



2022

CORPORATE SUSTAINABILITY REPORT

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CLEANAWAY
可寧衛股份有限公司

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About this Report

Period Covered

This report is the fourth corporate sustainability report (hereinafter referred to as this report) issued by Cleanaway Company Limited (hereinafter referred to as Cleanaway Group, Cleanaway, the Company or we), through which Cleanaway's practices and results of the implementation of its corporate social responsibility (CSR) and sustainability strategies for the year 2022 (from January 1, 2022 to December 31, 2022) will be disclosed. This report will be published once a year on a regular basis and simultaneously posted on the Group's CSR website, in order to convey the Group's determination to continue to move toward sustainable development and to maximize the value and impact of common society with all stakeholders.



The period covered by this report is consistent with that of the consolidated financial statements. In order to ensure the completeness and comparability of this report, some sections cover information before January 1, 2022 and after December 31, 2022, which will be described in the notes to those sections.

Normative References

This report coincides with the United Nations Sustainable Development Goals (SDGs), refers to the Global Reporting Initiative (GRI) Standards Core Option, and is prepared and disclosed in accordance with the Task Force on Climate-Related Financial Disclosure (TCFD) standards.

Boundary and Scope

The scope of information reported in this report does not include all of the consolidated entities or their business locations in [the consolidated financial statements](#); this is mainly due to the fact that some landfills are closed and some companies are only holding companies, and data for a few locations are not available or are not of significant managerial significance to the Company; therefore, this report only discloses information about significant business locations.

The information disclosed in this report mainly covers the significant business locations of the Company, including: Da Ning Co., Ltd. (Da Ning), Cleanaway Enterprise Company Limited (Cleanaway Enterprise), Kang Lien Enterprise Company Limited (Kang Lien), Chi Wei Company Limited (Chi Wei), Da Tsang Industrial Company Limited (Da Tsang), Cleanaway solidification plant (solidification plant), Top-Comment Resources Recycling Co., Ltd. (Top-Comment), and Cleanaway Group (Cleanaway Group).

If the scope of disclosure in each section of this report is different from the foregoing, a supplementary instruction will be given in the respective section. The calculation basis for various statistics in this report is as follows:

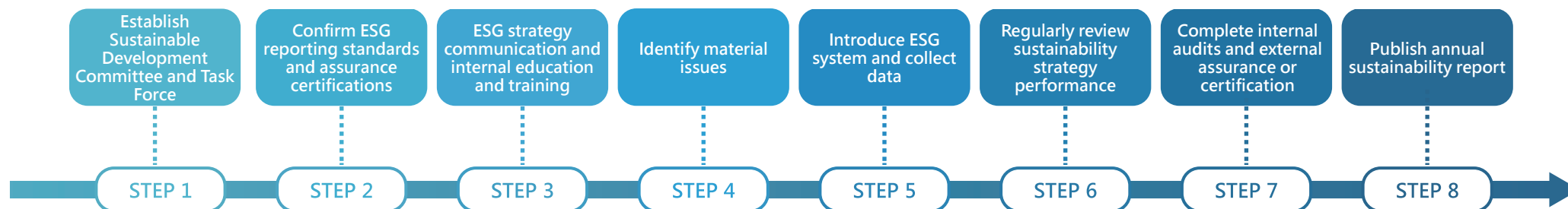
Financial data	The statement of economic income distribution uses data from the consolidated financial statements audited by CPAs. Unless otherwise indicated, financial data are expressed in "New Taiwan Dollars".
Environmental Data	Greenhouse gas emissions are inventory data in accordance with ISO 14064-1:2018 and have been verified by an external third party; water resources and waste statistics are data reported by each business location to the local authorities.
Other Data	Summarized statistical data from various business locations.

Report Management

Internal Control

Cleanaway has established the Operating Procedures for Report Compliance Principles for Sustainability Reports and the Operating Procedures for Selection of Material Issues for Sustainability Reports. The secretariat under the "Sustainable Development Committee" is responsible for the overall planning, integration and communication of the annual sustainability reports, and the person in charge of the annual ESG execution group is responsible for collecting the information required for the report and writing the content of the report. After completing the preparation of the annual sustainability report, the report will be submitted to the group supervisor for preliminary review, then submitted to the secretariat for internal audit, and finally approved by the Chairman of the Sustainable Development Committee.

Flowchart for Sustainability Report of Cleanaway



External Assurance

After the report is finalized by internal audit, the management appointed an external independent third-party assurance organization to verify that the report complies with the requirements of the GRI Standards. This year, we engaged Green Mountain Sustainability United Certified Public Accountants Management Consulting Co., Ltd. to perform a limited assurance engagement in accordance with the Taiwan Standard on Assurance Engagements 3000 (TWSAE 3000), "Assurance Engagements for Audits or Reviews of Financial Information of a Non-Historical Nature" (which are formulated with reference to the International Standard on Assurance Engagements 3000 (ISAE 3000)). Please refer to the Appendix for the related assurance methods and results.

We ensure the accuracy and completeness of the information and data in this report through internal control, and we have engaged Green Mountain Sustainability United Certified Public Accountants Management Consulting Co., Ltd. to perform limited assurance engagement in accordance with the Taiwan Standard on Assurance Engagements 3000 (TWSAE 3000), "Assurance Engagements for Audits or Reviews of Financial Information of a Non-Historical Nature". Please refer to the Appendix for [the Limited Assurance Report of CPAs](#).

Contact Information

The report is published in Chinese and is available in Cleanaway's official website (<https://www.cleanaway.tw/>) for view and download by stakeholders. For further information or any suggestion regarding this report, please contact us.

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CHAPTER 1

Sustainable Management

- 1.1 Message from Executives
- 1.2 ESG Performance and Recognition
- 1.3 Sustainability Blueprint
- 1.4 Operational Highlights
- 1.5 Negotiation of Stakeholders

1.1 Message from Executives

1.1.1 Message from Chairman

Commitments to Sustainable Management

In 2022, the world is facing uncertain external environmental risks such as inflation and extreme climate, which brings more severe challenges to Cleanaway Group. However, in this turbulent era, how to find a way for ESG corporate social responsibility that has own characteristics and can realize sustainable value has become a hot management topic for enterprises in the world. Therefore, Cleanaway has been actively implementing and practicing our four main businesses in the current year. First, the digital intelligent combination of waste treatment and reuse in the industry, which reshape a brand-new technology-based waste treatment industry; second, the promotion of circular economy, maximizing the recycling of resources and minimizing the disposal of waste, and actively developing renewable energy, using the green electricity generated for the Group's internal consumption, responding to the "5+2" industrial innovation policy with the government, and hoping for joint growth with the enterprise partners; third, the implementation of energy management and transformation. The Group has actively introduced the ISO50001 energy management system and obtained the certification to reduce carbon density and carbon footprint and to provide customers with more low-carbon and sustainable services, and we look forward to working together to respond to international energy management initiatives; fourth, the application of innovative green remediation technologies, which restores contaminated land to its original state, so as to bring back vitality to the badlands and jointly safeguard our homeland security.

Finally, "corporate culture" is the soul and core of corporate management. In order to cultivate a sustainable corporate culture and value of Cleanaway, the Group actively promotes ESG sustainability initiatives and strengthens risk management through a top-down governance model, as well as creates a diverse, equal and inclusive workplace environment to enable the Group to maintain its creativity and vitality. Looking forward to the future, Cleanaway will continue to build a sustainable and shared value chain with our stakeholders through the integration of soft and hard power.



Chairman

楊安祥

1.1.2 Message from General Manager

In 2021, Cleanaway's Corporate Sustainability Report won the TCSA Gold Award again. This is the third consecutive year that Cleanaway has received the award, which is the best recognition of the Group's persistent efforts in emphasizing sustainable management.

As a leader in environmental total solutions in Taiwan, we continue to work towards our sustainability goals in 2022. Firstly, we continue to lead our customers and alliance partners in the introduction of the Waste Matchmaking Platform, and successfully use digital tools to reduce operating costs, so that the environmental industry can reduce the consumption of manpower and resources through technology. Secondly, the Group has been actively expanding, developing and optimizing waste treatment methods, such as mercury, waste lighting and electronic waste recycling, to extract precious metals for reuse, and developing recycled pellets and CLSM to remanufacture sludge, ash and other wastes into products, which significantly increase the benefits of waste recycling and empower the Company to gradually move towards the era of circular economy. Thirdly, we have invested in renewable energy and green power fields, and invested in SRF (Solid Recovered Fuel), which can be used in various applications, including SRF power plants and recycled paper mills, to replace original fossil fuels to reduce environmental pollution and assist in the net-zero transformation of traditional industries. In addition, we also respond to domestic policies such as 5+2 and new agriculture, and expect to promote 130MW solar energy project integrating fish farming and power generation, and work with the government to create a new landscape for renewable energy.

For a long time, Cleanaway has been upholding the philosophy of "what is taken from the community is used for the community". We are committed to promoting social care, paying attention to and assisting our community neighbors to achieve sustainable development, and actively participating in various public welfare activities. We continue to strengthen environmental education and provide more comprehensive knowledge on circular economy through the "Project WASTE" series courses to enhance the public awareness of environmental protection.

In addition to promoting sustainable development of Cleanaway, we have successfully developed the "ESMS Smart Sustainability Solution" system and related consulting services based on our experience in ESG implementation. This feasible solution helps corporate customers to set effective sustainability goals and manage the sustainability performance of suppliers, so that sustainable management can be deeply rooted in the DNA of enterprises. At present, the system has been adopted by a number of domestic semiconductor manufacturers and leading electronics companies, and has been highly recognized by the industry. In the future, we will continue to integrate the resources of the Group and combine professional environmental knowledge with innovative technology to promote green transformation and realize our business objectives. We will also lead the Company, stakeholders, society and the environment towards the right path of sustainable development.

General
Manager



1.2 ESG Performance and Recognition

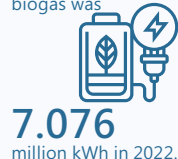
1.2.1 ESG Performance and Awards

2022 ESG Performance Highlights

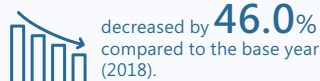
Honorable Moments in 2022



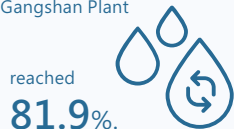
- The Group's accumulated renewable energy generation capacity from solar power and biogas was



- The amount of waste generated from the operating activities of solidification plants and landfill sites



- The proportion of recycled water used for water consumption at the Gangshan Plant



- Landfill wastewater discharge decreased by **94.3%** compared to the base year (2018).

- Won the title of Outstanding Green Procurement Unit for 2021 and 2022



awarded by Kaohsiung City Environmental Protection Bureau.

- The accelerated remediation of soil and groundwater contamination in Kaohsiung Refinery Area 4 - Project A was awarded the



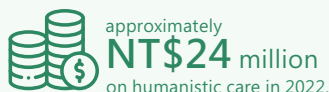
2022 Kaohsiung City Smart Project Site

by the Environmental Protection Bureau of the Kaohsiung City Government.



- Regularly evaluated the ISO 45001 Occupational Safety and Health Management System and passed the certification again.

- Continuously invested in various public welfare activities and spent



- Launched **19** environmental education service sessions in 2022, benefiting **673** persons.

- Cooperated with the Kaohsiung Municipal Library to promote the "Environmental Education, Reading for Sustainability" program, completing **6** sessions and benefiting **253** persons.



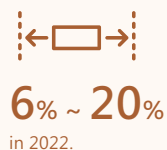
- Through HSBC, the Company issued the first letter of guarantee for public environmental project for the New Construction Division of Kaohsiung Municipal Government Works Bureau (remediation of soil and groundwater contamination in Kaohsiung Refinery Area 4) for a public environmental project, with an amount of



- In December 2022, the Board performance evaluation was performed and completed, with



- The corporate governance evaluation range was



- In 2022, there were



and all of them accepted and passed the new annual supplier audit.

- The Corporate Sustainability Report 2021 won the TCSA Taiwan Corporate Sustainability Report Award



1.3 Sustainability Blueprint

1.3.1 Sustainability Strategy and Layout Blueprint

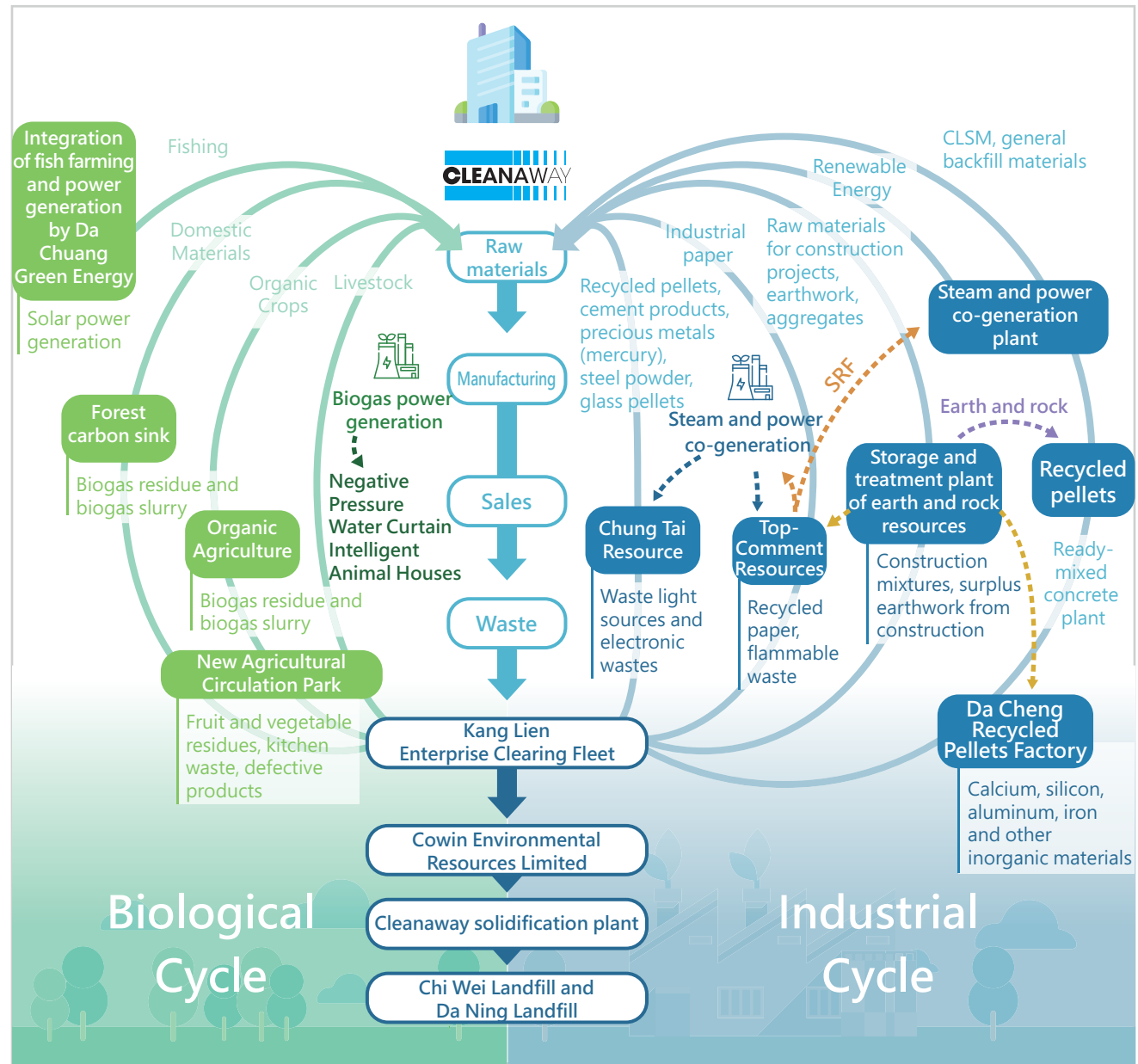
Cleanaway implements recycling and promotes net zero strategy for core businesses

Over the past 20 years, Cleanaway has served more than one thousand companies and properly disposed of more than 6 million tons of industrial waste in Taiwan. Recognizing the impact of waste on the environment and the importance of a circular economy to the next generation, we have been actively adapting to the demand for a net-zero planet and creating a new situation.

“Waste is a misplaced resource”. In the process of transformation in response to the trend of the new era, the Cleanaway Group pursues the spirit of urban mine and circular economy, is committed to promoting the re-creation of new resources, and identifying “materials” from the vast and diverse industrial wastes and investing in recycling technology, so that all kinds of resources can be recycled not only within the enterprise, but also within the industry and even across the industries. Further, combined with the waste transportation platform developed by our AIOT technology, we are able to grasp the characteristics of waste from various industries and control the quality and flow of products, in the hope that Cleanaway can have a greater influence on Taiwan’s path to sustainability.
















In addition to Chung Tai that recycles the metal resources, Top-Comment Resources and Da Cheng Recycling also joined the circular economy from 2022 aiming at inorganic chemical resources and non-metallic residue resources. In 2022, the amount of investment of Cleanaway was about NT\$500 million (about 5% of the green investment). We are committed to providing lower carbon and more efficient waste treatment services, and through upstream and downstream integration and systematic cooperation, we will achieve resource sustainability, land sustainability and corporate sustainability.

In the next 20 years, we will continue to protect national security by the management thinking stricter than regulations, and invest in the research and development of new environmental technologies to meet the new demands for a sustainable environment, and become a leader in promoting a new economic model in Taiwan.



Sustainability Strategy and Goals

On the learning path of “sustainability”, we listen to the voices of our customers, shareholders, suppliers, community partners, authorities, and other stakeholders with an open mind, practice ESG in our daily operations, and work together with our colleagues to develop new corporate values and create a resilient Taiwan society.

Sustainability Vision	Sustainability Strategy	2025 Goals	Corresponding SDGs		
 <p>G Responsibility Governance Strengthen the Company's management system</p>	<ul style="list-style-type: none"> Sustainable Governance/Regulatory Compliance Diversified investment 	<ul style="list-style-type: none"> Improve the overall score and performance of Taiwan's corporate governance evaluation. Invested more than NT\$10 billion in green energy and circular economy industries, including integration of fish farming and power generation, co-generation of steam and electricity, SRF, recycled materials, and other diversified investments and operations. 	 <p>8 Decent Work and Economic Growth</p>	 <p>9 Industry, Innovation and Infrastructure</p>	 <p>13 Climate Action</p>
 <p>E Environmental Sustainability Renewable Energy and Circular Economy</p>	<ul style="list-style-type: none"> Develop green and low-carbon treatment technologies Become a resource recycling and innovative material company 	<ul style="list-style-type: none"> Join the Energy International Initiative organization to improve unit energy efficiency and increase the proportion of green electricity consumption of the Group to reduce overall carbon emissions. Enhance the research and development technologies of circular economy to reduce the final waste disposal proportion, and increase the production of green products, actively utilize green power in manufacturing processes and obtain carbon labels for our products. 	 <p>7 Affordable and Clean Energy</p>	 <p>12 Responsible Consumption and Production</p>	 <p>13 Climate Action</p>
 <p>S Social Inclusion</p> <ul style="list-style-type: none"> Deepen environmental education Cultivate green enterprise DNA and global citizenship 	<ul style="list-style-type: none"> Internalize corporate environmental education DNA Enhance the external influence of environmental education 	<ul style="list-style-type: none"> Increase employee education and training investment and hours per capita. Apply for environmental education center certified by Environmental Training Center and move toward the goal of sustainable management, with an estimated annual service capacity of 1,000 person-time Increase the investment in social welfare and the number of beneficiaries of environmental education. 	 <p>2 Zero Hunger</p>	 <p>3 Good Health and Well-Being</p>	 <p>4 Quality Education</p>
			 <p>11 Sustainable Cities and Communities</p>	 <p>13 Climate Action</p>	 <p>17 Partnerships</p>

1.3.2 Stringent management and control of product quality – Issuance of TAF credibility report

Established in 2000, Cleanaway Group's Laboratory is one of the few TAF-accredited quality control laboratories in the domestic final waste disposal site industry. It provides reliable and rapid technical services for the Group's industrial waste landfills, hazardous waste solidification plants, soil remediation projects, and environmental monitoring samples from the plants (sites). Incoming waste must be tested before it can be buried, which prevents hazardous waste from entering sanitary landfills and reduces the risk of environmental pollution.

In recent years, the government has been promoting a circular economy, and the Group has invested capital, manpower, and equipment in advance for the transition to sustainable management, for which the Laboratory has developed testing services for recycled materials. In order to ensure that the test reports are credible and internationally recognized, we have strengthened our quality management system in accordance with ISO 17025 (Laboratory Quality Management System) in 2021, and have been accredited by TAF (Taiwan Accreditation Foundation) as an accredited laboratory under Accreditation System No. 3873. At present, we have obtained 21 accreditations, including dissolution and extraction procedures for waste and recycled pellets. We regularly participate in international proficiency tests to ensure that the quality of testing data is internationally comparable, so that we can provide our customers with timely and high-quality test reports.

Cleanaway Group expects to provide stable and high-quality recycling products and low-risk waste management services to the green materials market, and to become an innovative recycling materials company that can be trusted in Taiwan. In the future, Cleanaway will implement the circular economy in line with the national policy.



Testing Laboratory
3873

1.3.3 Practice Low Carbon and Net Zero – The Group's Green Energy Investments

With the goal of net-zero carbon emissions by 2050, the government has been accelerating the energy transformation, hoping to be in line with the rest of the world. However, green energy has become a common trend in the world, and all the world's leading companies are requiring suppliers to use a certain percentage of renewable energy. With this in mind, Da Chuang Green Energy, a subsidiary of Cleanaway Group, has been actively promoting a diversified layout to share these responsibilities, get ready for meeting the challenges of the net-zero carbon emission trend and align with the future ESG blueprints of the Company.

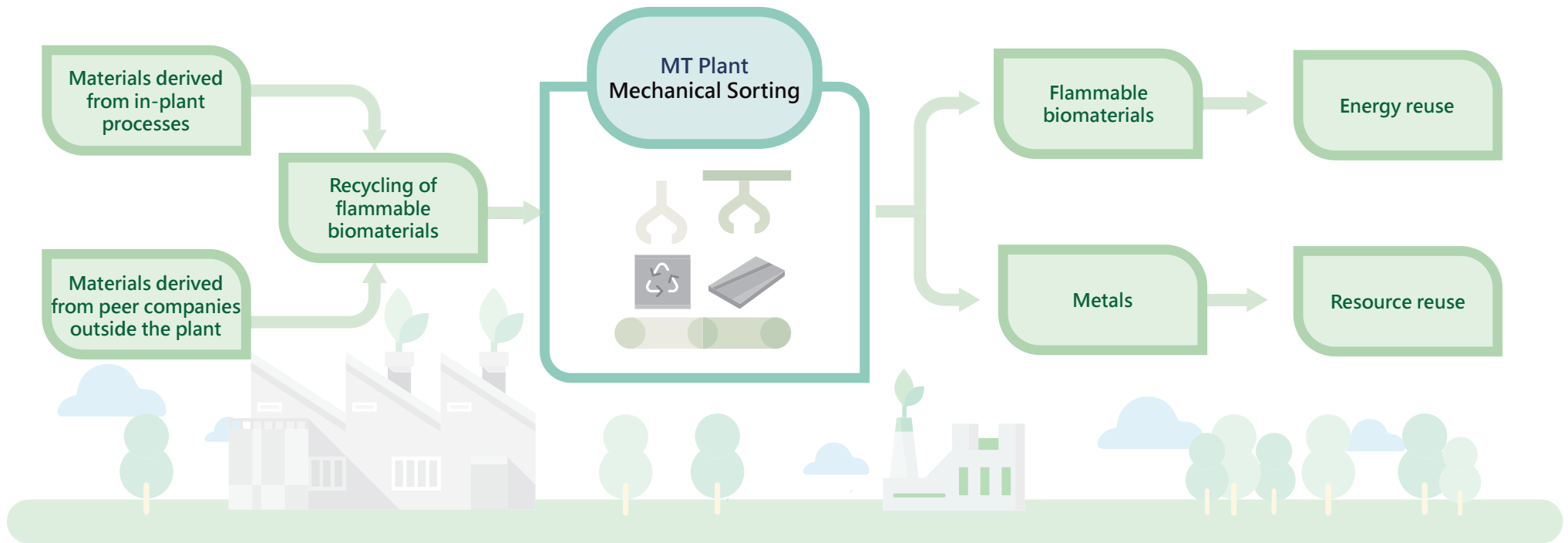
In order to maximize the benefits of land use, Da Chuang Green Energy is fully committed to the integration of fish farming and power generation and the development of green energy on specific lands. Currently, Da Chuang Green Energy has set up projects integrating fish farming and power generation in Mituo District, Kaohsiung City and Xinpi Town, Pingtung County, with a total planned capacity of about 138MW, which is estimated to generate 176,965,687.5 kWh of electricity annually and reduce carbon dioxide emissions by 90,075 metric tons, equivalent to the annual carbon absorption capacity of 231 Daan Forest Parks, and the electricity can meet the needs of about 41,895 households annually. In particular, the Project in Mituo District is the largest power plant integrating fish farming and power generation in Kaohsiung City, and the first phase of the project is expected to be completed in September 2023, with the meters installed to receive power, which will inject new momentum for the green energy development and transformation of Kaohsiung City.

