declaration of in accordance with GRI Standards 2021 (For each material topic covered in the applicable GRI Sector Standard and relevant GRI Topic Standard, comply with all reporting requirements for disclosures). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported, or omitted. In our professional opinion the self-declaration covers the CPC's sustainability topics.

Assurance level

The moderate level assurance provided is in accordance with AA1000AS v3 in our review, as defined by the scope and methodology described in this statement.

Responsibility

The ESG report is the responsibility of the CPC's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064, and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

AA1000 Licensed Report 000-4/V3-KSABE

For and on behalf of BSI:

Peter Pu, Managing Director BSI Taiwan

Statement No: SRA-TW-825342

2025-06-25

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Appendix 7: CPA Statement of Independence

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會計師有限確信報告

台灣中油股份有限公司　公鑒

確信範圍

本會計師接受台灣中油股份有限公司（以下簡稱台灣中油）之委任，對2024年度永續報告書中所選定之永續績效資訊（以下稱「標的資訊」），執行財團法人中華民國會計研究發展基金會所發布之確信準則所定義之「有限確信案件」並出具報告。

標的資訊及其適用基準

有關台灣中油之標的資訊及其適用基準詳列於附件一。

管理階層之責任

台灣中油管理階層之責任係依據臺灣證券交易所「上市公司編製與申報永續報告書作業辦法」之規定，以及參考適當之基準編製標的資訊，包括參考全球永續性報告協會(Global Reporting Initiatives, GRI)所發布之2021年GRI 準則(GRI Standards)，台灣中油管理階層應選擇所適用之基準，並對標的資訊在所有重大方面是否依據該適用基準報導負責，此責任包括建立及維持與標的資訊編製有關之內部控制、維持適當之記錄並作成相關之估計，以確保標的資訊未存有導因於舞弊或錯誤之重大不實表達。

本會計師之責任

本會計師之責任係依據所取得之證據對標的資訊作成結論。

本會計師依照財團法人中華民國會計研究發展基金會所發布之確信準則3000號「非屬歷史性財務資訊查核或核閱之確信案件」之要求規劃並執行確信工作，以發現標的資訊在所有重大方面是否有未依適用基準編製而須作修正之情事，並出具有限確信報告。本會計師依據專業判斷，包括對導因於舞弊或錯誤之重大不實表達風險之評估，以決定確信程序之性質、時間及範圍。

本會計師相信已取得足夠及適切之證據，以作為表示有限確信結論之基礎。

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會計師之獨立性及品質管理

本會計師及所隸屬組織遵循會計師職業道德規範中有關獨立性及其他道德規範之規定，該規範之基本原則為正直、公正客觀、專業能力及專業上應有之注意、保密及專業行為。

本事務所遵循品質管理準則1號「會計師事務所之品質管理」，該品質管理準則規定組織設計、付諸實行及執行品質管理制度，包含與遵循職業道德規範、專業準則及適用之法令規範相關之政策或程序。

所執行程序之說明

有限確信案件中執行程序之性質及時間與適用於合理確信案件不同，其範圍亦較小，因此，有限確信案件中取得之確信程度明顯低於合理確信案件中取得者。本會計師所設計之程序係為取得有限確信並據此作成結論，並不提供合理確信必要之所有證據。

儘管本會計師於決定確信程序之性質及範圍時曾考量台灣中油內部控制之有效性，惟本確信案件並非對台灣中油內部控制之有效性表示意見。本會計師所執行之程序不包括測試控制或執行與檢查資訊科技(IT)系統內資料之彙總或計算相關之程序。

有限確信案件包括進行查詢，主要係對負責編製標的資訊及相關資訊之人員進行查詢，並應用分析及其他適當程序。

本會計師所執行之程序包括：

- 與台灣中油人員進行訪談，以瞭解台灣中油之業務與履行永續發展之整體情況，以及永續報導流程；
- 透過訪談、檢查相關文件，以瞭解台灣中油之主要利害關係人及利害關係人之期望與需求、雙方具體之溝通管道，以及台灣中油如何回應該等期望與需求；
- 與台灣中油敘關人員進行訪談，以瞭解用以蒐集、整理及報導標的資訊之相關流程；
- 檢查計算標準是否已依據適用基準中概述的方法正確應用；
- 針對報告中所選定之永續績效資訊進行分析性程序；蒐集並評估其他支持證據資料及所取得之管理階層聲明；如必要時，則抽選樣本進行測試；
- 閱讀台灣中油之永續報告書，確認其與本會計師取得關於永續發展整體履行情況之瞭解一致。

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先天限制

因永續報告中所包含之非財務資訊受到衡量不確定性之影響，選擇不同的衡量方式，可能導致績效衡量上之重大差異，且由於確信工作係採抽樣方式進行，任何內部控制均受有先天限制，故未必能查出所有業已存在之重大不實表達，無論是導因於舞弊或錯誤。

結論

依據所執行之程序及所取得之證據，本會計師未發現標的資訊有未依照適用基準編製而須作重大修正之情事。

使用限制

本確信報告出具後，台灣中油對任何確信標的或適用基準之變更，本會計師將不負就該等資訊重新執行確信工作之責任。

安永聯合會計師事務所

會計師：呂倩雯 呂倩雯

民國一一四年六月三十日

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附件一：

編號	章節標題	內文標題	標的資訊	適用基準
1	1.1 我們的中油	1.1.2 董事概況	2024 年董事會運作概況 召開 15 次會議（含臨時董事會及常務董事會） 董事及監察人平均出席率 91%	台灣中油 2024 年度依照董事及監察人出席率之全年度統計。
2	附錄三	SASB 索引表	台灣中油於人口密集地區（營運據點所在鄉鎮人口數大於 5 萬人）之石化產物精煉廠，共 4 座	SASB EM-RM-120a.2：Global refineries located in or near areas of dense population, which are defined as urbanized areas with a population greater than 50,000
3	附錄五	2024 年水污染罰案件說明	違反單位 / 受罰原因 / 罰款及懲罰 / 解決或改善方案 興建工程處 / 未依逕流廢水污染削減計畫作業 / 1.95 萬元罰鍰與環境講習 2 小時 / 1. 依計畫設置沉砂池與截流溝。 2. 全面檢視各工程，避免類似情形再發生。 大林煉油廠 / 未於事件發生 3 小時內通報主管機關 / 3 萬元罰鍰與環境講習 2 小時 / 1. 閒站區域地下管線明管化，定期追蹤管線厚度。 2. 加強監測管線壓力及流量。 油品行銷事業部 / 未檢具逕流廢水污染削減計畫 / 2.125 萬元罰鍰與環境講習 2 小時 / 開工前全面檢視各應申報事項，並追蹤執行情形。	SASB EM-RM-140a.2：Number of incidents of non-compliance associated with water quality permits, standards, and regulations

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編號	章節標題	內文標題	標的資訊				適用基準
			桃園煉油廠	污染水體	9萬元罰鍰與環境講習2小時	1. 廠內增設漏油偵測器、CCTV及照明，沿線常設攔油索。 2. 廠外放流口常設攔油索、吸油棉索，定期巡視、更換。	
				與排放地面水體許可證核定內容不符	39萬元罰鍰與環境講習2小時	1. 不再使用後之箱涵灌漿封堵。 2. 仍須使用之箱涵申請增設逕流廢水放流口RD07。	

Environmental
Social
Governance

CPC Corporation
Taiwan

ESG REPORT 2024

台灣中油股份有限公司
CPC Corporation, Taiwan