Da Chuang Green Energy has always been committed to contributing to Taiwan's energy transformation and net-zero emission goals, actively developing renewable energy sources to become a supplier of green power plants, supplying the generated green power to the Group for internal consumption to offset carbon emissions, and providing customers with more low-carbon and sustainable services. In the future, it is looking forward to contributing to the green environment through sustainable management that takes into account ecological conservation and the social environment.



1.3.4 Replace Fuel Coal – Top-Comment’s Solid Recovered Fuel Turns Waste into Energy

Solid Recovered Fuel (SRF) refers to the a solid recovered fuel transformed from wastes through effective recycling of process wastes, which can be used as a substitute for conventional fuel after sorting, crushing, and screening of waste. In the past, in order to generate steam for the production process, Top-Comment had to rely on the combustion of coal to produce the heat energy required. However, after becoming a subsidiary of the Cleanaway Group, in order to realize the goal of resource recycling in the future, Top-Comment spent US\$8 million (about NT\$ 240 million) in 2022 to add the MT equipment in the plant in order to process the materials derived from the production process in the plant and transform them into environmentally friendly SRFs, which not only reuses the waste materials efficiently, but also relatively reduces carbon emissions and improves air quality in the neighboring areas. According to the design capacity of the new boiler in the plant, i.e. a treatment capacity of 3.96 tons per hour, the daily treatment volume (24h operation) is about 95.04 tons, and the monthly treatment volume can reach about 3,000 tons; the source of SRF can be divided into in-plant waste recycling and off-plant recycling, and it is estimated that the total volume of wastes converted into SRF is about 89,383 tons every year, compared with the original fuel coal, the carbon emission can be reduced by about 7,144 tons every year; the electricity generation is 17,169,600 kWh every year, and the carbon reduction is 8,619 tons every year.

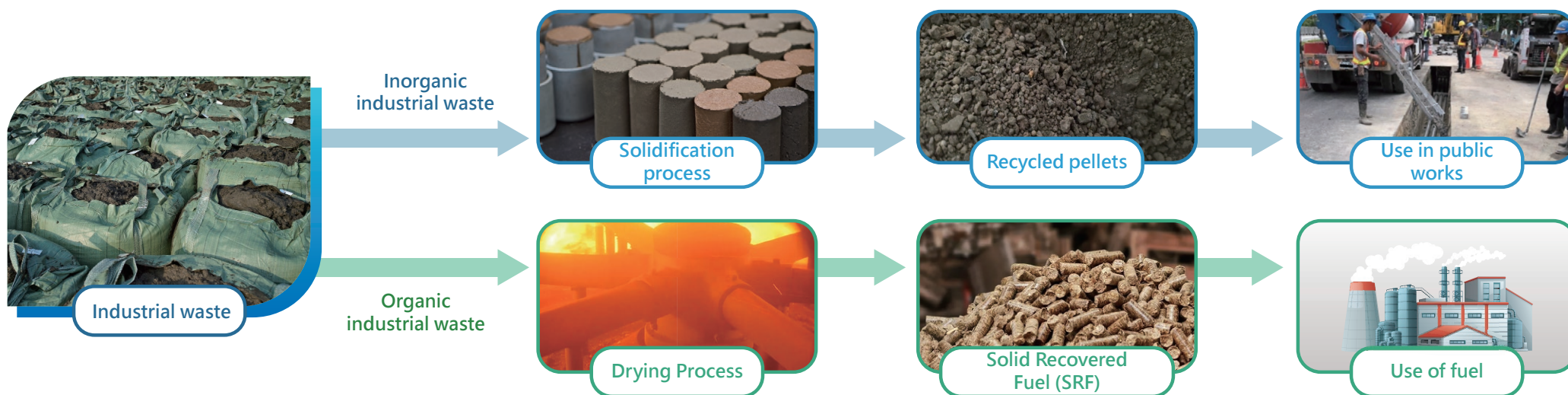


1.3.5 Expand Diversified Green Products – Research and Development of Recycled Pellets

In 2021, the average output of industrial waste reached 20.23 million tons. With the increasing output of industrial waste and the scarcity of land resources, it is not easy to apply for and construct landfill sites, leading to frequent illegal dumping of industrial waste, which will become another burden of environmental pollution if not handled and disposed of properly.

With its 20 years of experience in industrial waste treatment and its database of industrial waste characteristics, Cleanaway Group will establish a new resource recycling pathway in a professional and high-quality manner. Inorganic industrial waste will be treated into reusable materials through recycling, while organic waste with calorific value will be made into recycled fuel products to be used as fuel, which can not only reduce industrial waste, but also reuse effective resources, thus further helping to improve the effective recycling and reuse of industrial waste resources in Taiwan.

Da Cheng is expected to receive 12,000 tons of industrial waste per month, which can help extend the life of the Group’s landfills by 7.8 years, and is expected to generate 145,440 tons of recycled pellets per year, which can be used in public works construction, such as: road grading pellet underlayer and base layer, site filling and embankment filling, and controlled low-strength backfill materials. In addition, the manufacture process uses recycled fuel products as fuel, which reduces carbon dioxide emissions by 58.6% compared with fuel coal.



• Benefits:

- 1** Help extend the life of the Group’s landfills by **7.8 years**
- 2** Produce **145,440 tons** of recycled pellets every year
- 3** Reduce carbon dioxide emissions by **58.6% per year** by using recycled fuel products compared to fuel coal

1.3.6 Technology-based Waste Treatment Industry – Intelligent Management Tool Development

Why Should We Use AI

Audit Manpower Is Limited, Intelligent Transformation Is Urgently Needed

Although the Environmental Protection Administration is gradually building information systems and using GPS for flow tracking and management to ensure smooth reporting and management of industrial waste, there are still some issues to be researched and planned to improve the implementation efficiency of the handling capacity, system management, and inspection and punishment, etc. In a word, there is still no way for the industry to know whether the clearing and transport processes are lawful. If the tracking of waste cannot be extended to the access control of the treatment plant, the waste is likely to be discarded, and if it is done one day later, there will be a risk of indiscriminate dumping.

As the central authority is actively promoting the E-government, it is no longer possible to simply increase the inspection manpower or resources to tighten the control of factory operations; on the other hand, various intelligent technologies such as the Internet of Things, automated services, artificial intelligence, and 4G/5G mobile communications are maturing, and more importantly, these intelligent technologies are spreading rapidly, and have reached the life of every person rather than being the monopoly of a handful of technologists.

Improvements and Impacts after Implementation

Enhance the tracking and management of vehicles for clearing and transporting general industrial waste

For the Group's customers, the number of users grew by about 1,000 in 2022, with an annual contract volume of more than 100,000 tons. The Group has achieved certain management results in related tracking and management, and realized mutual data transmission and retrieval among systems and obtained complete clearing and transport paths by connecting to the Environmental Protection Administration's "Real-time Monitoring System for Industrial Waste Clearing and Transport Equipment (GPS)". In addition, we can also plan and guide the clearing companies to install video cameras to monitor the clearing and transport processes, integrate the camera images with the GPS path, and automatically analyze and report the clearing and transport events according to laws, so as to make the waste clearing and transport process transparent; and through the integration of information software and hardware, strictly carry out the audits to eliminate frauds. At present, the number of waste disposal and management users through the system has exceeded 10,000, and the weight of waste has reached more than 100,000, all of which are tracked and effectively handled by the intelligent tracking management to provide users with perfect services.

During the process, we make continuous updates through connecting with the EPA, establish the system for online reporting and simplifying the application process and updating the waste reporting related information to enhance the completeness of the data and bring convenience to users, such as providing batches of proper documents and batch output to improve the overall benefits of the treatment plants.

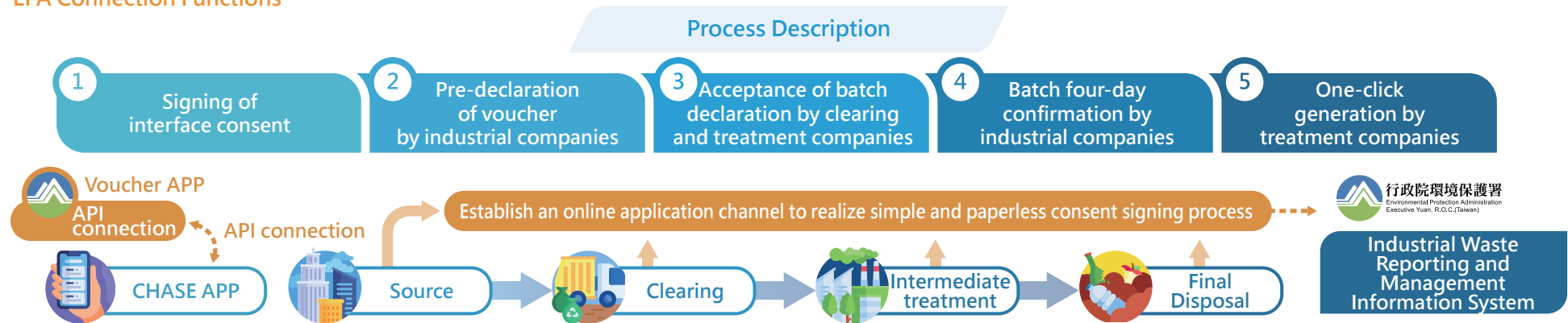
General incinerator refuses to accept industrial waste from other counties and cities

There is an imbalance between supply and demand for waste treatment, and news of garbage trucks lining up outside incinerator plants is often heard. In order to facilitate proper and prioritized treatment of waste produced in Kaohsiung, the Kaohsiung Environmental Protection Bureau has integrated the incineration plants in Kaohsiung (South Area Plant, Gangshan Plant, and Renwu Plant) through information-based management to control the incoming waste acceptance, treatment and other related operations. Kaohsiung City announced that from the end of September 2021, Gangshan and Renwu incinerators would refuse to accept incoming industrial waste from other counties and cities.

In terms of implementation, due to the fact that the production source industrial companies (especially non-regulated sources) are of small clearing and transport volume, low clearing and transport frequency, and are unfamiliar with the government regulations on waste reporting and auditing operations, the clearing industry has become a key player dominating the treatment of waste, which in turn leads to the clearing companies secretly carrying the waste from other counties and cities when clearing the waste of Kaohsiung. Although the EPA has divided Taiwan's counties and cities into five regions, and all counties and cities in each region coordinate with each other to treat waste, in order to implement the principle of prioritizing waste disposal in Kaohsiung, it is necessary to utilize the city's general industrial waste clearing and transport GPS paths and the clearing and transport status, to ensure that the waste treatment capacity of Kaohsiung can be retained for its own industrial companies.

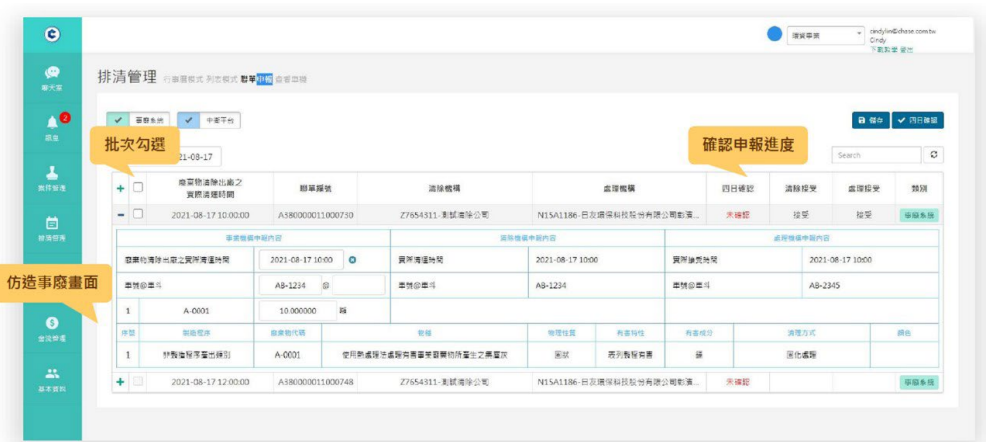


▶ EPA Connection Functions



Simplified paperless online consent application

After logging in, the industrial companies will see the copy declaration screen (synchronized to EPA)



In the future, we will design the clearing and transport tracking management information system, and connect it to the Kaohsiung City Waste Scheduling Platform to obtain information on vehicles scheduled to enter the plant on the same day. At the same time, by connecting to the EPA's GPS system, we will be able to track vehicles scheduled to enter the plant, so that users can check the GPS driving path on the system, and if we obtain the camera image on the vehicle, we will be able to monitor the surrounding conditions of the clearing and transport vehicles directly in the office, because the cameras (4) are installed on all sides of the vehicle, thus greatly reducing the vehicle accompanying cost. In addition, we can select areas with high risk of discarding through the electronic fence, and if the transport vehicles are getting close to those suspicious areas, the system will automatically send out abnormal alarms, so as to achieve the purpose of automated and intelligent monitoring and control.

1.4 Operational Highlights

1.4.1 About Cleanaway

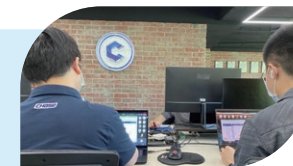
Basic Information – Organization and Business Locations Profile

Company Name	CLEANAWAY Company Limited
Ownership and Legal Form	Listed Company Limited by Shares
Establishment Date	May 4, 1995
Head Office	1F, No.308, Zhongshan S. Rd., Gangshan Dist., Kaohsiung City 820, Taiwan (R.O.C.)
Main Industry	Others – Environmental protection and greening service industry
Main Products or Services	<ol style="list-style-type: none"> 1. Industrial waste intermediate solidification service; 2. Industrial waste burying service; 3. Industrial waste clearing, transport and excavation services; 4. Sales of various paper tubes and paper products
Paid-in capital	NTD 1,088,880 thousand
Net sales	NTD 5,244,065,281
Number of Employees	311

▀ Taipei

Waste Platform

Integrate AI and big data analysis technology to create a waste information management platform and provide customers with one-stop clearing, transport and treatment services.



▀ Taoyuan

Recycling

We are specialized in recycling technologies for waste optical discs, waste circuit boards and metals, and developing sustainable engineering strategies.



Waste to Energy

In line with Taiwan's energy transformation program, we have invested in renewable energy power generation business, and is committed to converting waste into green power and reducing the reliance on fossil fuels in Taiwan.



▀ Chiayi

Recycling

Use the papermaking technology with a history of more than 35 years, implement material recycling with 100% recycled paper, and promote energy and resource integration toward low-carbon and green energy manufacturing.

▀ Kaohsiung

Final Disposal

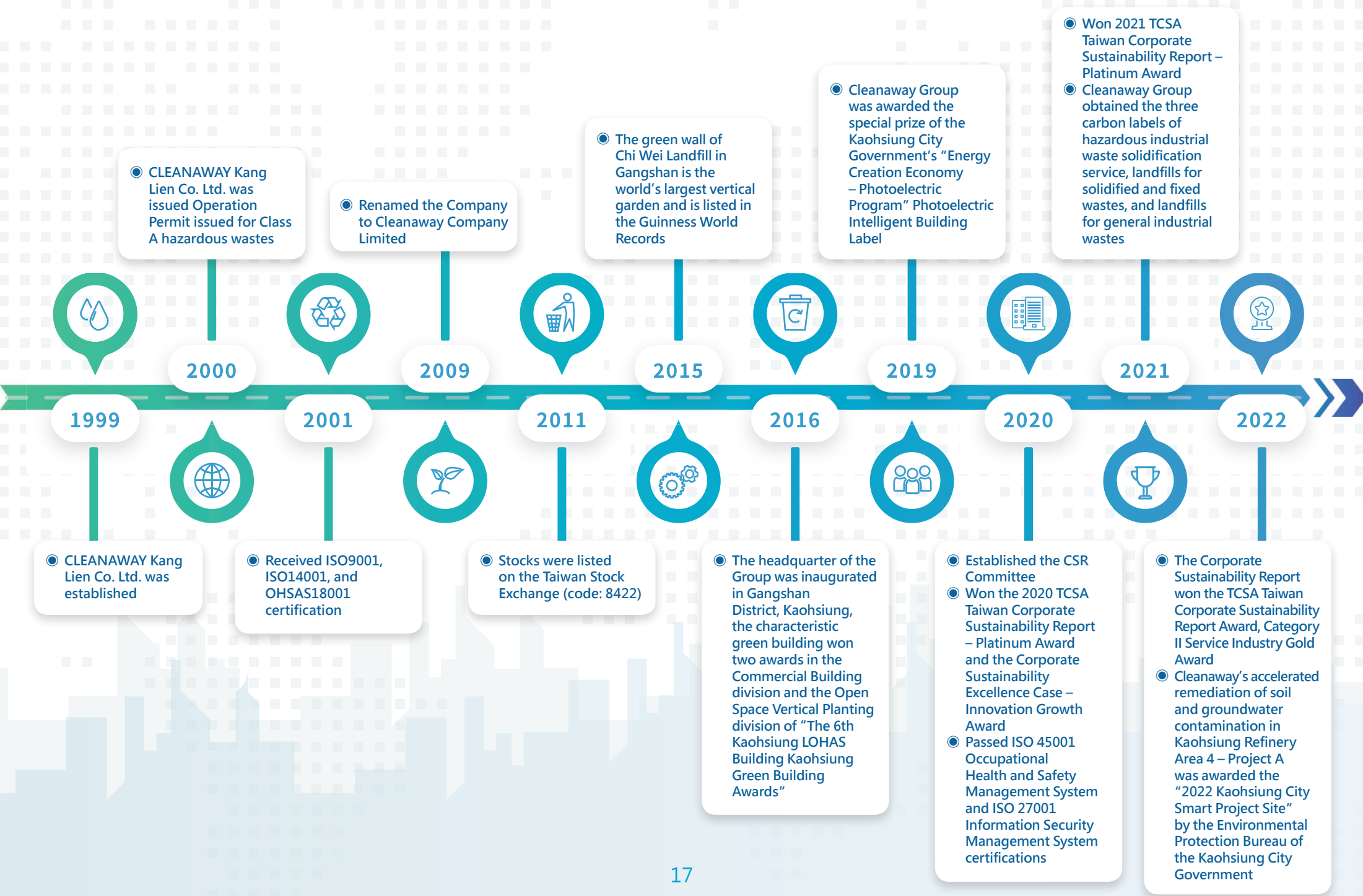
We have the largest private landfill and hazardous waste solidification plant in Taiwan, are committed to properly disposing of industrial waste in accordance with standards stricter than regulations, and are investing in soil pollution remediation to revitalize and restore national soil resources.



Incineration

As a professional hazardous waste incineration plant, we cooperate with SUEZ (France), the world's second-largest environmental group to introduce the world's top treatment technology and equipment to raise the waste treatment level in Taiwan.





























1.4.2 Business locations

- In 2022, the main business locations of the Cleanaway Group are as follows:



























The following is a list of companies included in the consolidated financial statements for the current year. The Company has included significant business locations in this report:

Companies included in this report

Country	Location Name	Type of product or service	Type of customer	Significant business location	Entity in Consolidated Financial Statements
Taiwan	 Top-Comment Resources	 Labor Service	 Firms	Yes	Yes
Taiwan	 Cleanaway Enterprise	 Others	 Firms	Yes	Yes
Taiwan	 Cleanaway Labor Service	 Labor Service	 Firms	Yes	Yes
Taiwan	 Chi Wei	 Labor Service	 Firms	Yes	Yes
Taiwan	 Solidification plant	 Labor Service	 Firms	Yes	Yes
Taiwan	 Da Tsang	 Others	 Firms	Yes	Yes
Taiwan	 Da Ning	 Labor Service	 Firms	Yes	Yes
Taiwan	 Kang Lien	 Labor Service	 Firms	Yes	Yes

Companies not included in this report

Country	Location Name	Type of product or service	Type of customer	Significant business locations Note	Consolidated Financial Statements	Entity in Reason for exclusion
Taiwan	 CCL Investment	 Holding Company Limited	-	No	Yes	Not a significant business location
Taiwan	 Cleanaway Energy	 Waste disposal	 Firms	No	Yes	Not a significant business location
Taiwan	 Da Chao Circular Economy	 Livestock husbandry, agriculture and animal husbandry circular economy related businesses	 Firms	No	Yes	Not a significant business location
Taiwan	 Da Cheng Recycling	 Waste disposal	 Firms	No	Yes	Not a significant business location
Taiwan	 Da Chuang Green Energy	 Solar power generation industry	 Firms	No	Yes	Not a significant business location
Taiwan	 Cowin Environmental Resources	 Waste incineration and physicochemical treatment	 Firms	No	No	Having no substantial control and not an entity in Consolidated Financial Statements
Taiwan	 Chung Tai Resource	 Recycling of waste light sources and electronic wastes	 Firms	No	No	Having no substantial control and not an entity in Consolidated Financial Statements
Taiwan	 Chase Sustainability Technology	 Self-service platform for industrial waste clearing, transport and disposal  Sustainability management consulting and platform services	 Firms	No	No	Having no substantial control and not an entity in Consolidated Financial Statements

Note: In addition to the above locations, the remaining subsidiaries in the consolidated financial statements are also not included in this report because they are not significant business locations, are not substantially controlled, or are general investment holding companies. For a complete list of subsidiaries in the consolidated financial statements of Cleanaway, please refer to the Company's 2022 Annual Report.

1.5 Negotiation of Stakeholders

1.5.1 Type of Stakeholders and Communication


• Identification of Stakeholders

Based on the persistent belief and original intention of “Looking into the Future, Environmental Sustainability”, Cleanaway continuously listens to the voices of stakeholders, takes the needs and expectations of stakeholders as a reference for Cleanaway’s decision-making, responds appropriately and clearly to the issues that stakeholders are concerned about, discloses relevant data and information, and creates and shares the greatest benefits with stakeholders.






The Sustainable Development Committee, the ESG Executive Team and external consultants have discussed all stakeholders related to Cleanaway. Based on the five principles of the new Stakeholder Engagement Standard, AA1000 SES 2015 (Dependency, Responsibility, Tension, Influence, and Diverse Perspectives), the members of the Sustainable Development Committee and the ESG Executive Team determine the scores of each stakeholder in these five aspects (0 to 5, with a higher score representing a higher level of engagement), and finally total the five scores; those with a total score of more than 15 are considered to be the stakeholders directly related to the Company. In 2022, we have identified six stakeholders: employees, customers, shareholders (investors), suppliers, community/local residents, and government authorities, and have prepared a stakeholder questionnaire for the survey.

• Stakeholder Communication Channels

In order to understand the concerns of different stakeholders and respond to their questions, we have set up different communication channels so that stakeholders can give their opinions at any time and get replied by specialized personnel. The communication channels and issues of concern for each stakeholder in 2022 are listed below:

Type of Stakeholder	Stakeholder's significance to the company	Communication channel (frequency)	Focus areas	Response Department	Response measures
 Employees	Employees are Cleanaway's most valuable asset. The employees are responsible for rendering service to maintain operation.	Management and Labor Council (Quarterly) Various internal meetings (Timely) Staff Forum (At least once a year) Employee welfare committee (Timely) Internal message board (Timely) General manager mailbox (Timely)	<ul style="list-style-type: none"> Labor Rights and Labor Relation Internal Training Occupational Safety and Health Regulatory Compliance Human Rights Policy 	Personnel Section, Welfare Committee	2.5 Responsible Commercial Behavior 4.2 Create Opportunities for Enhancing Abilities and Skills 4.3 Happy and Friendly Workplace 4.4 Protect Workplace Safety

Continued

Type of Stakeholder	Stakeholder's significance to the company	Communication channel (frequency)	Focus areas	Response Department	Response measures
 Customers	The customers trust Cleanaway to treat their waste properly so as to bring up a clean and safe living place in Taiwan and ensure sustainable environmental development.	Web Message System (Timely) Onsite visit (Timely) Telephone Communication (Timely)	<ul style="list-style-type: none"> Customer Services and Products Waste Management Air Quality Management Risk Management Regulatory Compliance Sustainable Development Strategy Supply Chain Management 	Business Department	1.3 Sustainability Blueprint 2.4 Risk Management 2.5 Responsible Commercial Behavior 2.6 Sustainable Supply Chain 3.4 Waste Regulation
 Investors/Shareholders	As the funders of Cleanaway, they indeed provide fair and transparent information.	Annual General Meeting (Annually) Investor conference (Timely) Public material information (Timely) Financial report (Annually) Investor Relations website (Timely) Web Message System (Timely) Telephone Communication (Timely)	<ul style="list-style-type: none"> Financial performance Corporate Governance System Risk Management Regulatory Compliance Waste Management 	Finance Department	2.1 Group Governance Structure 2.2 Financial Performance 2.4 Risk Management 2.5 Responsible Commercial Behavior 3.4 Waste Regulation
 Suppliers	Supplier of materials, equipment and apparatus will provide Cleanaway with qualified and suitable raw materials to jointly establish a sustainable supply chain.	Review report or meeting (Timely) Web Message System (Timely) Telephone Communication (Timely)	<ul style="list-style-type: none"> Supply Chain Management Customer Services and Products Financial performance Regulatory Compliance Sustainable Development Strategy Circular Economy 	Operations Department	1.3 Sustainability Blueprint 2.2 Financial Performance 2.5 Responsible Commercial Behavior 2.6 Sustainable Supply Chain
 Community/Local Residents	The supervisor of environment protection when Cleanaway operates, and the main recipients of Cleanaway's environmental education and community feedback.	Telephone Communication (Timely) Web Message System (Timely) Environmental education activities (Timely) Charitable activities (Timely)	<ul style="list-style-type: none"> Social engagement Waste Management Water Resource Management Climate Change Risk Management Air Quality Management 	Sustainable Development Department	2.3 Climate Change Risk Management TCFD 3.3 Water Resource Management 3.4 Waste Regulation 4.1 Carbon Management and Carbon Reduction Program 5.2 Social Engagement Achievements
 Government Authorities	As a listed company, Cleanaway complies with Company Act, Securities and Exchange Act and other environmental related regulations, and is subject to supervision and management of government authorities at all levels.	Telephone Communication (Timely) Web Message System (Timely) Public Hearing (Timely) Review Meeting (Timely)	<ul style="list-style-type: none"> Energy Management Greenhouse Gas Emissions Waste Management Air Quality Management Circular Economy Water Resource Management 	Finance Department Administration Department Operations Department Technology Department	1.3 Sustainability Blueprint 3.1 Carbon Management and Carbon Reduction Program 3.2 Energy Governance and Conservation 3.3 Water Resource Management 3.4 Waste Regulation

1.5.2 Material Issues Evaluation Process

Based on the impacts of the Company's operating activities, industrial model, and value chain, and through stakeholder engagement and expert advisors, the Sustainable Development Committee of Cleanaway annually evaluates the Company's sustainability issues that have significant impacts on stakeholders in accordance with the materiality, completeness, and inclusiveness of stakeholders as required in the GRI 3 Standards (2021 version), and reports the above material issues identification results to the Board of Directors for the resolution on the key sustainability issues for the current period. The Sustainable Development Committee is responsible for deciding on the key sustainability issues for the current period. The detailed evaluation process is as follows:

• Step 1. Identification of Material Issues

- (1) Summarize industry attributes: Check the Company's business items, business model, product or service type, industry type and worker type, and analyze all industry attributes related to the Company.
- (2) Identify sustainability issues: In addition to incorporating significant positive and negative events that have actually occurred in the past, the Company also considers potential risks or opportunities through stakeholder communication feedback, global regulations and standards (Global Risks Report, United Nations Sustainable Development Goals, TCFD, GRI, and SASB, etc.), industry regulations and standards, and industry benchmark companies, in order to make a complete inventory of sustainability issues related to the Company. A total of 26 sustainability issues were identified during the current reporting period.

• Step 2. Determination of material issues

- (1) Stakeholder feedback: We adopted interviews, focus sessions and questionnaires to evaluate the "impact" and "likelihood of occurrence" of all positive and negative sustainability issues with our senior management, the Sustainable Development Committee and ESG Executive Team, experts and external stakeholders. A total of 276 questionnaires were collected in 2022, including 16 internal questionnaires and 260 external questionnaires.
- (2) Evaluation on impact: Different calculation criteria were set according to the nature of the sustainability issues. The criteria for negative issues included the severity of the event, the scope of impact, and whether the event was reversible or not; the criteria for positive issues included the impact extent and scope of the event.
- (3) Evaluation on likelihood of occurrence: Calculated based on the probability of the impact.
- (4) Ranking and determination of on material issues: After calculating the impact and likelihood of occurrence of each issue, the Sustainable Development Committee set the materiality threshold scores for these two indicators, screened the material issues for the period, and reported them to the senior management for discussion and approval of the identification results of material issues.

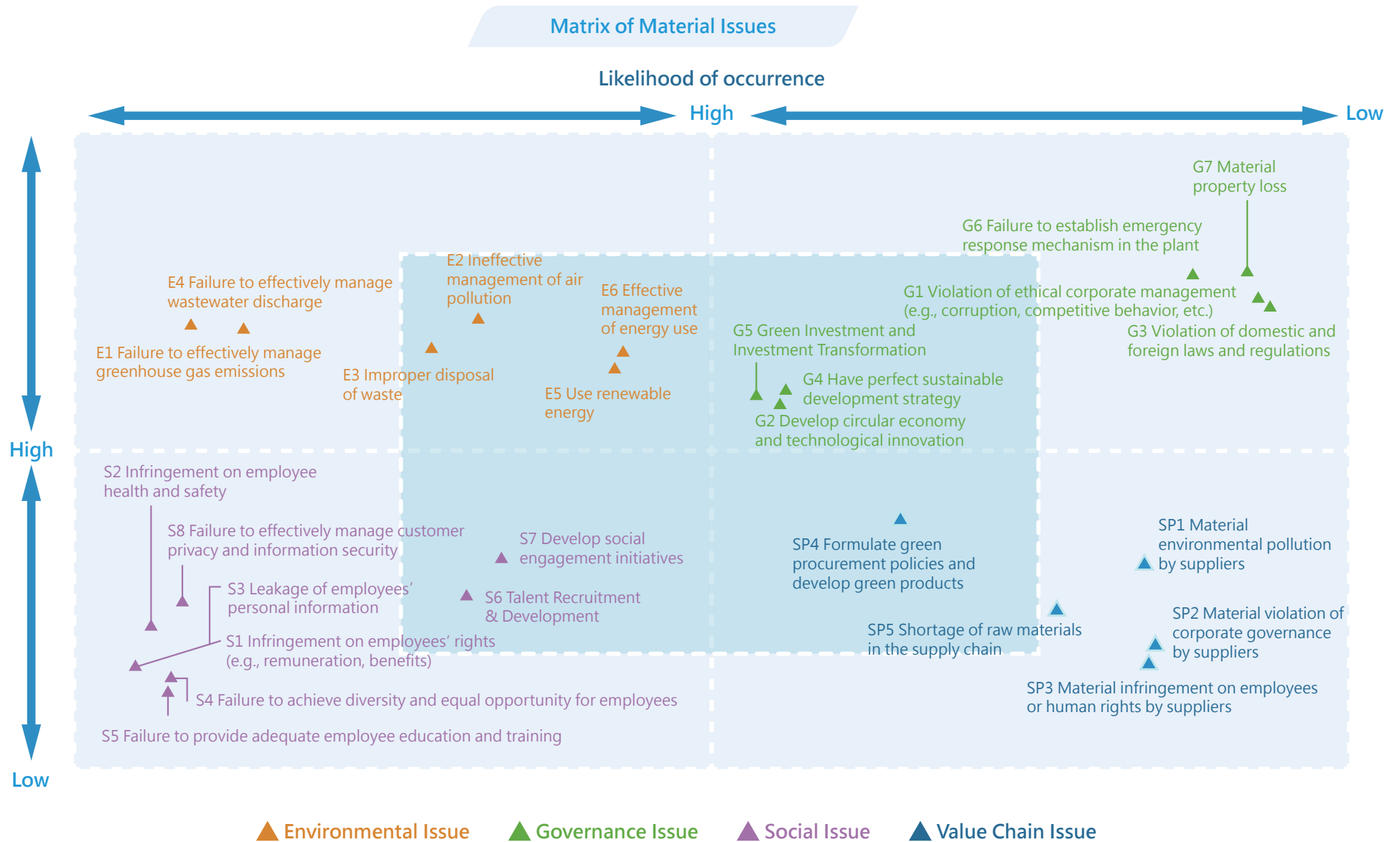
The thresholds for impact and likelihood of occurrence for the current period were 5.5 and 4.5 points, respectively, and a total of nine material issues were included. In addition, after discussion with senior management, air quality management and waste management were also included in the material issues as they are required to be disclosed by the SASB industry standards; therefore, there were 10 impact events this year, which corresponded to 9 ESG material issues respectively.





• Step 3. Report on Material Issue Information

The Sustainable Development Committee determined the international standards applicable to the material issues, reviewed the management policies and objectives of the material issues, and collected annual data to ensure that important sustainability information had been fully disclosed in this report, thus fully responding to the issues of concern to stakeholders. Upon completion of the annual Corporate Sustainability Report, the ESG Executive Team reviewed the contents of the report again and submitted it to the Board of Directors or other senior management for review and resolution to ensure that the information was not improperly disclosed or misrepresented.

• Step 4. Continuous Review





We will review the implementation of policies on material issues and the completion rate of goals annually to optimize internal management policies and qualitative and quantitative goals; we also compare the differences between the previous and subsequent issues after identifying the material issues for the next period, investigate the reasons for the differences, and give the reasons in the report.



Category	Impact Event	Corresponding Material Issue
 Governance	Have perfect sustainable development strategy	Sustainable Development Strategy
	Green Investment and Investment Transformation	Green Investment
	Develop circular economy and technological innovation	Circular Economy
 Environmental	Use renewable energy Effective management of energy use	Energy Management
	Ineffective management of air pollution	Air Quality Management
	Improper disposal of waste	Waste Management
 Social	Talent Recruitment & Development	Talent Management
	Develop social engagement initiatives	Social engagement
 Value Chain	Formulate green procurement policies and develop green products	Green Procurement and Green Products

Compared with the material issue identification results of the previous period, due to new criteria for identifying material issues were adopted, there were significant change in the issues, including the addition of governance, social, and value chain issues (green investment, circular economy, talent management, social engagement, green procurement and green products), while the issues of regulatory compliance, water resource management, occupational health and safety of employees, and the protection of employees' welfare and rights in the previous period were excluded from the list of material issues in the current period. However, we will maintain our established management procedures and regularly optimize our business strategies in accordance with actual operating conditions and international trends.

Comparison for Material Issues in the past three years

Category	2020	2021	2022
 Governance	Ethical corporate management	-	-
	Corporate Governance	-	Sustainable Development Strategy
	-	Economic Performance	Green Investment
	-	-	Circular Economy
 Environmental	-	Energy Management	Energy Management
	-	Air Quality Management	Air Quality Management
	Waste	Waste Management	Waste Management
	Compliance with environmental protection regulations	Regulatory Compliance	-
	-	Water Resource Management	-
 Social	Occupational Safety and Health	Employee Occupational Health and Safety	-
	-	Employee Welfare and Rights Protection	-
	-	Employee Training and Education	Talent Management
	Local Communities	-	Social engagement
	Compliance with socioeconomic regulations	Regulatory Compliance	-
 Value Chain	R&D and innovation of products and services	-	Green Procurement and Green Products

1.5.3 Material Issue Impact Management

Material Issue Management Strategy

The Board of Directors of Cleanaway is the highest decision-making and supervisory unit for material issues management of the Company. The Sustainable Development Committee is assigned to be responsible for the sustainability material issues management project, including checking and reviewing material issues management policies and proposing optimization and improvement suggestions; establishing diversified communication channels for stakeholders, regularly summarizing stakeholders' suggestions, judging the type and impact of their opinions, and formulating the countermeasures or response policies and reporting to the Board of Directors. The Board of Directors meets with the Sustainable Development Committee at least once a year to discuss the management of material issues and set the direction and strategic goals for sustainable development in the coming year.

Impact Boundary and Goal Achievement of Material Issues

Material Issues	Corresponding GRI Issue	Impact of Material Issue		Material Issue Management Policy	Scope of Influence (Boundary)			KPI and Goals		Management Evaluation Mechanism	Corresponding Section in This Report
		Positive Impact	Negative Impact		Upstream	Company Operations	Downstream	Completion Progress in 2022	Short-term Goals in 2025		
Green Investment	GRI 201-2	▲	-	Incorporate environmental issues into investment decisions to enhance organizational operation resilience, e.g., using funds for green investment projects such as renewable energy and greenhouse gas reduction.		√		In 2022, the investment amount was about NT\$500 million, accounting for about 5% of the green investment amount. (Da Chuang/Top-Comment/Cleanaway Energy)	Achieve 100% of green investment amount.	Financial statistics information	1.3.3 Practice Low Carbon and Net Zero – The Group's Green Energy Investments
Circular Economy		▲		Invest in research and development resources of recycled materials to give competitive advantage to the Group in the green industry, meet the international net-zero trend and enhance overall competitiveness.	√	√		Da Chao, Da Cheng, Chi Din and other subsidiaries are all in the planning stage of circular economy strategy in 2022, and Chi Din expects to complete the plan in the second half of 2023.	Enhance the research and development technologies of circular economy to reduce the final waste disposal proportion.	Internal KPI control	1.3.4 Replace Fuel Coal – Top-Comment's Solid Recovered Fuel Turns Waste into Energy 1.3.5 Expand Diversified Green Products – Research and Development of Recycled Pellets
Energy Management	GRI 302	▲		<ol style="list-style-type: none"> 1. Introduce ISO50001 energy management system to implement energy management policy and join EP100 energy international initiative organization. 2. Implement ISO14067 for waste disposal services and obtain the carbon footprint label. 3. Install renewable energy power generation equipment: landfill gas recovery, solar power generation in the plant (site) area. 		√		<ol style="list-style-type: none"> 1. Applied for energy conservation program of Industrial Technology Research Institute (ITRI) to install variable frequency energy-saving modules for the motor equipment in solidification plant, and completed the installation of six units in August 2022. 2. Applied for the guidance program of the Automotive Research & Testing Center (ARTC) and planned to install OBD systems for clearing and transport vehicles. 	<ol style="list-style-type: none"> 1. Achieve energy performance according to the EP100 international energy initiative organization. 2. Continue to obtain the carbon label for waste disposal services. 3. Increase the proportion of green power utilization in the Group. 	<ol style="list-style-type: none"> 1. ISO 50001 Energy Management System. 2. ISO 14067 Carbon Footprint Verification. 	3.2 Energy Governance and Conservation

Continued

Material Issues	Corresponding GRI Issue	Impact of Material Issue		Material Issue Management Policy	Scope of Influence (Boundary)			KPI and Goals		Management Evaluation Mechanism	Corresponding Section in This Report
		Positive Impact	Negative Impact		Upstream	Company Operations	Downstream	Completion Progress in 2022	Short-term Goals in 2025		
Air Quality Management	GRI 305	-	●	Regularly test air pollutant emissions from solidification plant processes to ensure they are below regulatory emission standards.		√	√	The air pollutant emissions from the solidification plant processes were below regulatory emission standards.	The air pollutant emissions from the solidification plant processes are below regulatory emission standards.	Internal Tracking	3.1 Carbon Management and Carbon Reduction Program
Waste Management	GRI 306	-	▲	Continuously promote the implementation of the environmental management system, enhance environmental performance, strengthen waste disposal technology, enhance the control and improvement of pollution sources, implement waste reduction, and strive for green life and comprehensive energy conservation and carbon reduction.		√		Derived waste generation was reduced by 46.00%. (Base year: 2018)	The amount of waste generated from the operating activities of solidification plants and landfill sites is reduced by 20%. (Base year: 2018)	ISO 14001 Environmental Management System	3.4 Waste Regulation
Talent Management	GRI 401	▲	●	Provide a friendly working environment and formulate diversified employee hiring and training policies; ensure equality in the recruiting system, and attract and retain key personnel without gender discrimination.		√		In 2022, the turnover rate was 10.8%, and the average time of education and training for employees was 6 hours.	<ol style="list-style-type: none"> 1. Acceptance rate of offer letters (entry rate): 80%. 2. Pass rate in probation period: 90%. 3. Reduce employee turnover rate to 8%. 4. Increase average training hours per employee per year to 8 hours. 	Internal KPI control ISO 45001 Occupational Safety and Health Management System	4.1 Diversified Workplace and Manpower Recruitment 4.2 Create Opportunities for Enhancing Abilities and Skills
Social engagement	GRI 413	▲	-	Attach importance to the well-being of society, local communities and customers, and promote community development and integration through public donations and environmental education.			√	<ol style="list-style-type: none"> 1. Launched 19 environmental education service sessions in 2022, benefiting 673 persons. 2. Spent approximately NT\$24 million on humanistic care in 2022. 	<ol style="list-style-type: none"> 1. Apply for environmental education center certified by Environmental Training Center, hoping to become the first sustainable environmental education center in Southern Taiwan that focuses on waste management and circular economy. 2. Continue to increase the number of beneficiaries of social welfare activities related to our business. 	Internal Tracking Records	5.1 Social Inclusion Goals and Strategies 5.2 Social Engagement Achievements
Green Procurement and Green Products	GRI 204	●		Implement green procurement and local purchasing policies to effectively manage the supply chain and achieve the sustainable development goals of responsible production and consumption.	√	√		<ol style="list-style-type: none"> 1. The amount of green procurement in 2022 was NT\$8,546,472. 2. The proportion of local purchasing by Cleanaway and Top-Comment was 100% and 92% respectively. 3. The proportion of qualified suppliers signing the letter of commitment was 67%. 	<ol style="list-style-type: none"> 1. Increase the proportion of suppliers signing the letter of commitment to 100%. 	Internal Tracking Records	2.6 Sustainable Supply Chain

Note 1: ● represents an actual impact (actual risk or opportunity), ▲ represents a potential impact (potential risk or opportunity).

Note 2: This list of management policies only lists the key policies or strategies and management goals. Please refer to the respective sections for detailed management policies.

CHAPTER 2

Corporate Governance and Risk Control

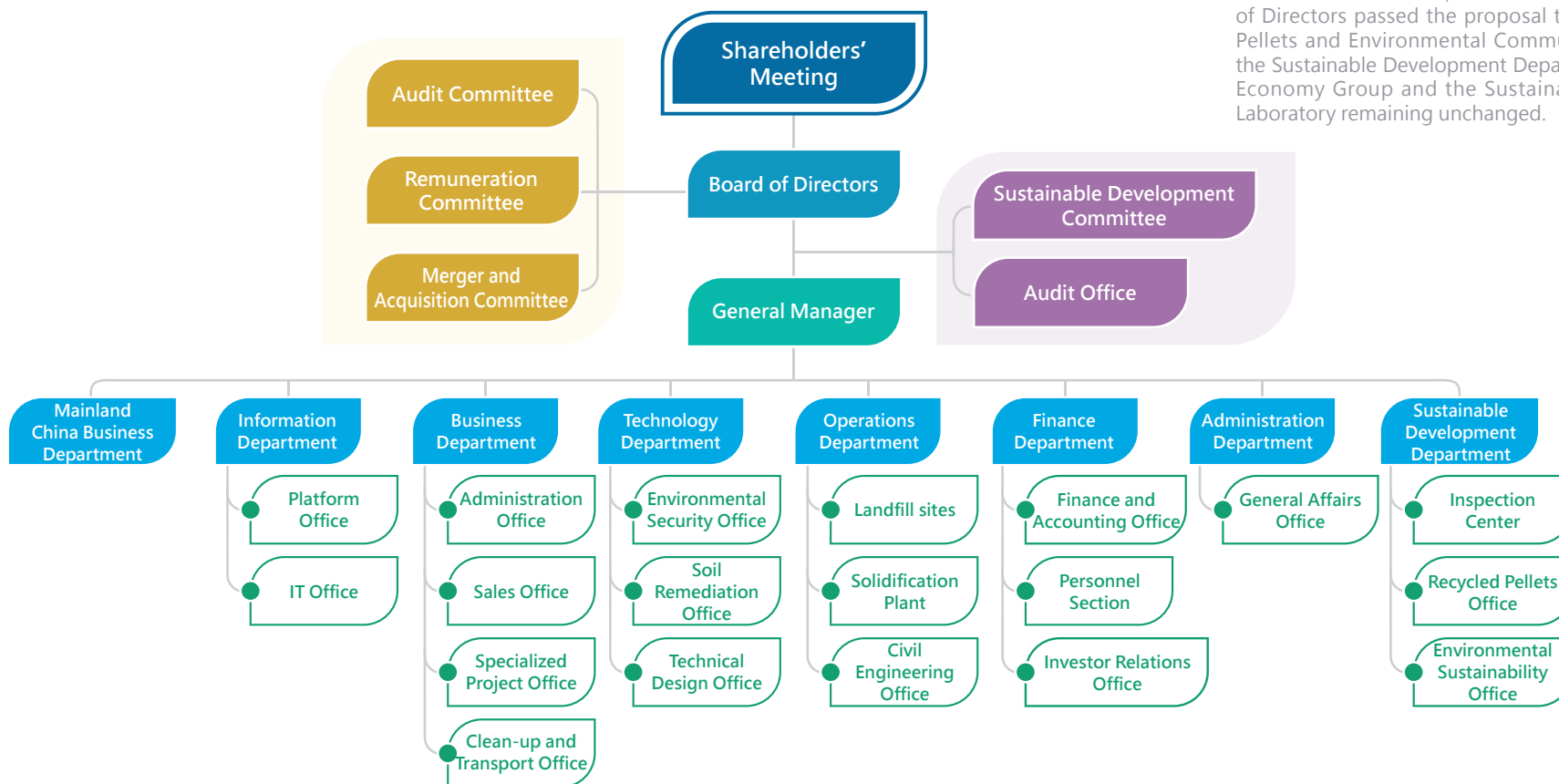
- 2.1 Group Governance Structure
- 2.2 Financial performance
- 2.3 Climate Change Risk Management TCFD
- 2.4 Risk Management
- 2.5 Responsible Commercial Behavior
- 2.6 Sustainable Supply Chain

2.1 Group Governance Structure

2.1.1 Governance Structure

The highest authority of the Company is the Shareholders' Meeting, and the shareholders elect the directors to form the Board of Directors, which is the highest governance unit of the Company and is responsible for the Company's overall business decisions. Functional committees are established under the Board of Directors, including the Audit Committee, the Remuneration Committee, the Special Committee for Merger/Consolidation and Acquisition, and the Sustainable Development Committee, to oversee the Company's internal control system, the remuneration to directors and managers, the Company's financial statements, and the key ESG performance objectives, etc. Please refer to 2.1.2 for the detailed job description and composition of the committee.

Organizational Chart of Cleanaway Company Limited



Note: In order to meet the operational needs and implement the actual businesses, on February 24, 2023, the Board of Directors passed the proposal to change the Recycled Pellets and Environmental Communication Group under the Sustainable Development Department into the Circular Economy Group and the Sustainability Group, with the Laboratory remaining unchanged.

• Board of Directors

The Board of Directors plays a balancing and supervisory role between the owners and the operators of the Company, exercises the rights and obligations granted by the shareholders, manages and decides on the Company's operational policies for the upper layer; decides on the Company's operation management personnel and supervises the Company's operations for the lower layer. In principle, the Board of Directors meets quarterly. In 2022, the Board of Directors held 8 meetings, with an average attendance rate of 100%. The main duties and authorities of the Board of Directors include:

1. Formulate the Company's business policies
2. Approve important regulations and contracts of the Company
3. Appoint and dismiss the management personnel
4. Establish or dissolve branch offices
5. Approve budgets and financial reports
6. Decide on the pledge, transaction or other disposal of the Company's assets.
7. Decide on loans to be made by the Company from banks
8. Give suggestions on the proposals at the shareholders' meeting on the amendment of the Articles of Incorporation, change of capital, dissolution of the Company and merger of the Company.
9. Give suggestions on the proposals at the shareholders' meeting on the distribution of earnings of the Company
10. Decision on other important matters



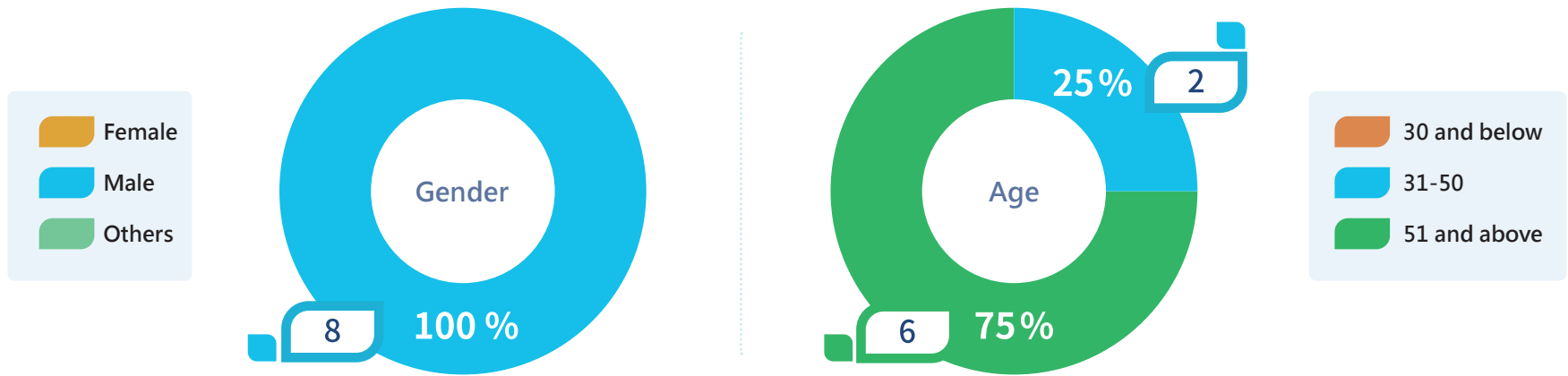
• Diversity of the Board of Directors

In order to strengthen corporate governance and promote the sound development of the composition and structure of the Board of Directors, the Company has stated in Article 20 of the "Corporate Governance Best Practice Principles" that the Company will consider diversifying the composition of the Board of Directors and formulate appropriate diversification policies with respect to the Company's own operation, business model and development needs. The Company adopts the candidate nomination system for directors, and the directors has a term of office of three years in principle and can be re-elected. The current Board of Directors consists of 8 directors (including 4 independent directors), with the term of office from July 1, 2022 to June 30, 2025. For the diversity information of the Board of Directors, please refer to: [Cleanaway 2022 Annual Report, page 15](#).

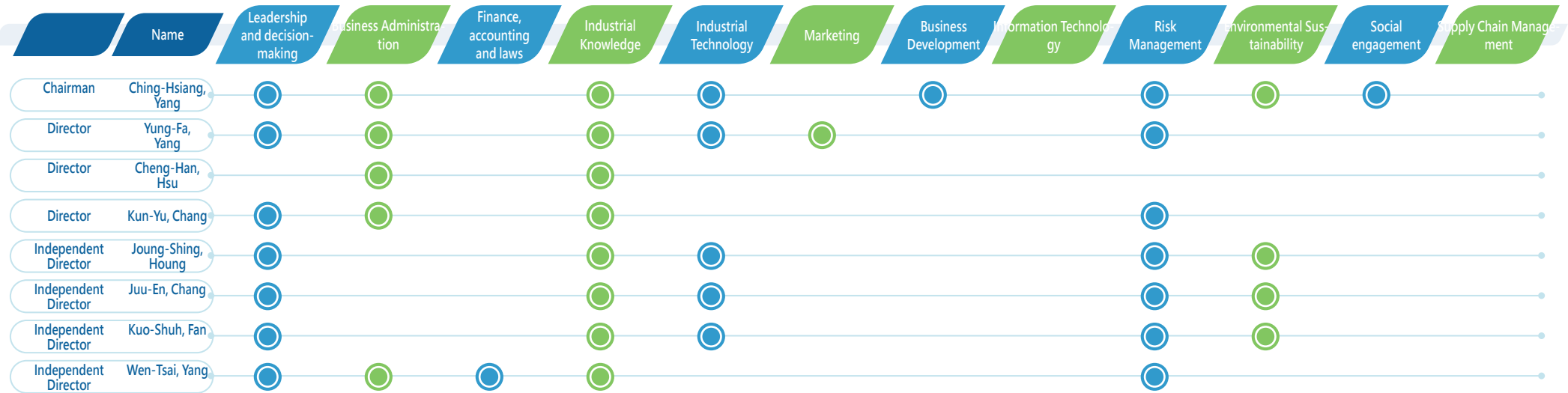
Information on Directors

Title	Term	Name	Gender	Age	Concurrent position in the Company	Important positions concurrently held in other companies	Functional Committee		
							Audit Committee	Remuneration Committee	ESG Committee
Chairman	3	Ching-Hsiang, Yang	Male	51 and above	-	<ul style="list-style-type: none"> Chairman of Da Ning Co., Ltd. Director of CCL Investment Holding Company Limited, Cleanaway Shanghai Management Holding Company Limited, Cleanaway Zoucheng Holding Company Limited, Cleanaway Zhejiang Holding Company Limited, and Erh Cheng Investment Holding Company Limited 			
Director	3	Yung-Fa, Yang	Male	31-50	General Manager of the Company	<ul style="list-style-type: none"> Chairman of Cleanaway Energy Company Limited, Da Chao Circular Economy Company Limited, Top-Comment Resources Company Limited, Da Cheng Recycling Company Limited, Chase Sustainability Technology Co., Ltd., George Yang Co., Ltd., Erh Cheng Investment Holding Company Limited Director of Da Tsang Industrial Company Limited, Da Ning Co., Ltd., Kang Lien Enterprise Company Limited, Chi Wei Company Limited, CCL Investment Holding Company Limited, Cleanaway Enterprise Company Limited, Da Chuang Green Energy Company Limited, Chi Din Materials Co. Ltd., Cowin Environmental Resources Limited, Chung Tai Resource Technology Corp., Wei Ho Industrial Company Limited, Hao Da Enterprise Company Limited General Manager of Da Tsang Industrial Company Limited, Cleanaway Enterprise Company Limited, Chi Wei Company Limited, Kang Lien Enterprise Company Limited, Da Ning Co., Ltd., CCL Investment Holding Company Limited, Da Chao Circular Economy Company Limited, Da Chuang Green Energy Company Limited, Da Cheng Recycling Company Limited, and Chi Din Materials Co. Ltd. 			√
Director	3	Cheng-Han, Hsu	Male	31-50	-	<ul style="list-style-type: none"> Chairman of Fu-Kuo Development Co., Ltd. Director of Baiham Enterprise Co., Ltd., Chan Lien Co., Ltd., and Fu Han Investment Co., Ltd. 			
Director	3	Kun-Yu, Chang	Male	51 and above	-	-			
Independent Director	3	Joung-Shing, Houng	Male	51 and above	-	<ul style="list-style-type: none"> Director of Environmental Resources Research and Development Foundation (EPA Think Tank) Adjunct Professor of Institute of Environmental Engineering and Management, National Taipei University of Technology 	√	√	
Independent Director	3	Juu-En, Chang	Male	51 and above	-	<ul style="list-style-type: none"> Honorary Professor, Department of Environmental Engineering, National Cheng Kung University Independent Director of Green River Holding Co. Ltd. and Cheng Mei Materials Technology Corp. 	√	√	
Independent Director	3	Kuo-Shuh, Fan	Male	51 and above	-	<ul style="list-style-type: none"> Honorary President of CEITA Consultant of Taiwan Photovoltaic Industry Association 	√	√	
Independent Director	3	Wen-Tsai, Yang	Male	51 and above	-	<ul style="list-style-type: none"> Independent Director of Southeast Cement Corporation 	√	√	

Gender and Age Distribution of Directors



Distribution of Professional Competence and Experience of Directors



- **Independence of the Board of Directors**

For the current Board of Directors of the Company, independent directors account for 50% of all directors. No more than two directors of the Company are related to each other as spouses or within the second degree of kinship, and none of the directors is under any of the categories stated in Paragraph 3 of Article 26-3 of the Securities and Exchange Act.

- **Ethical corporate management**

The directors represent the Company externally and are obligated to faithfully execute the business and manage the Company, so as to avoid any misconduct from damaging the interests of the Company or others. To ensure Cleanaway's directors, managers, and all employees have committed to conduct business in accordance with the highest ethical standards, the Company sets out the principles of Ethical Corporate Management Best Practice Principles, Codes of Ethical Conduct, Operating Procedures for Preventing Insider Trading, Employee Codes of Ethical Conduct, and Procedures for Ethical Management and Guidelines for Conduct, all of which are approved by the Board of Directors and put into effect. For more information about the fulfillment of the ethical corporate management, please refer to: [Cleanaway 2022 Annual Report, pages 57-59](#).

- **Continuing Education and Training for Board of Directors**

Each year, Cleanaway arranges training courses for directors regarding their professional skills and knowledge, as well as issues related to sustainable development, in order to strengthen the professional ability of directors and the Company to cope with operational impacts. In 2022, we participated in 2 training courses arranged by the Company, with a total of 6 hours of training programs and courses. For the training programs participated by each director in 2022, please refer to: [Cleanaway 2022 Annual Report, pages 39-41](#).

- **Performance Evaluation and Remuneration System of Directors**

In accordance with Article 26 of the Company's Articles of Incorporation, remunerations to directors and supervisors shall not exceed 5% of the Company's profit for the current year, and shall be based on the Company's operating results and the performance evaluation results of the Board of Directors. The directors' performance shall be evaluated in the following aspects: mastery of the Company's objectives and tasks, understanding of directors' responsibilities, participation in the Company's operations, internal relationship management and communication, professional skills and continuing education of directors, and internal control. Reasonable remuneration shall be given for each of the evaluation items that have been included in the performance evaluation of the Board of Directors. The remunerations to directors, general manager and vice general managers shall be audited by the Remuneration Committee and the Board of Directors, and reviewed from time to time based on actual operating conditions and relevant laws and regulations, and the related remuneration shall be sufficient to recognize the responsibilities and risks assumed by them. In December 2022, the performance evaluation of the Board of Directors and the functional committees was performed and completed. In 2022, the Board of Directors, the Remuneration Committee, and the Audit Committee operated in accordance with laws and regulations, and had good interactions with the management team. In case a director should be recused for a relevant proposal, the Chairman indeed requested for the recusal of that director, and minutes of the meeting were made. The Company continues to promote the formulation of relevant corporate governance regulations to fully protect shareholders' rights and interests. The average attendance of each director at the meetings of the Board of Directors, the Remuneration Committee, and the Audit Committee was good (attendance rate: 100%). For the remunerations to directors, the range of remunerations to director and the criteria for distribution in 2022, please refer to: [Cleanaway 2022 Annual Report, pages 18-24](#).

- **Remuneration Policy of Directors and Senior Management**

The remuneration system for directors and senior management of Cleanaway is proposed by the Remuneration Committee to the Board of Directors and approved by the Board of Directors. A reasonable remuneration not exceeding 5% of the current year's profit shall be distributed to the directors based on the performance evaluation results of the directors. The remuneration to senior management is based on the industry standard and their professional ability, while bonuses are based on the company's net profit achievement and risk management, and are approved by the Chairman according to the operating performance after the Remuneration Committee has proposed the distribution principles. The retirement system for senior management is the same as that for other employees. For the remunerations to senior management and the range of remuneration in 2022, please refer to: [Cleanaway 2022 Annual Report, pages 21-24](#).

- **Severance and Retirement Policies of Directors and Senior Management**

The directors of Cleanaway receive no other severance payments during their term of office, except for the director's remuneration approved by the Remuneration Committee and the travel allowance for attending meetings in accordance with the Company's Articles of Incorporation. For General Manager, Vice General Managers and other senior management, except for the severance and retirement payments that should be reviewed and approved by the Remuneration Committee, the other severance and retirement operations are the same as those for other employees. The notice period for severance is based on local government regulations, and the number of days of notice and the calculation method for severance payment are the same as those for other employees. For details, please refer to: [Cleanaway 2022 Annual Report, pages 37 and 97](#).

- **Goals for the Board of Directors' functions and evaluation on their implementation**

1. The Company's Board of Directors exercises the duties and authorities in accordance with the laws and regulations, the Company's Articles of Incorporation, and the resolutions of the Shareholders' Meeting. In addition to possessing the professional knowledge, skills, and qualities necessary for the execution of their duties, all directors are committed to creating the greatest benefits for all shareholders in line with the principle of loyalty, honesty and duty of care.
2. In order to establish a good governance system for the Board of Directors, improve the supervisory function and strengthen the management function, the Company has formulated the rules for procedure of the Board of Directors in accordance with the regulations of the securities authorities, including the main discussion contents, the execution of operations, the information to be contained in the meeting minutes, announcements, and other matters to be followed in accordance with these rules.
3. In addition to regular self-inspection of the operation of the Board of Directors to strengthen the functions of the Board of Directors, the Company's internal auditors also prepare audit reports on the operation of the Board of Directors to comply with the requirements of the securities authorities.

For the implementation of the evaluation on the Board of Directors in 2022, please refer to: [Cleanaway 2022 Annual Report, page 26](#).

- ▶ **Recusal of Directors for Conflicts of Interest**

The Company has specified the provisions on the recusal of directors for conflicts of interests in the rules for procedure of the Board of Directors. A director himself/herself or the legal entity he or she represents who has an interest in a matter before the meeting of Board of Directors that is harmful to the interests of Cleanaway is prohibited from joining in the discussion of and voting on that matter, and is required to recuse from the discussion of and voting on that matter, and is not allowed to act as a proxy for other director in exercising his or her voting rights. The second responsibility of the Board of Directors is to provide guidance to the management team. The Board of Directors of Cleanaway will listen to the reports from the management team on economic, environmental protection and corporate social responsibility issues (including evaluation on relevant risks and opportunities, compliance with international standards, and code of professional ethics) before each quarterly meeting. The management must propose the corporate strategy to the Board of Directors. The Board must evaluate the likelihood of success of these strategies and constantly review the progress of the strategies and urge the management team to make adjustments as necessary.

Cleanaway has purchased liability insurance for directors, supervisors, and key employees. All directors and supervisors are in compliance with the requirements for further education, and all directors' non-competition and interest avoidance are truthfully recorded and disclosed on Market Observation Post System for public inquiry. The remuneration of directors and supervisors of the Company and all companies under consolidated financial statements includes transportation expenses, earning distribution for the remuneration of directors and supervisors. Transportation expenses are calculated by reference to the typical pay levels adopted by peer companies and attendance of the directors and supervisors. The remuneration distributed by earnings is determined based on the Articles of Incorporation of the Company and all companies under consolidated financial statements. The Board of Directors prepares a distribution proposal and submits it to the Shareholders' Meeting for approval; the remuneration of the general manager and vice general managers, including salary, bonuses and employee bonuses, is based on the position held and the responsibilities undertaken, referring to the standards of the same industry for similar positions and depending on the business performance results reported to the Remuneration Committee for review and determination.

For related party transactions and cross-shareholding among directors, controlling shareholders or other interested parties in 2022, please refer to: [Cleanaway 2022 Annual Report, pages 67-71 and 197-202](#).



2.1.2 Functional Committee

• Audit Committee

The Company has established the charter for the Audit Committee, which specify the responsibilities and authorities of the Committee, including:

1. To establish or amend the internal control system in accordance with Article 14-1 of the Securities and Exchange Act.
2. To evaluate the effectiveness of the internal control system.
3. To establish or amend the procedures for handling material financial operations in accordance with Article 36-1 of the Securities and Exchange Act, such as acquisition or disposal of assets, derivatives trading, lending of funds to others, and endorsement or guarantee for others.
4. Matters in which a director has a personal interest.
5. Material asset or derivative transactions.
6. Material loan of funds, endorsement or guarantee.
7. Raising, issuance or private placement of equity securities.
8. Appointment, dismissal, or remuneration of CPAs.
9. Appointment or dismissal of the finance, accounting or internal audit supervisors.
10. The annual financial report signed or sealed by the chairman, manager, and accounting supervisor, and the financial report for Q2 audited and certified by CPAs.
11. Other important matters as stipulated by the Company or the competent authorities.



Resolutions on the foregoing matters shall be approved by at least one-half of all members of the Company's Audit Committee and submitted to the Board of Directors for approval.

The current Audit Committee consists of four members, all of whom are independent directors and meet the independence requirements, and the term of office is from July 1, 2022 to June 30, 2025, The Audit Committee meets at least twice a year; in 2022, four meetings were held with an attendance of 100%.

For the performance and evaluation of the Audit Committee, please refer to: [Cleanaway 2022 Annual Report, pages 27-29](#) and [26](#).



- **Remuneration Committee**

The purpose of the Remuneration Committee is to prevent the remuneration of directors, supervisors and management from being inconsistent with the Company's operating conditions and individual performance. Therefore, an independent committee is established to formulate and regularly evaluate the remuneration system and standards, so as to make the remuneration system more transparent and fairer and to protect the interests of shareholders and the Company.

The Company has formulated the charter for the Remuneration Committee to regulate the responsibilities, authorities and obligations of the Committee, including:

1. To establish and regularly review the policies, systems, standards and structures for performance evaluation and remuneration of directors and managers
2. To regularly evaluate and set the remuneration of directors and managers

The Remuneration Committee of the Company shall perform the foregoing responsibilities and authorities in accordance with the following principles:

1. The performance evaluation and remuneration of Directors, Supervisors and Managers shall be based on general standards adopted by peer companies and shall take into account the reasonableness of the correlation of individual performance, the Company's business results and future risks.
2. Directors and managers shall not be induced to engage in behavior that exceeds the Company's risk appetite in pursuit of remuneration.
3. The proportion of bonus to be paid to directors and senior managers for short-term performance and the time of payment of part of the variable remuneration shall be determined according to the industry characteristics and the nature of the Company's business.

The current Remuneration Committee consists of four members, all of whom are independent directors and meet the independence requirements, and the term of office is from July 1, 2022 to June 30, 2025, The Remuneration Committee meets at least twice a year; in 2022, five meetings were held with an attendance of 100%.

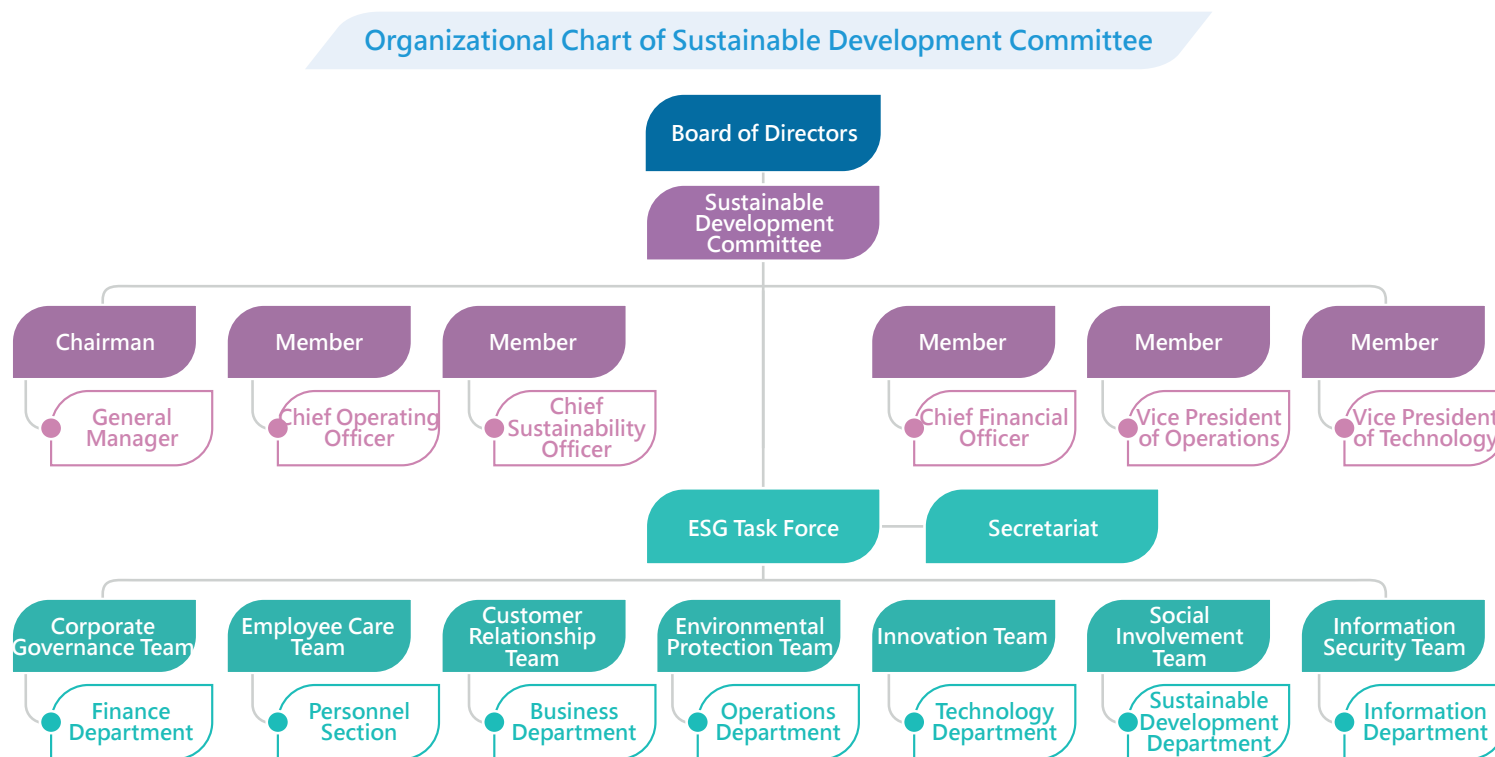
For the evaluation on the Remuneration Committee, please refer to: [Cleanaway 2022 Annual Report, page 26](#).

Sustainable Development Committee

In order to implement the corporate social responsibility and sustainable development of the Company and its subsidiaries, and to converge with the international standards, and to put into practice the corporate governance, social justice, environmental sustainability, customer rights, employee care and innovation technology, the Board of Directors of Cleanaway approved the establishment of the “CSR Committee” on November 6, 2020, and the name of which was changed to the “Sustainable Development Committee” at the Board meeting on July 15, 2022, which is a new name for the “Sustainable Development Committee” at the Board meeting. It serves as the dedicated unit for the Company’s sustainable development, with the Board of Directors as the highest authority to determine the Company’s ESG organizational structure, responsibilities and authorities. The members of the Sustainable Development Committee consist of the General Manager and first-level executives, with the General Manager serving as the Chairman and designating the Chief Sustainability Officer as the Vice Chairman to lead the operations of the ESG Task Force.

Seven executive teams are established under the committee in accordance with the implementation direction of the ESG strategy, including: Corporate Governance Team, Employee Care Team, Customer Relationship Team, Environmental Protection Team, Innovation Team, Social Involvement Team, and Information Security Team, with the General Manager serving as the chairman and the Sustainability Officer as the Vice Chairman; there is also a Secretariat, in which the chairman assigns two secretaries to assist in the execution of tasks by each of these teams. The CSR Committee is responsible for inter-departmental communication and the establishment of medium- and long-term goals. The responsibilities and authorities of the Committee include:

1. To establish the CSR policies, objectives and management system
2. To Plan, implement, prepare and amend the CSR related work
3. To supervise the risk management policy and risk control report, and report to the Board of Directors on a regular basis every year.
4. To prepare and issue CSR report
5. To report to the Board of Directors annually on the results of implementation and plans for the coming year



• **Communication between the Sustainable Development Committee and the Board of Directors in 2022**

The ESG Task Force under the Sustainable Development Committee meets at least quarterly, and the specific plans and implementation results of the Sustainable Development Committee in 2022 have been reported to the Board of Directors on December 23, 2022. The implementation status of the relevant operations of the Sustainable Development Committee is as follows:

Date of meeting	Nature of meeting	Agenda	Important reports and specific suggestions
2022/1/27	ESG Task Force Review Meeting	Progress report and discussion of each team	<ol style="list-style-type: none"> The implementation process of Employee Care Team shall be reviewed and amended in a timely and rolling manner If environmental education is affected by the epidemic, it is suggested to change it to an online activity For greenhouse gas emissions analysis, please add some related details to understand the differences and changes It is suggested that the AI intelligent management improvement target in customer relationship should be set and presented by proportion To enhance the information security of employees, some irregular inspection measures can be added to strengthen the risk awareness of employees
2022/2/16	2021 Sustainability Report Consensus Camp and Kickoff Meeting	<ol style="list-style-type: none"> The new version of GRI Standards Preparation Direction of Sustainability Report Identification of Material Issues Exchange and Discussion 	None
2022/6/16	ESG Task Force Review Meeting	Progress report and discussion of each team	<ol style="list-style-type: none"> Improve the employees' knowledge and skills, and review the compliance of system settings with laws and regulations; it is suggested to add "Self-evaluation Table of Knowledge and Skills" and "Checklist for Regulations and System Settings" For the results of the information security promotion and questionnaire test conducted in the first half of the year, please announce the relevant statistical results and analysis for the information of the company's employees.

Date of meeting	Nature of meeting	Agenda	Important reports and specific suggestions
2022/9/29	ESG Task Force Review Meeting	Progress report and discussion of each team	<ol style="list-style-type: none"> For the part without subsequent disposal as reported by patrol inspector, please continue reporting to the EPA the lack of follow-up action on the notification for establishing a sound mechanism for reporting and proper handling It is suggested to strengthen the employee function and to enhance the statistics of each detailed item in the statistical data of on-the-job training For the selection of denominator for GHG emission intensity, it is suggested to select a factor with relevance and sensitivity in order to meet the presentation of actual emission intensity
2022/12/22	Sustainable Development Committee and Quarterly Review Meeting	Progress report and discussion of each team	<ol style="list-style-type: none"> 2022 Annual Report and 2023 Sustainability Report and Greenhouse Gas Inventory Project Schedule Each company within the Group starts to input the data of greenhouse gas inventory on a monthly basis to facilitate immediate understanding of whether the Group's carbon emissions meet the standard Top-Comment Resources finds that recently the batch purchase price of biomass energy anaerobic digestion equipment is lower, so the Company can evaluate the addition of plan for purchasing anaerobic equipment into the sustainability report next year. After the new boiler starts to generate power for self-consumption, Top-Comment Resources will review and adjust the greenhouse gas emission targets at the end of each quarter, and is expected to move towards the target of total carbon emissions below 25,000 tons Cleanaway is a company with "E" as the starting point, and takes "E" method and approach as the Group's strategy, so we are definitely a leader in the ESG field in the future. The General Manager instructs all departments to show their professionalism and expertise in the external presentation. For example, the cooperation case that has already been implemented – Making Waste into Experience, the recycled pellets and CLSM implemented by the Sustainable Development Department, and other circular economy methods are all good practices in the field of "E". ESG is not only a slogan, but also a solid executive force of the environmental protection.

Implementation Status of Communication Matters between the Sustainable Development Committee and the Board of Directors

Date of meeting	Nature of meeting	Agenda	Resolutions and related opinions
2022/5/6	Report of the Board of Directors	<ol style="list-style-type: none"> Greenhouse Gas Inventory and Verification in 2021 Prepare the Company's Greenhouse Gas Inventory and Verification Schedule 	No objection
2022/7/15	Discussion of the Board of Directors	The "Corporate Social Responsibility Committee" was renamed as the "Sustainable Development Committee"	The chairperson of the meeting consulted all Directors present, and they approved the proposal without objection
2022/8/5	Discussion of the Board of Directors	The "Charter for Corporate Social Responsibility Committee" was renamed as the "Charter for Sustainable Development Committee" and some articles were amended	The chairperson of the meeting consulted all Directors present, and they approved the proposal without objection
2022/12/23	Report of the Board of Directors	<p>The specific plans to promote sustainable development and the results of implementation in 2022 are as follows</p> <ol style="list-style-type: none"> The Chinese version sustainability report was completed in August 2022, which won the 15th TCSA Sustainability Report – "Platinum Award" Intellectual Property Management and Operation Risk Management and Operation Stakeholder Communication Ethical corporate management and professional ethics promotion and employee education and training Obtained the "Statement on Greenhouse Gas Inventory and Verification 2021" issued by BSI (a verification organization) in accordance with ISO14064 Report on the schedule and progress plan of greenhouse gas inventory and verification of the Company and subsidiaries 	No objection

- Special Committee for Merger/Consolidation and Acquisition**

The Company's Board of Directors approved the establishment of the Special Committee for Merger/Consolidation and Acquisition on March 25, 2016, and has formulated the Charter for the Special Committee for Merger/Consolidation and Acquisition specifying the Committee's responsibilities and authorities. It consists of all the independent directors of the Company, and is responsible for reviewing the fairness and reasonableness of merger and acquisition plans and transactions, and the Company shall report the review results to the Board of Directors and the Shareholders' Meeting. However, under the Business Mergers and Acquisitions Act, if a shareholders' meeting is not required to be held to resolve the merger or acquisition, such matter may not be submitted to the shareholders' meeting.

The Special Committee for Merger/Consolidation and Acquisition is convened prior to the implementation of merger and acquisition related plans. There was no record of the convening of the meeting as there was no such plan in 2022.

2.2 Financial performance

2.2.1 Economic Value

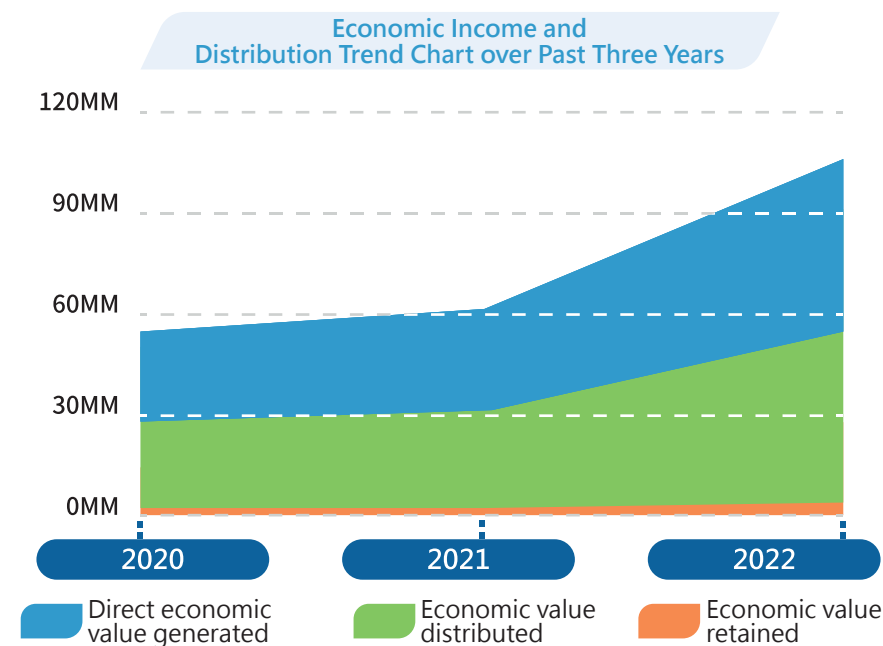
In the fourth quarter of each year, all departments will prepare the budget for the following year, and the finance department will collect the budgets for sales, production, purchasing, and payroll expenses, and prepare the projected income statement, balance sheet, and cash flow statement, which are reported by the Chairman or the designated representative of Chairman at the last board of directors' meeting of the year, and are approved by the Board of Directors.

We will handle our daily accounting books and prepare our financial statements on an accrual basis in accordance with the Business Account Act, Generally Accepted Accounting Principles and International Financial Reporting Standards (IFRSs). The Finance Department analyzes and compares the amount of difference between the budget and the actual statements and the reasons for such difference on a monthly basis. If there is a significant difference or if the difference is affected by force majeure factors, the Board of Directors shall discuss and propose a revision of the business objectives. The quarterly financial statements shall be reviewed by the finance supervisor, certified by CPAs, sent to the Supervisors for review, and finally proposed to the Board of Directors for approval. Cleanaway's quarterly consolidated financial statements, annual consolidated financial statements and parent company only financial statements are publicly available on the Company's website and on Market Observation Post System (MOPS).

This report reclassifies the annual consolidated Comprehensive Income Statement according to the economic distribution. Payments to funders and the government by the solidification plant, Kang Lien, Chi Wei, Cleanaway Group, and Da Ning are calculated according to the cash-based amounts to prepare a statement of economic income and distribution.

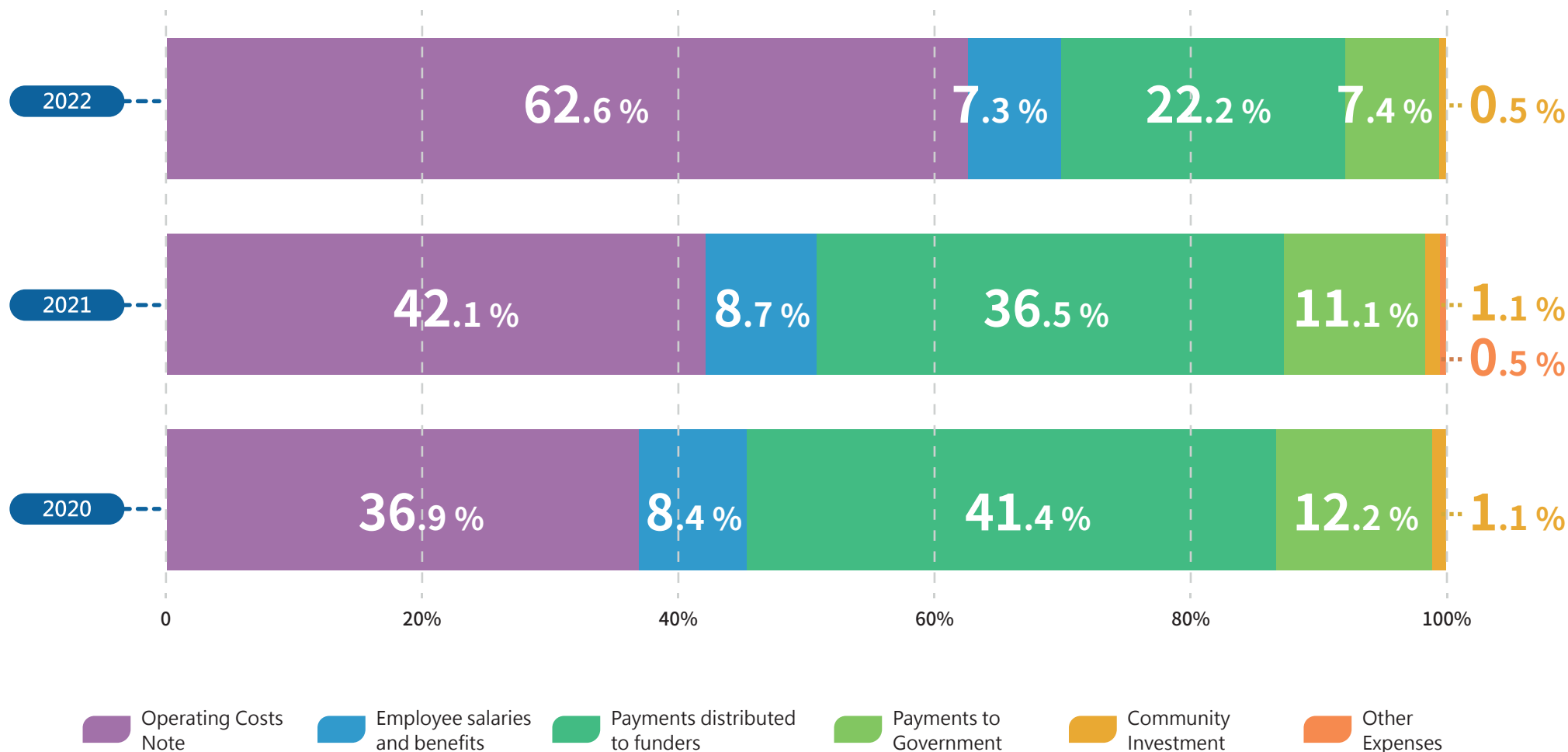
Unit: In Thousands of New Taiwan Dollars

Economic Value	Item/Account	2020	2021	2022
Direct Economic Income	Net Operating Revenue	2,680,539	3,022,951	5,244,065
	Financial investment income	24,119	25,659	4,873
	Income from asset sales	240	0	0
	Royalty income	0	0	0
	Acquisition of government grants	0	0	0
	Other Revenue	39,384	37,346	62,704
Direct economic value generated		2,744,282	3,085,956	5,311,642
Economic distribution	Operating Costs	(973,706)	(1,263,301)	(3,170,252)
	Employee salaries and benefits	(220,642)	(260,671)	(366,926)
	Payments to funders	(1,095,099)	(1,095,402)	(1,122,394)
	Payments to Government	(323,200)	(333,335)	(374,686)
	Community Investment	(29,617)	(33,554)	(25,096)
	Other Expenses	0	(13,599)	(1,945)
Economic value distributed		(2,642,264)	(2,999,862)	(5,061,299)
Economic value retained		102,018	86,094	250,343



Note: The operating costs in 2022 were higher than those in previous years, which was mainly due to the increase in excavation costs for the Kaohsiung Refinery contract undertaken in 2022.

Economic Distribution Proportion Chart



Note: The operating costs in 2022 were higher than those in previous years, which was mainly due to the increase in excavation costs for the Kaohsiung Refinery contract undertaken in 2022.

2.3 Climate Change Risk Management TCFD

2.3.1 Climate Governance

The Company's Board of Directors has established the Functional Committee on Sustainable Development Governance as the highest decision-making unit for the management of climate change related opportunities and risks. The Sustainable Development Committee is the executive unit for managing and identifying climate change related risks and opportunities. The Company has established the Sustainable Development Committee, chaired by the General Manager, with seven working groups (ESG Task Force) under the Committee, including Corporate Governance Team, Employee Care Team, Customer Relationship Team, Environmental Protection Team, Innovation Team, Social Involvement Team, and Information Security Team, to handle the issues of concern to different stakeholders and integrate the tasks promoted by relevant departments of the Company to facilitate the execution of the relevant business activities; ESG Task Force meets quarterly to propose the risks and opportunities faced by the Company and corresponding countermeasures. Subsequently, the Corporate Governance Team will collect the climate-related information and provide to the Financial Supervisor for financial impact assessment of the identified climate-related risks, which is then submitted to the Board of Directors. The Committee monitors the risks arising from climate change from the perspective of sustainable development and formulates measures to respond to such risks, and reviews the implementation of the relevant issues at least once a year at the Board of Directors' meeting. The Company has already reported the operations of Sustainable Development Committee in 2022 to the Board of Directors on December 23, 2022.

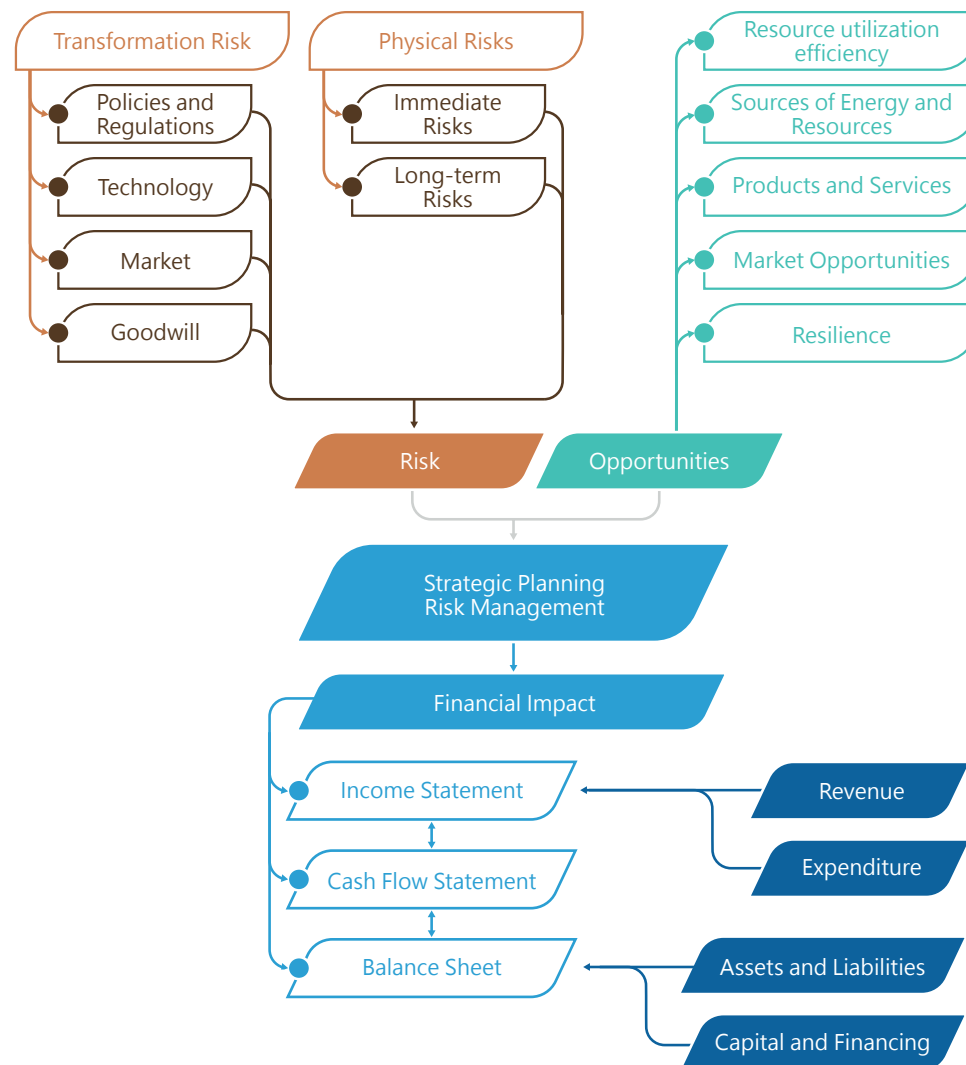
Internal control: The Company conducts annual greenhouse gas inventories in accordance with the laws and regulations and the requirements of the competent authorities, and specially-assigned personnel will collect the information on greenhouse gas emissions and reductions. After being reviewed by the supervisors, the results will be disclosed on the MOPS and in the Corporate Sustainability Report; the reports on the Company's relevant operations are prepared in accordance with the relevant laws and regulations of competent authorities, and the identification results of the Company are subject to the review of the responsible supervisor and the ESG task force. In addition, the Company conducts internal audits every year to review the management of ESG-related operations, and prepares audit reports for internal retention and reference.

For the Organizational Chart of Sustainable Development Committee, please refer to 2.1.2 Functional Committee.

2.3.2 Climate Risk and Opportunity Identification and Evaluation

The Company refers to the Task Force on Climate-Related Financial Disclosures (TCFD) issued by the Financial Stability Board (FSB), conducts climate risk and opportunity analysis, and develops corresponding measures according to the disclosure frameworks of "Governance", "Response Strategy", "Risk Type", "Indicator Description" and "Risk Level".

In 2022, Cleanaway introduced the TCFD risk management framework, through which the Company hopes to identify the financial risks and potential opportunities of climate change for the Company. The TCFD framework is described as follows:



Based on the TCFD framework, the Company has developed the governance, strategy, risk opportunity management and possible financial impact analysis for the following different stages.

Climate Change Management Strategies, Indicators and Goals

Climate Change Governance	Please refer to 2.3.1 Climate Governance
Climate Change Strategy	<p>The Company belongs to the Others. The main physical risks, transformation risks and opportunities faced by the industry are shown below. In addition, the ESG Task Force has also developed response strategies for different aspects, as described below:</p> <p>Physical risks: Physical risks are divided into immediate and long-term risks according to nature. The ESG Task Force checks the possible types of physical risks and their frequency of occurrence in high-risk areas, and develops countermeasures to reduce financial impacts.</p> <p>Transformation risks: Transformation risks can be divided into policies and regulations, technology, market and goodwill according to nature. The ESG Task Force develops strategies and management policies for each type of transformation risk, sets relevant indicators and goals, and regularly tracks and reviews the risk management situation every year.</p> <p>Opportunities: Opportunities include resource efficiency, energy sources, products and services, markets, and resilience. The ESG Task Force analyzes the five opportunities, selects potential opportunities for the Company, develops related strategies and management policies, and sets indicators for annual tracking and review to enhance the Company's competitive advantage.</p> <p>The Sustainable Development Executive Committee takes the lead and collaborates with relevant organizations to identify the Company's short-, medium-, and long-term climate risks and opportunities, develop reasonable scenarios and assumptions, assess the impact of climate risks on related businesses, and formulate corresponding management actions or response strategies. In addition, the Company also sets management indicators and goals to strengthen its control over specific climate risks and opportunities. For the set risk and opportunity indicators and goals, please refer to the Climate Change Indicators and Goals in this section.</p>
Climate Risk Management	<p>Cleanaway has established risk and opportunity management procedures, hazard identification and risk assessment procedures in accordance with ISO14001 and ISO45001, and planned for risk management operations in accordance with these procedures. In addition, Cleanaway has completed the identification and assessment of internal risk issues and implemented risk management measures in accordance with the risk management policies and procedures.</p> <p>Please refer to the following table for the risk management aspect and issue identification of Cleanaway.</p>
Indicators and Goals	Please refer to 2.3.4 Climate-related Indicators and Goals

Climate Change Risk Impacts and Response Opportunities

Type of Risk/ Opportunity	Name	Description of Impact/Opportunity	Scope of Impact	Impact Period	Financial Impact	Response Strategy
Transformation Risk	Policies and Regulations	Policies and initiatives related to climate change are booming. At the present stage, the development policies and goals are generally divided into two categories: to limit any adverse effects that may contribute to climate change, and to facilitate climate change adaptation. Policies and regulations may increase the Company's operating costs, such as the implementation of carbon pricing mechanism to reduce greenhouse gas emissions, indoor air quality, electricity conservation standards, and improving water use efficiency, etc. The risk of climate-related litigation may also increase as losses from climate change continue to grow.	Increase in operating costs and penalty cases	Short-term	Medium	<ol style="list-style-type: none"> 1. Actively engage with authorities, related organizations and other stakeholders, pay close attention to changes in domestic and overseas regulations, and establish an internal inventory of electricity and water consumptions and carbon emissions to regularly review the effectiveness of measures. 2. Evaluate and reduce energy consumption of equipment, establish a carbon emission monitoring system, and invest in industries related to the circular economy to provide green power certificate.
	Technology	The economic system gradually shifts to supporting low-carbon and high-efficiency technological improvements and innovations, causing our products and services to be replaced by lower-carbon products or services, or an increase in operating costs due to the development of low-carbon technologies and renewable energy sources.	Decrease in revenue and increase in operating costs	Short- and medium-term	High	<ol style="list-style-type: none"> 1. Continue to promote low-carbon services such as online clearance and AI intelligent customer service, and increase time efficiency and minimize the use of paper resources through large cloud platform system. 2. The Group invests in renewable energy and environmentally friendly technologies, such as solar energy, renewable energy plants and recycling plants, in order to minimize and transfer potential corporate risks.
	Market	Climate change leads to changes in supply-demand structure and product and service mechanisms, and increases market uncertainty. Investments in industries with high pollution or carbon emission may bring bad impression to society or stakeholders, and shareholders or outside investors may consider ESG performance in deciding whether or not to invest in the Company. Negative reports on environmental issues may result in a reduction in revenue and asset value. The Group's operations and assets may be damaged if the Group is affected by sustainable development awareness.	Decrease in revenue and asset value	Short- and medium-term	High	<ol style="list-style-type: none"> 1. The Group actively adjusts and develops a variety of treatment methods based on trends in environmental regulations and waste disposal issues, so as to improve client-side integrated waste disposal and collection services. 2. Develop products and services related to low-carbon technologies in order to cope with the impact of customer supply chain management and customers' selection of waste recycling on revenue. In addition, replace high-carbon coal with low-carbon fuels and replace diesel forklifts with electric machines. 3. Actively invest in renewable energy and recycling related industries. Include investment properties in the ESG assessment and keep abreast of policy and market changes, actively respond to ESG-related issues, and proactively disclose information on carbon emissions and the use efficiency of water and electricity resources.
	Goodwill	Ineffective implementation of ESG affects the Company's reputation, resulting in loss of customers and business and a decrease in revenue. Failure to actively respond to stakeholders' concerns about climate change affects the Company's image and reputation.	Loss of reputation and decrease in revenue	Short-, medium- and long-term	Medium	<ol style="list-style-type: none"> 1. Continue to promote ESG issues and cooperate with suppliers that fulfill corporate responsibilities or actively promote ESG. 2. Set up communication channels for issues or demands of stakeholders, and obtain feedback to support the Company's development towards sustainable and green enterprise.

Note: Definition of impact period: short-term, within 3 (inclusive) years; medium-term, 3 to 10 (inclusive) years; and long-term, more than 10 years.

Continued

Type of Risk/ Opportunity	Name	Description of Impact/Opportunity	Scope of Impact	Impact Period	Financial Impact	Response Strategy
Physical Risks	Immediate Risks	In addition to the increase in electricity consumption due to climatic anomalies and the possibility of power outages during the summer peak season, the increasing severity of catastrophic extreme climates such as typhoons and heavy rains may cause suspension of operation of offices, plants (sites), and public facilities, as well as potential asset impairment.	Suspension of operation and impairment of asset values	Short-, medium- and long-term	Medium	<ol style="list-style-type: none"> 1. Set up eco-flood detention ponds to realize the function of flood detention during heavy rainfalls, and recycle rainwater as a source of water for plant watering, environmental cleaning, and solidification process in plants (sites). 2. Reinforce the specifications of the hardware structure of the plants (sites) and set up a civil engineering professional unit to strengthen monitoring after the earthquake in addition to regular monitoring to grasp the changes in the hardware facilities and take reinforcing measures when necessary. 3. Set up and inspect the drainage, flood detention facilities and emergency pumping equipment to cope with the risk of extreme rainfall and to prevent surface runoff from affecting the operation of landfill facilities due to insufficient drainage. 4. Implement patrol inspection and maintenance of hardware facilities in plant (site) areas, and take typhoon-related measures immediately after a typhoon warning is issued to prevent erosion and accumulation of water, which can affect the structure of the facilities, due to poor on-site drainage.
	Long-term Risks	Long-term changes in climate patterns, such as increases in average temperatures, changes in regional rainfall patterns, rising sea levels or prolonged heat waves, will result in increased operating costs, such as rising electricity bills and shortage of water resources.	Increase in operating costs and decrease in asset value	Long-term	Medium	<ol style="list-style-type: none"> 1. Continue to establish a continuous management mechanism for operations, improve the efficiency of resource utilization, and actively develop low-carbon products and services. 2. Establish an emergency response plan and conduct drills regularly to strengthen employees' response capabilities and prevent sudden or unforeseen natural disasters that can affect operations and cause financial burden.
Opportunities	Resource utilization efficiency	Improve the utilization efficiency of resources required for operations by continuously monitoring information on the use of various resources (water, electricity) and taking timely and effective corrective measures. Enhance operational efficiency and reduce costs through recycling of resources. Set up water-saving equipment and promote water consumption reduction.	Reduction of operating costs	Short- and medium-term	Medium	<ol style="list-style-type: none"> 1. Evaluate the operating efficiency of equipment and replace or upgrade inefficient equipment to help reduce carbon emissions. 2. Obtain ISO 50001 certification and Product Carbon Footprint Label. Through participation in EP100, set more mandatory and ambitious goals, and incorporate energy efficiency into business strategy to achieve carbon reduction goals. 3. Avoid the use of fossil fuels and select more energy-saving facilities and equipment. Establish an energy use monitoring mechanism to effectively evaluate and manage energy consumption. 4. Headquarters Building Air Conditioning Power Monitoring System Solution: Introduce an intelligent management system to monitor and analyze electricity utilization in each area with AIOT technology, thus reducing unnecessary energy waste. 5. Introduction of ISO 50001 energy management system: Improve highly energy-consuming equipment to achieve the goal of gradually reducing energy consumption.

Note: Definition of impact period: short-term, within 3 (inclusive) years; medium-term, 3 to 10 (inclusive) years; and long-term, more than 10 years.

Continued

Type of Risk/ Opportunity	Name	Description of Impact/Opportunity	Scope of Impact	Impact Period	Financial Impact	Response Strategy
Opportunities	Energy Sources	Evaluate the use of low-carbon energy sources to enhance energy efficiency. Repair buildings or purchase energy-saving equipment in accordance with the government incentive policy.	Reduction of operating costs	Short- and medium-term	Medium	<ol style="list-style-type: none"> Utilize own rooftops and unused land to build solar power generation facilities to increase the use ratio of green energy and reduce carbon emissions and pollution. Promote biogas power generation at landfills to promote the development of renewable energy and reduce greenhouse gas emissions. Purchase renewable energy to increase the utilization rate of renewable energy.
	Products and Services	We are committed to striking a balance between human activities and environmental sustainability and providing total solutions for environment and waste. The services include environmental consulting services, waste clearing and treatment, resource recycling, and the use of intelligent platforms to provide all-round environmental protection solutions. Top-Comment Resources, a subsidiary of the Group, utilizes 100% recycled paper to protect forest resources and mitigate the impact of climate change.	Increase in revenue	Short-, medium- and long-term	Medium	<ol style="list-style-type: none"> Use patented soil cleaning technology to enhance on-site remediation of large-scale contaminated sites, so that the customers can recycle land for high-value development. Actively expand the scope of services to include solar power generation, high-temperature incinerators for hazardous waste, recycling technology for WEEE, and cooperation with waste clearing and transport operators through AIoT intelligent platform. Use recyclable resources to produce flammable biomass fuels, reduce the burden on landfills and incinerators, and build renewable energy plants to promote new energy sources and reduce the use of fossil fuels; through the circular economy, realize the recycling of energy and water resources, and develop low-carbon and green paper mills, taking into account both economic growth and environmental sustainability.
	Market Opportunities	The government encourages the use of renewable energy. Promote energy conservation and carbon reduction in order to mitigate the rising global average temperature. Increased reputation	Increase in revenue Decrease in operating costs	Short-, medium- and long-term	Medium	<ol style="list-style-type: none"> Invest in Da Chuang Green Energy Company Limited, actively develop the solar green energy industry integrating fish farming and power generation, add new business models, and transform into a green power provider (green power certificate). Install variable frequency energy-saving modules in plants (sites), replace diesel forklifts with electric forklifts, introduce energy-saving counseling services for transportation fleet promoted by Energy Bureau, and introduce the ISO 50001 energy management system.

Note: Definition of impact period: short-term, within 3 (inclusive) years; medium-term, 3 to 10 (inclusive) years; and long-term, more than 10 years.

Continued

Type of Risk/ Opportunity	Name	Description of Impact/Opportunity	Scope of Impact	Impact Period	Financial Impact	Response Strategy
Opportunities	Resilience	<p>Adopt a sustainable trade finance structure to solve environmental problems and fulfill green responsibilities through green finance. Green finance is the first and foremost key to creating a green economy. In order to address the immaturity and illiquidity of the market due to the various environmental risks in green economy, various innovative green financial instruments (including green bonds, green financing, and green investment banking, etc.) can be used to re-establish a market-based financial system related to the sustainable development of the environmental economy, and assist in the effective transformation of the economic structure and the completion of environmental goals. By virtue of the support of financial institutions in investing and financing the green energy industry and in green and sustainable development, jointly solve overall environmental problems and fulfill green responsibilities, and strengthen the resilience of responding to the risks of climate change by finance.</p> <p>Actively implement environmentally friendly promotional activities and hold environmental education courses. Continue to invest manpower in environmental conservation and strengthen the linkage between environmentally friendly and artistic and cultural activities.</p>	Increase in revenue and reputation	Long-term	Medium	<ol style="list-style-type: none"> 1. In January 2022, through HSBC, the Company issued the first letter of guarantee for public environmental project for the New Construction Division of Kaohsiung Municipal Government Works Bureau (remediation of soil and groundwater contamination in Kaohsiung Refinery Area 4) for a public environmental project, with an amount of NT\$820 million. 2. In 2022, environmental education courses were completed at 15 organizations, totaling 17 sessions, and 1 parent-child oriented activity was organized in the plant (site) area. 3. In the first, second, and third quarters of 2022, a total of 40 land inspections were conducted, and a public welfare cooperation program, "Environmental Education, Reading for Sustainability", was conducted with the Kaohsiung Municipal Library.

Note: Definition of impact period: short-term, within 3 (inclusive) years; medium-term, 3 to 10 (inclusive) years; and long-term, more than 10 years.

From the above, it can be concluded that, as a leader in environmental protection total solutions in Taiwan, Cleanaway is actively following the global development trend and national policies. In addition to endeavoring to maintain the existing waste treatment capacity, Cleanaway also takes the circular economy as the Group's focus of development, focuses on the issue of climate change, and joins in the carbon inventories and management. In addition, the Company strives to promote (develop) renewable energy, become a supplier of green energy, emphasize the development of low-carbon energy, and create a carbon credit market, hoping to grow together with our corporate partners. When facing various risk issues, the Company also considers the impacts of climate change, improves the management of climate change risks and opportunities through the identification of climate-related risks and opportunities, setting of indicators and goals and other relevant mechanisms, and proposes different countermeasures to address key risks and opportunities.

The Company has achieved the milestone of "Green Energy Sustainability" in 2022. In 2022, we identified the risks and opportunities caused by climate change through group discussions and continued to implement actions to address climate change. We apply the science-based method to continue implementing actions to address climate change.



2.3.3 Climate Risk and Opportunity Impact Evaluation

In 2022, the Company experienced water and electricity shortages in some areas due to climate change. Fortunately, none of these situations had any impact on the Company's operations, or result in any indirect impairment of the Company's capital and operating costs, or had any impact on the demand for the Group's products (services).

Risk and Opportunity Impact Evaluation

Type of Risk/Opportunity	Labor cost	Equipment cost	Capital expenditure	R&D expenses	Social activity expenses	Losses and remedies	Outsourcing cost	Insurance expenses	Total	Impact Period Evaluation	Financial Risk Level Evaluation
Policies and Regulations	4	2	3	3	4	2	3	3	24	Short	Medium
Technology	5	5	5	5	0	4	4	4	32	Short and medium	High
Market	3	4	3	5	4	5	3	4	31	Short and medium	High
Goodwill	1	1	2	2	5	3	3	0	17	Short, medium, and long	Medium
Immediate Risks	2	3	4	1	0	3	1	5	19	Short, medium, and long	Medium
Long-term Risks	3	4	4	1	0	2	2	5	21	Long	Medium
Resource utilization efficiency	3	4	4	3	3	1	1	3	22	Short and medium	Medium
Energy Sources	2	4	4	2	3	1	1	3	20	Short and medium	Medium
Products and Services	3	5	5	1	3	3	3	3	26	Short, medium, and long	Medium
Market	2	4	4	1	5	1	1	1	19	Short, medium, and long	Medium
Resilience	4	1	1	1	5	2	4	4	22	Long	Medium

Note 1: A higher score represents greater impact, while 0 means no impact. (The total score range is 0~40)

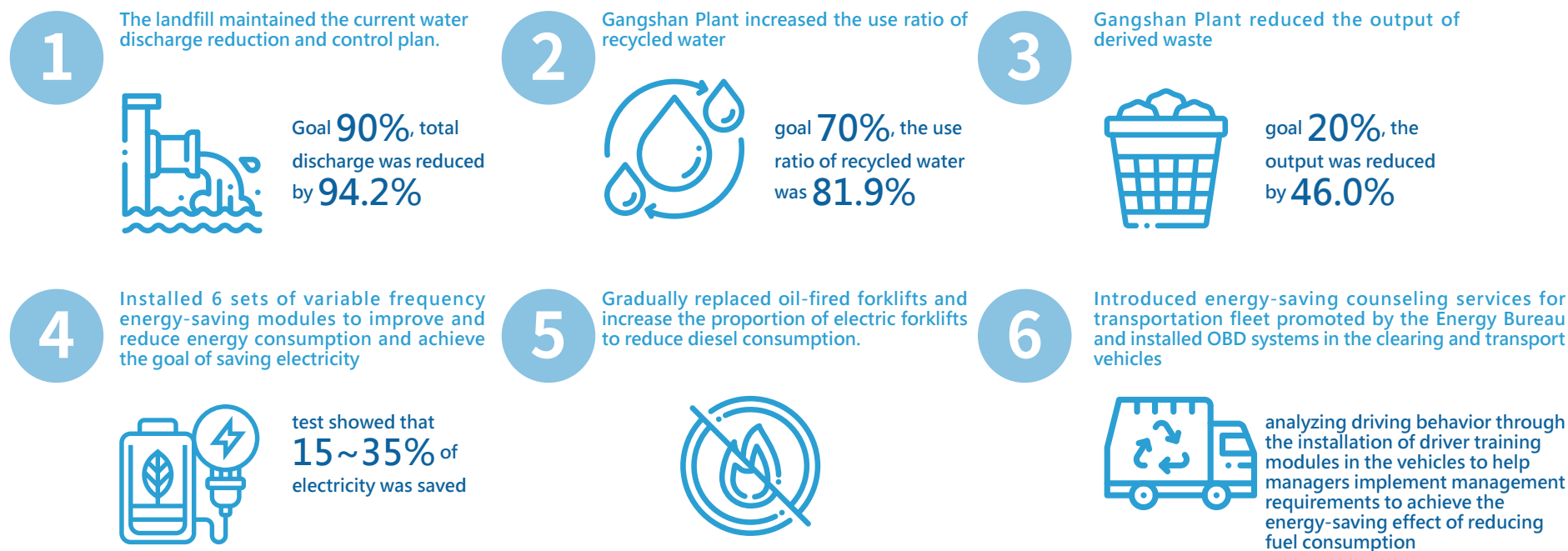
Note 2: Definition of impact period: short-term, within 3 (inclusive) years; medium-term, 3 to 10 (inclusive) years; and long-term, more than 10 years. (Judged by the financial supervisor based on the information in financial statements and the Company's financial operation status in the past years)

Note 3: Financial risk level: 0-15, risk level = low; 16-30, risk level = medium; 31-40, risk level = high.

2.3.4 Climate-related Indicators and Goals

The Company's ESG Task Force will review the risks and opportunities posed by climate change according to the "Task Force on Climate-related Financial Disclosures (TCFD)" framework, present management goals and indicators to the Board of Directors in the fourth quarter of each year, and report the implementation progress in the quarterly meeting of the following year in order to effectively manage the climate indicators and goals.

In accordance with the ISO 14001 environmental management system and ISO 50001 energy management system, we have implemented the climate-related risk management and control of energy use and water use. In 2022, the implementation results of Cleanaway Note are as follows:



Note: Since Top-Comment became a subsidiary of Cleanaway Group in December 2021, the 2022 climate-related indicators and goals have not been set in 2021.

We conduct annual greenhouse gas inventories in accordance with ISO 14064-1:2018, increase the number of subsidiaries to be included in the inventory year by year in accordance with the greenhouse gas inventory plan of the Sustainable Development Department, and complete the greenhouse gas inventory and certification for all companies included in the consolidated financial statements within the time limit stipulated by laws and regulations.

Taking into account environmental laws and regulations, customer requirements, stakeholder expectations, external initiatives and other relevant factors, the Company's senior management reviews the achievement of various climate-related indicators and goals in the Sustainable Development Committee every year.

2.4 Risk Management

2.4.1 Risk Management Organization

A company's risk management ability plays a critical role in addressing risks and opportunities arising from internal and external factors. Global trends and risks and opportunities brought by environment may affect the profitability and even the survival of a company. Instead of leaving the future to unpredictable environments and variables, it is advisable to continue to enhance the competitiveness and influence of the Company, fully grasp the business opportunities, and meet the new era.

Based on Article 27 of the Corporate Governance Best Practice Principles for TWSE/GTSM Listed Companies, the Company's risk management organization is the "Sustainable Development Committee" established under the Board of Directors of the Company, which serves as the highest authority for risk management, and the ESG Task Force serves as the executive body for risk management. The General Manager is responsible for leading the task forces to integrate and manage various potential risks that may have an impact on operations and profits, and to proactively communicate with stakeholders of risk events to minimize the impact on the Company's operations in the event that a risk event occurs. The Company's risk management organization follows the management procedures set out in the risk management policy approved by the Board of Directors, to ensure the effectiveness of risk management. The authority and responsibility of each unit are as follows:

Board of Directors	The Board of Directors is the highest supervisory unit for risk management and is responsible for reviewing the annual risk management policy and operation to ensure the effective implementation of the risk management system. It also regularly reviews the impact, performance and strategic objectives of ESG at the end of each year.
Sustainable Development Committee	<p>The Company's Corporate Social Responsibility Committee conducts risk evaluation on important issues based on the materiality principle of CSR. The related authority and responsibility are as follows:</p> <ol style="list-style-type: none"> 1. To supervise the risk management policy and risk control report, report to the Board of Directors on a regular basis every year, report the implementation of risk management to the Board of Directors in a timely manner, and propose necessary improvement suggestions. 2. To approve the priority of risk control 3. To supervise the improvement of risk control 4. Other matters to be handled by the Committee as directed by the Board of Directors.
ESG Task Force	<p>The ESG Task Force collects information, proposes risk management objectives and measures, and reports the results to the risk management unit on a regular basis. The related authority and responsibility are as follows:</p> <ol style="list-style-type: none"> 1. To take overall responsibility for risk management of the Company, formulate the risk management structure, organization and mechanism, and establish qualitative and quantitative management standards. 2. To regularly review the contents of the risk management policy and keep abreast of the development of international and domestic risk management systems, review and propose improvement measures accordingly. 3. To collect the implementation and improvement progress of risk control by each team and report to the CSR Committee regularly. 4. Coordinate and promote cross-organizational risk control programs, and determine and implement cost-effective risk control programs to enhance risk management transparency and improve risk control practices. 5. To strengthen information security management through daily drills, penetration tests, information security inspections, vulnerability scans, and educate employees to raise their awareness of information security to ensure legitimate access to the Company's information; in the event of an external intrusion or an incident, to take prompt and necessary emergency response actions to restore the normal operation of the system in the shortest possible time to minimize the damage that may be caused by such incident.

2.4.2 Risk Identification and Countermeasures

The Company complies with the precautionary principle in Article 15 of the United Nations Rio Declaration on Environment and Development, which states: “Each country shall widely apply precautionary measures to protect the environment in accordance with its capabilities. Where there is a serious threat or irreversible damage, measures to prevent environmental degradation shall not be delayed on the grounds of lack of full scientific certainty”. Therefore, the Company conducts risk control, incident prevention and continuous improvement of all routine and non-routine hazardous events that may occur in all processes, areas, people and facilities within the processes, activities or services of the Cleanaway solidification plant. The Company has obtained ISO 14001 and ISO 45001 certifications and utilized the established risk control system as the Company’s environmental risk evaluation method to help the Company reduce and avoid negative environmental impacts in environmental management, improve risk prevention capabilities, identify development opportunities, and solidify the Company’s foundation for sustainable development.

• Risk Management Policy

On November 6, 2020, the Board of Directors of Cleanaway approved the establishment of Risk Management Policy and disclosed it on the Company’s website as the guiding principle of the Company’s risk management. The Company evaluates its risks on a regular basis every year, and formulates and implements risk management policy for all risks, which covers the management objectives, organizational structure, attribution of authority and responsibility, risk management procedures and other mechanisms, in order to effectively identify, measure and control all risks of the Company, and control the risks arising from business activities within an acceptable range.

In order to respond to changes in the internal and external environments of the Group, we will ensure the design and implementation of the system continue to be effective. Risk management policy and organization. Identification of risk events is a responsible act for enterprises to strengthen their operations, implement various risk controls and reduce operational risks and crises in order to achieve the goal of sustainable management. The Company actively promotes the implementation of the risk management mechanism and reports its operation to the Board of Directors once a year, with the latest date of reporting to the Board of Directors on December 23, 2022.

The main operations in 2022 are as follows:

1. The ESG Task Force performed risk identification in accordance with the materiality principle of corporate social responsibility, and there was no difference in the types of risks and potential risks from those in 2021, and the control strategies and practices had been proposed.
2. In accordance with ISO14001 and ISO45001, established risk and opportunity management procedures, hazard identification and risk evaluation procedures to analyze risks and opportunities in all ESG aspects and to develop corresponding countermeasures.
3. Strengthened the implementation of risk management mechanisms, which was supervised by members of the ESG Task Force. In 2022, the proposed control strategies and practices were implemented for each risk category.
4. Members of the ESG Task Force promoted the concept of risk management, and had promoted and strengthened the awareness and cognition of the Company’s operational risk culture during quarterly ESG Task Force meetings.

• Risk Evaluation and Related Risk Management Strategies

The Company integrates and manages all potential strategic, operational, financial and hazardous risks that may have an impact on operations and profitability in a proactive and cost-effective manner, and identifies potential risks according to risk categories to provide appropriate risk management for all stakeholders. The Company’s risk management includes the management of “market risk”, “waste disposal and collection risk”, “raw materials risk”, “water resource risk”, “climate change risk”, “occupational safety and health risk”, “environmental risk”, “natural disaster risk” and “information risk”.

The Group has established a sound internal control system, as well as effectively implements and regularly reviews this system in accordance with the Regulations Governing Establishment of Internal Control Systems by Public Companies, in response to changes in the internal and external environment of the Group, so as to ensure that the design and implementation of the system continue to be effective. Risk management policy and organization. Identification of risk events is a responsible act for enterprises to strengthen their operations, implement various risk controls and reduce operational risks and crises in order to achieve the goal of sustainable management.


Risk Category	Potential Risk	Control Strategies and Practices
Market risk	Restrictions on treatment methods	<ul style="list-style-type: none"> The Group actively adjusts and develops a variety of treatment methods based on trends in environmental regulations and waste disposal issues, so as to improve client-side integrated waste disposal and collection services.
Waste disposal and collection risk	Risk of falling waste	<ul style="list-style-type: none"> Require sales executives to obtain complete information on the status of waste to be handled during contract signing, and coordinate the relevant tasks with the disposal and collection unit; for example, the disposal and collection unit is required to take leak prevention and covering measures when transporting drippable or bulk waste.
Raw material risk	Risk of disruptions in material supply	<ul style="list-style-type: none"> Maintain at least two suppliers of Portland cement used for solidification, where both the Company and the suppliers have entered into long-term supply agreements; therefore, the Company is able to prevent any disruption in material supply effectively. Establish an appropriate inventory system and maintain a portion of the inventory for operating needs, in order to respond flexibly to material demand in solidification and treatment. Collect business information or conduct factory surveys to learn about and keep abreast of changes in market operations, so that the Company can respond early to such changes.
Water resource risk	Water Resource Management	<ul style="list-style-type: none"> Set up eco-flood detention ponds to store floodwater arising from heavy rainfalls, as well as use recycled rainwater to irrigate plants in plant (site) areas and as a source of process water for solidification. Recycle used water in plant (site) areas and use it for dust suppression and solidification on landfill sites, thereby properly utilizing recyclable water sources.
Climate change risk	Carbon emission management	<ul style="list-style-type: none"> Promote the Group’s low-carbon living and consumption to drive the development of a low-carbon society. Install solar photovoltaic systems on closed landfill sites to generate and use renewable energy. Produce biomass energy using biogas obtained from landfill sites and generate electricity using gas turbine power generators. Set up plans to lay large areas of turf and beautiful plant walls in the Group’s plant (site) areas as these plans can effectively reduce carbon dioxide in the atmosphere. Conduct comprehensive assessments on the impact of climate change and policy factors on market demand and production output, as well as carry out short- and medium- term operational planning to prevent an increase in operating costs due to stricter environmental policies and regulations. Conduct careful and detailed assessments on material capital expenditures that may arise from environmental changes, and formulate countermeasures against possible risks arising therefrom in advance to mitigate the negative impact of such risks.

Continued



Risk Category	Potential Risk	Control Strategies and Practices
Occupational safety and health risk	Risk of management system implementation	<ul style="list-style-type: none"> • Incorporate the ISO 45001 management system and successfully obtain the certification, implement operation control, and raise awareness of occupational safety and healthy protection measures to prevent occupational accidents. • Implement an employee care system, conduct health checkups for employees each year, care for employees' health, and provide a friendly workplace. • Strengthen hazard identification and risk assessment, and take appropriate preventive measures, so as to control risks to acceptable levels. • Plan and formulate audit plans and include contractors in the scope of audit, so as to reduce unsafe behavior, strengthen guidance, and make improvements.
Environmental risk	Environmental load	<ul style="list-style-type: none"> • Committed to controlling air and effluent pollutants and strengthening water recycling and reuse. • Properly manage the reduction and treatment of derived waste to prevent secondary pollution problems. • Minimize the landfilling area and strengthen covering to reduce rainwater infiltration and erosion problems. • Install surface run-off wastewater collection and treatment facilities to optimize the quality of surface runoff.
Natural disaster risk	Earthquake risk Rainfall risk Typhoon risk	<ul style="list-style-type: none"> • Reinforce the specifications of hardware structure in factory or site areas, and set up a dedicated civil engineering unit to conduct regular and post-earthquake monitoring, so as to keep track of changes in hardware facilities and implement enhanced measures when necessary. • Inspect drainage and flood detention facilities as well as emergency water pumping equipment in response to the risk of extreme rainfall, so as to prevent surface run-off from affecting landfill facilities due to inadequate drainage. • Implement patrol inspection and maintenance of hardware facilities in plant (site) areas, and take typhoon-related measures immediately after a typhoon warning is issued to prevent erosion and accumulation of water, which can affect the structure of the facilities, due to poor on-site drainage. • Establish an emergency response plan and conduct drills regularly to strengthen employees' response capabilities and prevent sudden or unforeseen natural disasters that can affect operations and cause financial burden.
Information risk	Anomalies in information systems	<ul style="list-style-type: none"> • Equip the systems with firewall and antivirus software, ensure that information personnel undergo regular examinations and tests, and build a complete antivirus mechanism. • Strengthen disaster prevention, information security, monitoring, reporting mechanism, anomaly management, and backup. • Conduct information security training and promotion to enhance employees' understanding and awareness of information security.

ESG-oriented Risk Response and Management

In accordance with ISO14001 and ISO45001, Cleanaway has established risk and opportunity management procedures, hazard identification and risk evaluation procedures, and a standardized and effective risk control system to identify, analyze and evaluate risks and take countermeasures. In accordance with risk management policies and procedures, Cleanaway has completed the identification and evaluation of internal risk issues, analyzed the risks and opportunities according to different ESG aspects, and developed corresponding countermeasures as follows:

Risk		Opportunities			
Category	Risk identification	Response Strategy	Potential Financial Impact of Practices and Actions		
 <p>Social</p>	S1	Regulatory Compliance	Set up or increase the use of renewable energy according to government requirements	Promote green energy	<ol style="list-style-type: none"> 1. Install solar power generation facilities on the Company's building rooftops and idle land to reduce pollution and lower carbon emissions. 2. Promote the collection of biogas on landfill sites to generate electricity, where the use of renewable energy can reduce the concentration of greenhouse gases (GHG). 3. Purchase renewable energy to increase renewable energy utilization rate.
			Reduce GHG based on government requirements	Assess and reduce the energy consumption of equipment	<ol style="list-style-type: none"> 1. Evaluate the operating efficiency of equipment and replace or upgrade inefficient equipment to help reduce carbon emissions. 2. Avoid the use of fossil fuels and select greener facilities and equipment. 3. Establish an energy use monitoring mechanism to effectively evaluate and manage energy consumption.
			Carbon emission reporting regulations	Establish a carbon emission monitoring system	<ol style="list-style-type: none"> 1. Incorporate total carbon emission control and establish a GHG inventory platform to collect and monitor emissions regularly. 2. Establish carbon footprint monitoring to measure the impact of product manufacturing processes on the environment. 3. Formulate energy conservation and carbon reduction targets to continuously save energy and reduce carbon emissions.
	S2	Education and training for employees	Trend of energy conservation and carbon reduction	Strengthen the promotion of energy conservation and carbon reduction and personnel training	<ol style="list-style-type: none"> 1. Enhance employees' understanding of energy conservation to implement energy management in factories. 2. Promote environmental education to the public, with the aim of raising environmental awareness among employees, suppliers, community members, and other stakeholders. 3. Integrate and strengthen collaboration with the education community in relation to research on climate change adaptation.
	S3	Major Statutory Infectious Diseases	Expansion of special infectious diseases affects operations.	Reduce the risk of disease spread and strengthen health management among employees at the Company's headquarters and factories, external suppliers, and related parties.	<ol style="list-style-type: none"> 1. Refer to announcements from the Central Epidemic Command Center. 2. Implement access control at all entrances and exits of the Company's headquarters, separate the office area of each department, and require employees to put on a face mask at all times during working hours. 3. Keep abreast of changes in the disease situation and disease prevention measures, preparation of disease prevention supplies, and monitoring of employees' health on a daily basis.

Continued

Risk			Opportunities		
Category		Risk identification	Response Strategy	Potential Financial Impact of Practices and Actions	
 Economical	G1	Supplier Management	Demand from green supply chain	Strengthen green business	<ol style="list-style-type: none"> 1. Help and require suppliers to build GHG inventories and reduce carbon emissions, and use these inventories as an important basis for rating the Company's procurement strategies. 2. Observe and learn from benchmark companies to learn about and search for the most suitable energy-saving improvement practices for each plant (site) area.
	G2	Purchasing Management	The rise of environmental awareness	Implementing Green Consumption	<ol style="list-style-type: none"> 1. Choose green products that are more eco-friendly when purchasing daily supplies in plant (site) areas, such as printers, air-conditioners, computers, and light bulbs. 2. Upgrade or replace gasoline-powered motor vehicles and heavy machinery with electric vehicles and heavy machinery to reduce carbon footprint. 3. Implement greening of buildings and plant (site) areas to beautify them and reduce the concentration of carbon dioxide.
	G3	Additional taxes and expenditures	Impose carbon and energy taxes	Establish a carbon emission monitoring system	<ol style="list-style-type: none"> 1. Incorporate total carbon emission control and establish a GHG inventory platform to collect and monitor emissions regularly. 2. Establish carbon footprint monitoring to measure the impact of product manufacturing processes on the environment. 3. Formulate energy conservation and carbon reduction targets to continuously save energy and reduce carbon emissions.
	G4	Production Scheduling Management	Increasingly severe power shortages have led to unstable power supply conditions, affecting plant (site) operations	Unstable power supply from power plants puts the stability of plant (site) operations at risk, thereby increasing operating costs	Learn about electricity usage in the area and arrange for staggered peak production based on the actual situation to carry out production in the area during non-peak electricity hours.
 Environmental	E1	Climate change	Water rationing, production cut or suspension of production due to extreme climate	Increase market demand for production capacity of low-carbon factories	<ol style="list-style-type: none"> 1. Assess floods and droughts caused by climate change and strengthen the resilience of public facilities to climate risks. 2. Strive to save water, improve process water and rainwater recycling rates, and establish emergency responses to water shortages. 3. Purchase natural disaster-related insurance to prevent an increase in business risks due to abnormal climate.

2.5 Responsible Commercial Behavior

2.5.1 Ethical corporate management

• Ethical Corporate Management and Code of Conduct (Anti-Corruption Policy)

Cleanaway upholds the corporate cultural spirit of “integrity and honesty”, with honesty and integrity, fairness and transparency as the highest guiding principles of the Company. To ensure Cleanaway’s managers and employees have committed to conducting business in accordance with the highest ethical standards, the Company sets out the principles of Ethical Corporate Management Best Practice Principles, Codes of Ethical Conduct, Operating Procedures for Preventing Insider Trading, Employee Codes of Ethical Conduct, and Procedures for Ethical Management and Guidelines for Conduct in accordance with the reference examples of the “Codes of Ethical Conduct of TWSE/GTSM Listed Companies” and “Procedures for Handling Internal Material Information”, to regulate the ethics and responsibilities of governance units and employees when engaging in business conduct. The Company also promotes and deepens its ethical and honest corporate culture, adopts the spirit of “no wrongdoing, no indulging” in any violation of ethical conduct, and takes such measures as termination of employment or business relationship and appropriate legal actions against the violators.

Financial institutions support projects or transactions that have a positive impact on ESG (Environment, Social Responsibility, and Corporate Governance) through the issuance of letter of guarantee, letter of credit, and confirmation. In January 2022, the Company issued the first letter of guarantee for public environmental project for the New Construction Division of Kaohsiung Municipal Government Works Bureau (remediation of soil and groundwater contamination in Kaohsiung Refinery Area 4) for a public environmental project through HSBC, with an amount of NT\$820 million. The Company is committed to investing in the circular economy and has successfully solved environmental problems and fulfilled its green responsibility through green finance.

The Company will continue to perform tasks and pass the verification in accordance with the ISO 14001:2015 environmental management system, and disclose the expected environmental impacts and carbon emission reductions of this project. In addition, the Company will invest in various circular economy industries to accelerate the development of green energy, reduce carbon emissions, and promote the virtuous cycle of sustainability, thus creating a win-win situation for both economy and environment.

The Company has set up the following regulations for different objects in respect of ethical corporate management, which are also published on the Company’s website:

- **Directors and managers: the Company has also established the “Code of Ethical Conduct” to strictly prohibit directors and managers from either directly or indirectly providing, promising, requesting for or accepting any improper benefit, or engaging in any ethical violation, unlawful conduct or breach of fiduciary duty.**

- **Employees: The Company has formulated self-discipline documents that stipulate employees’ commitment to fulfilling confidentiality obligations when signing the “Letter of Employment”, and has issued the “Work Rules.” On the other hand, the Company has also established the “Employee Code of Conduct” and promulgated clear rules and regulations that address various issues, such as employee code of conduct, ethics and integrity, recusal due to conflict of interest, gifts, and entertainment, in the abovementioned “Letter of Employment,” “Work Rules,” and “Employee Code of Conduct” to be complied with by all employees.**

• Anti-Corruption Reporting Mechanism

Cleanaway has established the “Regulations Governing behavior cases from being reported as illegal, unethical or lack of credibility” to encourage reports on any illegal act or violation of the Codes of Ethical Conduct and the Ethical Corporate Management Best Practice Principles. All employees can report in person, by phone, by letter, email or by leaving a message on the company website. Once the report is submitted, the Company’s handling unit will proceed in accordance with the following procedures:

1. An information shall be reported to the department head if involving the rank and file and to an independent director if involving a director or an officer.
2. The responsible unit of the Company and the department head or personnel being reported to in the preceding subparagraph shall immediately verify the facts and, where necessary, with the assistance of the legal compliance or other related department.
3. If a person being informed of is confirmed to have indeed violated the applicable laws and regulations or the Company’s policy and regulations of ethical management, the Company shall immediately require the violator to cease the conduct and shall make an appropriate disposition. When necessary, the Company will institute legal proceedings and seek damages to safeguard its reputation and its rights and interests.
4. Documentation of case acceptance, investigation processes and investigation results shall be retained for five years and may be retained electronically. In the event of a suit in respect of the whistleblowing case before the retention period expires, the relevant information shall continue to be retained until the conclusion of the litigation.
5. With respect to a confirmed information, the Company shall charge relevant units with the task of reviewing the internal control system and relevant procedures and proposing corrective measures to prevent recurrence.
6. The responsible unit of the Company shall submit to the board of directors a report on the whistleblowing case, actions taken, and subsequent reviews and corrective measures.

In 2022, the Company did not receive any reports of illegal, unethical or dishonest behavior from stakeholders, and did not commit any juristic act related to corruption, bribery, competition, trust, and monopoly or engage in lobbying for public policies.

Designated Unit for Receiving Reports

(I) Spokesperson: Hearing of reports by stockholders, investors and other stakeholders.

Contact person: Finance Department, Ping-Cheng Hung

Telephone: +886-7-622-8422 ext.236

Email: hong.roy@cleanaway.tw

(II) Chief Auditor: Hearing of reports by this Company's internal staff, consumers, suppliers and contractors.

Contact person: Auditing Office, Mei-Chih Kao

Telephone: +886-7-622-8422 ext.211

Email: kao.lisa@cleanaway.tw

• Communication and Training on Anti-corruption Policy

Education and training serve as an important channel for promoting internal systems and cultivating the correct idea of rule of law among employees. The implementation of communication and training on anti-corruption is as follows:

1. Board members: the Company's "Codes of Ethical Conduct, "Ethical Corporate Management Best Practice Principles," and "Codes of Ethical Conduct," are subject to approval by the board of directors; The same shall apply to any amendment thereto. The communication result is 100%.
2. Employees: Since going public, the Company has included various issues such as anti-corruption, moral and ethics, recusal due to conflict of interest, and gifts and entertainment, in orientation training for new employees. The "Letter of Employment" signed by all employees consists of contractual provisions that prohibit employees from engaging in fraud for personal gain, receiving kickbacks, and profiting others illegally. Furthermore, the Company's "Work Rules" also comprises specific provisions on duty of honesty, where employees are prohibited from using bribes, kickbacks, allowances or other improper means and must act in a fair and impartial manner when acquiring sales; employees are also not allowed to make requests to or lobbying the Company when performing their duties; and employees must act in a fair and impartial manner when carrying out procurement and audit-related duties. As of December 31, 2022, each and every employee has signed the consent form for the provisions above to show that they are aware of and comply with these provisions, which have been fully communicated to them. In 2022, the Corporate Governance

Team under the ESG Task Force conducted the "Promotion of Integrity Policies and Related Knowledge" from time to time through the announcement and questionnaire function of the Cleanaway's approval system, which trained 282 people.

3. Suppliers: The Company not only verbally communicates its anti-corruption policy to procurement personnel and suppliers, but also conducts ethical assessments on suppliers to ensure that suppliers engage in business dealings with the Company in a fair and transparent manner and do not request for, provide or accept bribes. All the aforesaid measures have been fully communicated to procurement personnel and suppliers.

• Recusal for Conflicts of Interest

The Company has specified the provisions on the recusal of directors for conflicts of interests in the rules for procedure of the Board of Directors. A director himself/herself or the legal entity he or she represents who has an interest in a matter before the meeting of Board of Directors that is harmful to the interests of Cleanaway is prohibited from joining in the discussion of and voting on that matter, and is required to recuse from the discussion of and voting on that matter, and is not allowed to act as a proxy for other director in exercising his or her voting rights. The second responsibility of the Board of Directors is to provide guidance to the management team. The Board of Directors of Cleanaway will listen to the reports from the management team on economic, environmental protection and corporate social responsibility issues (including evaluation on relevant risks and opportunities, compliance with international standards, and code of professional ethics) before each quarterly meeting. The management must propose the corporate strategy to the Board of Directors. The Board must evaluate the likelihood of success of these strategies and constantly review the progress of the strategies and urge the management team to make adjustments as necessary.

Cleanaway has purchased liability insurance for directors, supervisors, and key employees. All directors and supervisors are in compliance with the requirements for further education, and all directors' non-competition and interest avoidance are truthfully recorded and disclosed on Market Observation Post System for public inquiry. The remuneration of directors and supervisors of the Company and all companies under consolidated financial statements includes transportation expenses, earning distribution for the remuneration of directors and supervisors. Transportation expenses are calculated by reference to the typical pay levels adopted by peer companies and attendance of the directors and supervisors. The remuneration distributed by earnings is determined based on the Articles of Incorporation of the Company and all companies under consolidated financial statements. The Board of Directors prepares a distribution proposal and submits it to the Shareholders' Meeting for approval; the remuneration of the general manager and vice general managers, including salary, bonuses and employee bonuses, is based on the position held and the responsibilities undertaken, referring to the standards of the same industry for similar positions and depending on the business performance results reported to the Remuneration Committee for review and determination.

2.5.2 Human Rights Policy

In order to fulfill our corporate social responsibility and protect the basic human rights of our employees and stakeholders, the Company supports and voluntarily complies with international human rights conventions, including the 1948 United Nations Universal Declaration of Human Rights, the UN Framework and Guiding Principles on Business and Human Right, the United Nations Global Compact and the International Labor Organization Declaration of Fundamental Principles and Rights at Work. The Company shall respect internationally recognized basic human rights in accordance with international human rights conventions such as the United Nations Global Compact, the United Nations Global Compact, and the International Labor Organization Declaration of Fundamental Principles and Rights at Work, and respect for internationally recognized fundamental human rights. The Company also formulate its corporate governance and human rights policies in accordance with the guiding principles of the aforementioned norms as well as domestic labor laws and regulations, such as the Labor Standards Act, the Law on Gender Equality at Work, the Law on Occupational Safety and Health, to eliminate any infringement and violation of human rights. In addition, the Company has included a corporate social responsibility (CSR) course in orientation training for all new employees, so that new employees can learn about the policies and practices promoted by the Company in relation to CSR and have a clearer understanding of their own rights.

Internally, Cleanaway advocates that employees will not be treated unfairly due to factors such as race, religion, skin color, nationality, and gender, with the relevant provisions stipulated in internal documents and regulations included in the "Work Rules (including Regulations Governing Sexual Harassment Prevention). Externally, Cleanaway has also set up a variety of smooth communication channels, so that stakeholders across different fields can effectively convey their ideas and opinions.

In compliance with the regulations of the International Labour Organization, Cleanaway strictly prohibits the employment of child labor below the legal minimum age for employment, creates a friendly and legally compliant workplace, and engages in recruitment according to recruitment procedures that comply with the regulations promulgated by the competent authorities and the relevant laws.

• Human Rights Assessment

While pursuing sustainable business operations, the Company also pays attention to people and environment, and undertakes and promotes social responsibility to its employees and the overall environment. In order to fulfill our commitment to provide a safe and healthy workplace, the Environmental Safety Office of the Technology Department (the responsible unit) manages the occupational safety and health of our employees in accordance with laws and regulations, and regularly entrusts a professional organization to conduct environmental inspections every year to identify the environmental risks in our business.

The human rights issues that we are concerned about and their implementation are as follows:

1. Establish an international environmental management system in accordance with ISO-14001 and ISO-45001

The Company has established an international environmental management system in accordance with ISO-14001 and ISO-45001, which provides the Company with a perfect environmental and occupational safety and health management framework. Set environmental management objectives, targets and programs annually to achieve the goals of pollution prevention and continuous improvement, thus realizing sustainable management. In addition, the management measures taken for preventing sexual harassment and forced or compulsory labor are described below:

Item	Description
Prevention of sexual harassment	In accordance with the Law on Gender Equality at Work, the Company has established sexual harassment prevention and control measures, complaint and disciplinary measures, as well as complaint channels. When an incident occurs, the Human Resources Department and the relevant unit will handle the matter confidentially and decide on the punishment and internal improvement measures.
Forced or Compulsory Labor	The Company has established a plan to prevent unlawful abuse in the performance of duties. Based on the results of hazard identification and risk evaluation, the Company will allocate appropriate labor for high-risk or high-load work and night work according to the proper labor allocation recommendations of the health service doctors and the manpower. The scheduling of shifts must be agreed upon by employees, and rules are in place to avoid continuous night shifts, long working hours, or frequent overtime work. The Safety and Health Committee of the Company has set up a complaint notification and handling team and announced the complaint notification methods. In case of any unlawful infringement, employees can file a complaint to the team, and the team members will investigate the case and discuss the preventive measures.

2. Establish Safety and Health Management Organization

The Company provides a safe working environment and emphasizes the personal safety of each employee. In order to achieve effective management, supervision, and improvement, the Company has set up the Environmental Safety Office under Technology Department to handle matters related to occupational safety and health management and environmental protection, and continuously improve the working environment and sanitary conditions, in order to reduce the risk of occupational accidents and protect the physical and mental health of the employees. In response to changes in occupational safety and health laws and regulations, the Company regularly revises the safety and health work rules for employees to follow, formulates occupational disaster prevention plans and emergency response plans, and directs the relevant departments to implement them. In addition, the Company is responsible for the planning, management and checking of safety and health operations in the factory to provide a safe working environment for our employees.

3. Set access control facilities

The Company is equipped with monitoring system, access control facilities, and security personnel to conduct inspections from time to time and strictly control the entry and exit of people to ensure the personal safety of employees.

4. Equipment Inspection and Management

The Administration Department and the Environmental Safety Office of the Technology Department are responsible for planning and supervising the checking and inspection of safety and health facilities of the Company's headquarters and plants (sites) respectively; the inspection methods include regular inspection, key inspection, and operational inspection, and the relevant inspection contents are set jointly by the user units and the Environmental Safety Office (Administration Department for Headquarters), and then the inspections are carried out in accordance with the plan. The Company conducts regular inspections of the on-site operating environment and equipment, plans monthly equipment inspections, and conducts key inspections and makes records before use.

5. Fire Safety

The Company's firefighting equipment and emergency response equipment are regularly inspected to ensure that they remain in good condition and maintain their functionality; fire drills are conducted on a semiannual basis.

6. Health examination

In order to provide a safe and sanitary working environment for our employees and to prevent occupational accidents, we regularly provide free health examination for our employees, and all employees of the Group are scheduled to have a health examination once a year. In addition, the Environmental Safety Office of the Technology Department carries out health management and supervises the investigation and handling of occupational hazards such as diseases, injuries, disabilities, and deaths of labors, as well as preserve data for future reference.

7. Other Facilities

The Company has set up facilities for physically challenged workers in accordance with the law in order to establish a healthy and friendly workplace.

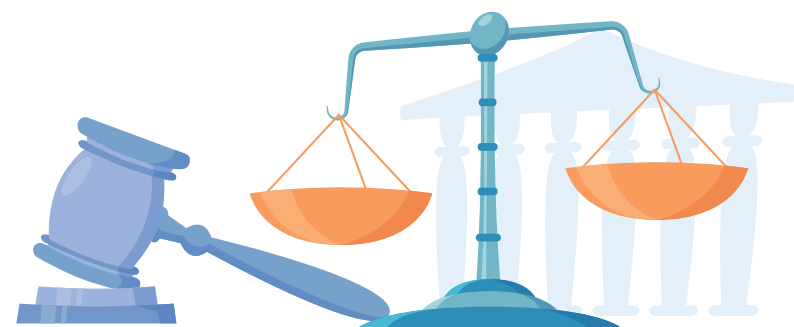
2.5.3 Regulatory Compliance

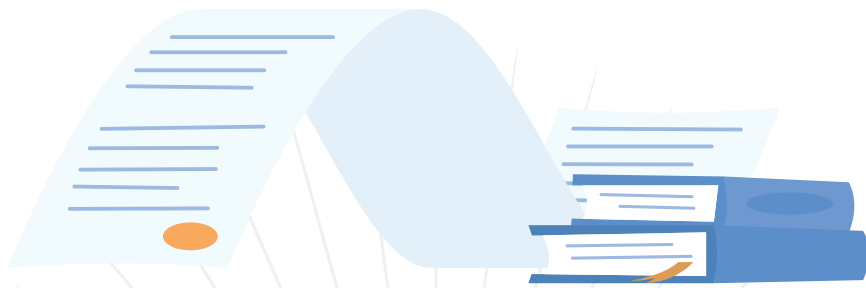
In 2022, the Company violated 0 environmental laws and regulations, 0 social laws and regulations, 0 governance and economic laws and regulations, and 0 product and service laws and regulations, decreasing by 3, 0, 0, and 0, respectively, compared to 2021.

Summary table of fines due to violation of laws in 2022

Fine Payment		Number of violations	Amount
Fine payable in previous year		0	0
2022	New fine	0	0
	Fine paid	0	0
Fines accrued at the end of the year		0	0

Note: This table will disclose the cases in which a fine of more than NT\$100,000 is imposed due to violation.





Summary table of fines due to negligence or willful misconduct of subcontractors in 2022

Violations

For non-compliance with contractual requirements and repeated violations during the construction period, the Company violated the “Regulations on Environmental Management and Construction Safety of Public Works Sites of the New Construction Division of Kaohsiung Municipal Government Works Bureau” and the “Key Points of Safety and Hygiene Self-Management Mechanism of the New Construction Division of Kaohsiung Municipal Government Works Bureau”, resulting in a total of 3 penalties, with a fine amount of NT\$219,000, NT\$228,000, and NT\$114,000, respectively.

Subsequent Improvement Measures

1. Regularly organize training seminars and notify all contractors to participate in the seminars to strengthen the occupational safety awareness of all related parties.
2. The Occupational Safety Supervisors at all levels are requested to increase the supervision and inspection frequency to effectively urge operators to comply with the relevant regulations during operation.
3. All kinds of operation projects shall be proposed in advance, the occupational safety personnel will make risk evaluation and planning, and then notify the hazards before operation to ensure the physical and mental safety and health of construction workers.

Note: This table will disclose the cases in which a fine of more than NT\$100,000 is imposed due to violation. For the fines imposed due to the negligence or willful misconduct of the subcontractors, we have required the subcontractors to pay on our behalf, therefore, there is no financial impact.

2.5.4 Sustainability Associations

Membership of Associations

Cleanaway attaches great importance to and are concerned about the development of environmental protection, circular economy and sustainability issues, actively participates in business-related associations, and exchanges industry knowledge, information and practical experience with industry peers and professionals, hoping to respond to the changes in the international situation and help promote the sustainability and innovation of the industry. In 2022, the Company joined 12 associations, as shown in the table below:

Association	Membership
Taiwan Share Association	Director, General Member
Taoyuan Enterprise Chamber	General Member
Kaohsiung Truck Freight Association	General Member
Kaohsiung Municipality Waste Removal and Treatment Business Association	General Member
Kaohsiung City General Industry Association (KHIA)	General Member
Kaohsiung OTC Entrepreneurs Association	General Member
Taiwan Association of Soil and Groundwater Environmental Protection	General Member
Chinese Environmental, Safety and Health Association (CE-SHA)	General Member
Taiwan Environmental Engineering Association (TEEA)	General Member
Taiwan Alliance for Sustainable Supply (TASS)	General Member
Taiwan Society for Circular Economy (TWSCE)	General Member
Asia Pacific Public Private Partnerships (PPP) Association	General Member

2.6 Sustainable Supply Chain

2.6.1 Green Procurement for Raw Material Management

Cleanaway

- Materials Used by Weight or Volume

Cleanaway is an intermediate treatment solidification plant for hazardous industrial waste. Hazardous industrial waste is converted into less soluble or less toxic forms after solidification and is confined in solids to minimize the distribution in the environment and reduce the risk of harm to the ecosystem; in order to ensure that the solidified material complies with the leaching standards of toxicity characteristic leaching procedure (TCLP) and to avoid waste of raw materials, feasibility tests will be conducted before solidification treatment for each batch of hazardous waste to provide a reference for the optimal proportion of that batch of raw materials.

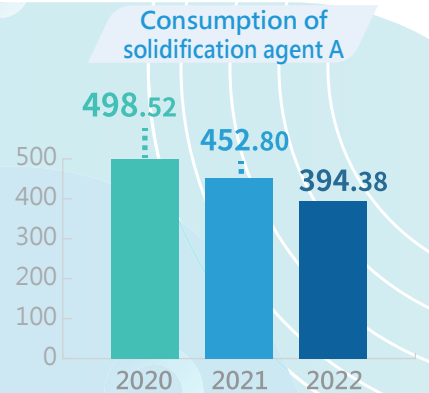
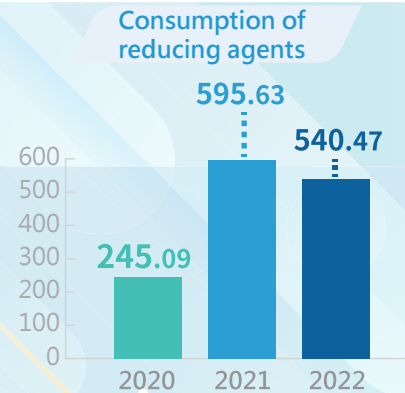
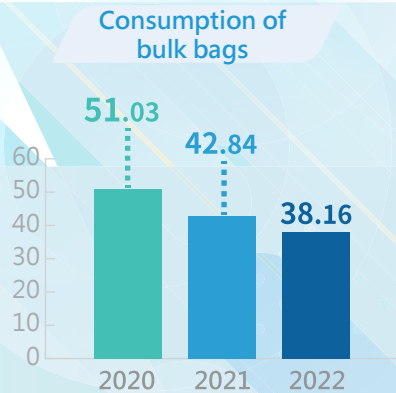
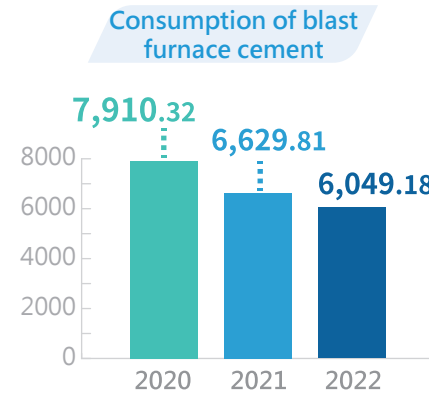
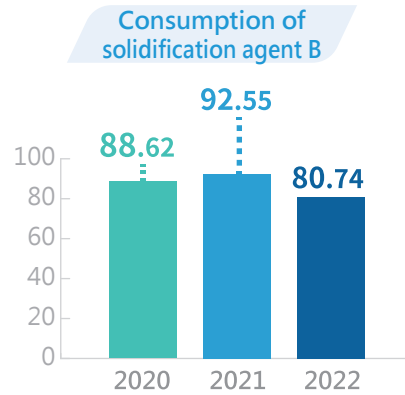
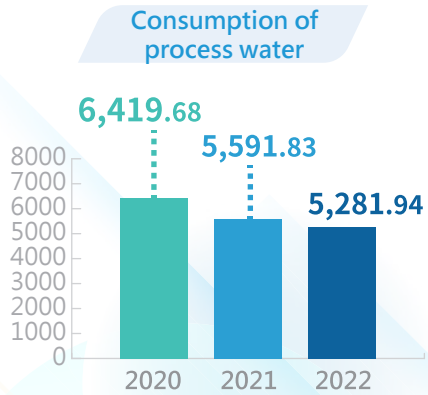
The main raw materials used by Cleanaway include blast furnace cement, solidification agent A, solidification agent B, bulk bags, reducing agents, and process water. From 2020 to 2022, the Company used 20,589.31 tons of blast furnace cement (50.21%) and 17,293.49 tons of process water (42.18%), accounting for 92.39% of the total input materials used, and were the most important raw materials used in the manufacturing process; followed by 1,381.19 tons (3.37%) of reducing agents, 1,345.70 tons (3.28%) of solidification agent A, 261.91 tons (0.64%) of solidification agent B, and 132.03 tons (0.32%) of bulk bags. For details, please refer to the table of raw material consumption, cumulative consumption, and proportion during the three years.

Raw material consumption, cumulative consumption, and proportion during the three years

Types of input materials		Consumption (unit: ton)				Total proportion
		2020	2021	2022	Cumulative consumption	
Non-recycled materials	Solidification agent A	498.52	452.80	394.38	1,345.70	3.28%
	Solidification agent B	88.62	92.55	80.74	261.91	0.64%
Recycled materials	Blast furnace cement	7,910.32	6,629.81	6,049.18	20,589.31	50.21%
	Bulk bags	51.03	42.84	38.16	132.03	0.32%
	Reducing agents	245.09	595.63	540.47	1,381.19	3.37%
	Process water	6,419.68	5,591.88	5,281.94	17,293.49	42.18%
						96.08%

Solidification agent A, solidification agent B and reducing agents used in the solidification process chelate different types of heavy metals for reduction reaction to produce solidification products that meet regulatory standards. Compared with 2020, the consumptions of raw materials used in 2022, except for reducing agents, showed a decreasing trend due to the impact of the Covid-19 epidemic in 2022, which resulted in a decrease in the output of hazardous industrial waste by various industrial companies, and a decrease in the incoming volume of waste. Since reducing agents are used in the batch solidification treatment of specific wastes, the consumption of reducing agents used in a year is determined by the amount of specific wastes imported into the plant in that year. Generally, the consumption of reducing agents used in 2022 still showed a decreasing trend compared to 2021. The consumptions of raw materials used are shown in the figures below.

Note: This table only calculates the consumptions of raw materials used in the solidification plant.



• **Recycled Materials Used**

From 2020 to 2022, Cleanaway used a total of 41,003.63 tons of raw materials in the hazardous industrial waste treatment process, of which 39,396.02 tons (96.08%) of recycled input materials are used as input materials for solidification, including blast furnace cement, bulk bags, reducing agents, and process water. Slags added to blast furnace cement are sourced from waste generated by steel-making plants. As a cement additive, slags can not only reduce cement waste by 30% and thus achieve the goal of waste recovery, but also reduce CO2 emissions by 37% compared to portland cement. On the other hand, reducing agents are sourced from waste acid recycled from surface treatment at various steel plants, whereas bulk bags are made of recycled polypropylene (PP) pellets. The Company recycles and stores water used for process equipment cleaning, floor cleaning, vehicle cleaning and employees' domestic wastewater at factories as well as rainwater to be provided as process water for solidification. Ultimately, in addition to reducing the waste of resources and lowering the demand for environmental resources, it can also achieve the goals of energy saving and carbon reduction, waste recycling and sustainable regeneration.

Top-Comment

• Materials Used by Weight or Volume

Top-Comment's business is industrial paper, 100% recycled waste paper is used to make gray cardboard. The raw materials used mainly include waste paper, process water, and process additives (solid and liquid). In 2022, the total consumption of waste paper was 64,212.985 tons (9.54%), and the total consumption of process water was 605,019.5 tons (89.85%), which together accounted for 99.39%, and were the most important raw materials used in the process; and the total consumption of other process additives (solid) was 1,189 tons (0.18%), and the total consumption of process additives (liquid) was 2,912.381 tons (0.43%). For details, please refer to the table of raw material consumption and proportion.

Raw material consumption and proportion

Types of input materials		Consumption (unit: ton)		Total proportion
		2022		
Non-recycled materials	Process additives (solid)	1,189.00	0.18%	0.61%
	Process additives (liquid)	2,912.38	0.43%	
Recycled materials	Recycled paper (waste paper)	64,212.99	9.54%	99.39%
	Process water	605,019.50	89.85%	

• Recycled Materials Used

Top-Comment uses 100% recycled waste paper as raw material. In 2022, Top-Comment used a total of 673,333.866 tons of raw materials in the paper making process, of which 669,232.485 tons (99.39%) of recycled materials were used as raw materials for the manufacturing process, including recycled paper (waste paper) and process water. The waste paper was 100% recycled, the water used for process equipment cleaning, floor cleaning and employees' domestic wastewater at factories as well as rainwater were recycled and stored. Ultimately, in addition to reducing the waste of resources and lowering the demand for environmental resources, it can also achieve the goals of energy saving and carbon reduction, waste recycling and sustainable regeneration.

• Green Procurement

In recent years, as global warming intensifies and extreme climate causes disasters in all corners of the world, the Cleanaway Group has been implementing its sustainable development goals and responding to the mitigation of climate change. From 2020, the Group has been prioritizing the purchase of energy-saving and carbon-reducing equipment, green commodities that have less impact on the environment, and raw materials with green labels, as well as implementing environmental protection education and promoting the use of green products. Encourage green consumption, promote the effective use of energy, reduce excessive energy consumption, avoid environmental pollution, and achieve the benefits of energy saving, carbon reduction and environmental protection. The amount of green procurements was NT\$8,701,236 in 2020, NT\$9,960,870 in 2021, and NT\$8,546,472 in 2022, totaling NT\$27,208,578 in the past three years. Cleanaway Group implements green procurement with the goal of achieving sustainable development. In 2021 and 2022, Cleanaway has been consecutively awarded the Certificate of Merit for Green Procurement by the Environmental Protection Bureau of the Kaohsiung City Government, in recognition of the Group's active participation in green procurement and commitment to the promoting environmental protection.



2.6.2 Supply Chain Structure

Cleanaway

Cleanaway Group aims to become the “leader in total environmental solutions in Taiwan” in Taiwan’s waste clearing and disposal market and has established a one-stop waste clearing and disposal service model. The Group’s waste cleaning services include hazardous industrial waste solidification (thermal desorption and recycling of mercury-containing wastes), final disposal of general industrial waste, waste transportation fleet, and large-scale on-site remediation of contaminated sites by soil cleaning technology. Therefore, the role of suppliers is mainly to provide raw materials, equipment purchase and inspection and repair, annual repair, emergency repair, labor and other professional services required for operations. The types of suppliers mainly include “raw material suppliers”, “labor contractors”, “civil engineering and construction contractors”, “repair providers of machinery and equipment” and “repair providers of mobile machinery vehicle”, etc. Through the Group’s supplier and contractor management model and cooperation, Cleanaway Group is able to maintain stable daily operation and maintenance.

Type of supplier	Number of suppliers	Region	Payments in 2022	Industry Characteristics
Repair providers of machinery and equipment	2	Kaohsiung City: 1; Pingtung County: 1	\$962,000 (0.08%)	Capital, technology, and labor intensive
Repair providers of mobile machinery vehicle	18	Taoyuan City: 1; Chiayi City: 1; Tainan City: 1; Kaohsiung City: 15	\$16,941,770 (1.48%)	Capital, technology, and labor intensive
Civil engineering and construction contractors	10	Taichung City: 1; Tainan City: 1; Kaohsiung City: 7; Pingtung County: 1	\$972,832,716 (85.05%)	Technology intensive or labor intensive
Raw material suppliers	7	Tainan City: 2; Kaohsiung City: 5	\$39,880,519 (3.49%)	Capital and technology intensive
Labor contractors	11	Chiayi County: 1; Tainan City: 1; Kaohsiung City: 9	\$94,261,184 (8.24%)	Technology intensive or labor intensive
Others Note	19	Taipei City: 2; New Taipei City: 2; Kaohsiung City: 15	\$18,930,723 (1.66%)	Technology intensive or labor intensive
Total	67	Taipei City: 2; New Taipei City: 2; Taoyuan City: 1; Taichung City: 1; Chiayi City: 1; Chiayi County: 1; Tainan City: 5; Kaohsiung City: 52; Pingtung County: 2	\$1,143,808,912	The proportion of local procurement was 85% (Suppliers in Tainan City and Kaohsiung City/total number of suppliers)

Note: The main types of other suppliers are for departmental needs and consumable goods

Top-Comment

Top-Comment is a manufacturer of industrial paper. Therefore, the role of suppliers is mainly to provide raw materials, equipment purchase and inspection and repair, annual repair, emergency repair, labor and other professional services required for manufacturing. The types of suppliers mainly include "raw material suppliers", "packaging material suppliers", "repair providers of machinery and equipment", "civil engineering and construction contractors", "labor contractors" and "new boiler suppliers", etc. Through the cooperation with suppliers and contractors, Top-Comment is able to maintain stable daily operation and maintenance and smoothly complete the project works.

Type of supplier	Number of suppliers	Region	Payments in 2022	Industry Characteristics
Raw material suppliers	47	Taichung City: 6 ;Taipei City: 3; Tainan City: 5; Nantou County: 2; Taoyuan City: 2; Kaohsiung City: 5; Yunlin County: 1; Chiayi City: 10; Chiayi County: 6; Changhua County: 1 USA: 5; Philippines: 1	\$291,955,058 (37.76%)	Capital and technology intensive
Packaging material suppliers	6	Taichung City: 1; Taipei City: 1; Chiayi County: 1; Changhua County: 3	\$9,929,416 (1.28%)	Capital and technology intensive
Repair providers of machinery and equipment	18	Taichung City: 3; Taipei City: 2; Taichung City: 1; Taoyuan City: 2; Kaohsiung City: 4; Yunlin County: 1; New Taipei City: 1; Chiayi City: 2; Chiayi County: 2	\$30,371,828 (3.93%)	Capital, technology, and labor intensive
Civil engineering and construction contractors	3	Chiayi City: 2; Chiayi County: 1	\$10,676,205 (1.38%)	Technology intensive and labor intensive
Labor contractors	1	Chiayi County: 1	\$26,063,567 (3.37%)	Technology intensive and labor intensive
New boiler suppliers	19	Taipei City: 2; Tainan City: 1; Taoyuan City: 2; Kaohsiung City: 7; Yunlin County: 1; New Taipei City: 1; Chiayi City: 2; Mainland China: 3	\$346,030,416 (44.75%)	Capital, technology, and labor intensive
Others Note	14	Taipei City: 1; Tainan City: 1; Taoyuan City: 1; Kaohsiung City: 4; Yunlin County: 2; Chiayi City: 3; Chiayi County: 2	\$58,258,374 (7.53%)	Technology intensive and labor intensive
Total	108	Taichung City: 10; Taipei City: 9; Tainan City: 8; Nantou County: 2; Taoyuan City: 7; Kaohsiung City: 20; Yunlin County: 5; New Taipei City: 2; Chiayi City: 19; Chiayi County: 13; Changhua County: 4 USA: 5; Philippines: 1; Mainland China: 3	\$773,284,864 (100.00%)	The proportion of local procurement was 30% (Suppliers in Chiayi County and Chiayi City/total number of suppliers)

Note: The main types of other suppliers are for departmental needs and consumable goods

2.6.3 Supply Chain Management Policy

In order to implement sustainable development of the supply chain, Cleanaway began establishing regulations governing supplier management to promote a win-win performance with suppliers. In accordance with the procurement procedures under ISO9001 quality management system, the Group conducts assessments on suppliers or contractors that are on the list of qualified suppliers, and the actions to be taken in the event of non-compliance are detailed in the supplier management policy. In order to implement the sustainable development of the supply chain, the Cleanaway Group continuously invites suppliers and contractors to participate in seminars and establishes a perfect communication mechanism.

I New Supplier Management

Cleanaway Group has expanded its commitment to and mission in fulfilling corporate social responsibility (CSR) to suppliers with which it works closely in its businesses. Therefore, CSR clauses are gradually included in supplier contracts, where the sustainable cooperation target is to have suppliers performing all the CSR clauses included in these contracts. Suppliers should strictly comply with the contracts and perform the provisions of the relevant laws and regulations in relation to labor conditions, occupational safety and health, environmental protection, and labor rights, and should comply with the terms to ensure the operation of the relevant social responsibility, and continue to communicate with suppliers and disseminate information on social responsibility to jointly create a win-win partnership. Should a supplier violate these clauses, the Group can either request for improvements from the supplier within a specified duration or terminate and cancel the contract. Procurement personnel has assessed new suppliers based on the new supplier assessment form, which also includes assessment on new suppliers with respect to social norms. All new suppliers are required to undergo assessment. New suppliers that have passed the assessment process and successfully obtained approval from the relevant unit supervisors will be included in the List of Qualified Suppliers by procurement personnel.

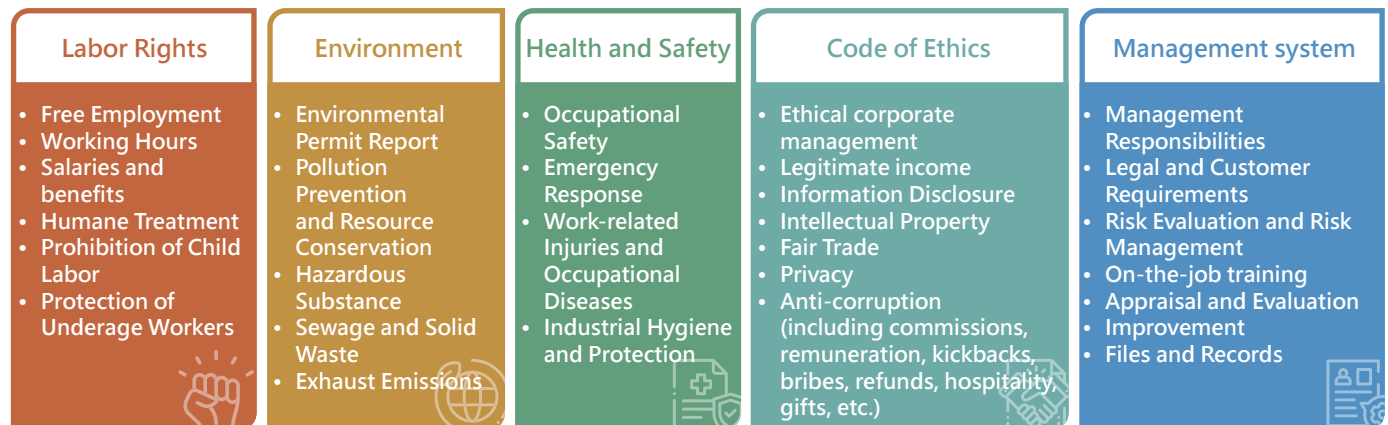
- Letter of Commitment for Suppliers

Cleanaway Group attaches importance to the requirements of Corporate Social Responsibility (CSR), and mainly focuses on "Labor and Human Rights", "Employee Health and Safety", "Product Safety", "Business Ethics", "Environmental Protection", and "Requirements for Compliance with Policies and Laws", and invites qualified suppliers to participate in our sustainable development strategy and to sign a letter of commitment to cooperate with the Cleanaway Group to promote the implementation of social responsibility and pursue the goal of corporate sustainable development based on the principle of mutual benefit and cooperation. In 2022, Cleanaway Group had a total of 175 qualified suppliers, with 117 suppliers signing the letter of commitment. It is expected that all suppliers will sign the letter of commitment by 2025.

- New Supplier Assessment

Cleanaway Group continues to fulfill social responsibility and closely develops partnerships with suppliers, and complies with important international declarations and norms. In accordance with the norms regarding human rights, labor standards, environment, and anti-corruption, Cleanaway has formulated the "New Supplier Assessment Form", which is based on the "Labor Rights", "Environment", "Health and Safety", "Ethics" and "Management System". The New Supplier Assessment Form is applicable to all suppliers and contractors who provide raw materials, goods or services, and all their activities should be in full compliance with the requirements of this assessment and local laws and regulations. Suppliers that meet the requirements of the "New Supplier Assessment Form" can be registered as qualified suppliers, but they can only be renewed if they still meet the requirements of the "Annual Supplier Assessment" in the future.

Cleanaway's New Supplier Assessment Items



II Existing Supplier Management

Each year, the procurement personnel of Cleanaway Group will conduct performance assessment and rating on new suppliers and existing qualified suppliers in five areas, namely "product quality," "product delivery," "degree of cooperation," "supply stability," and "Supplier Code of Conduct." Ratings are given to suppliers as follows. Suppliers with an A rating will have their contracts renewed. Suppliers with a B rating will have their contracts renewed three months upon reassessment. Suppliers that continue to receive a B rating will have their services discontinued as the Company searches for other qualified suppliers. Suppliers with a C rating will not be hired. However, suppliers with a significant impact on society and the environment will be included in the list of discontinued suppliers.

 <p>Supplier Registration</p>	<ul style="list-style-type: none"> • New Supplier Assessment Form • Vendor Assessment Form
 <p>Supplier Assessment</p>	<ul style="list-style-type: none"> • Product Quality • Product Delivery Time • Vendor compliance • Supply Stability • Code of Conduct for Suppliers
 <p>Unqualified Suppliers</p>	<ul style="list-style-type: none"> • Supplier Communication and Guidance • Re-audit Execution • The case will be closed for qualified suppliers, and unqualified suppliers will be prohibited

III Supplier Communication and Guidance

In order to grasp the risks and competitiveness of suppliers, the Group has set up an audit and guidance system for suppliers, whereby procurement personnel conduct interdepartmental assessments and audits of suppliers and contractors every year. In case of suppliers that fail certain assessment items, the Company will enhance efforts to visit and communicate with them and increase the frequency of audit on them to grasp the supplier's risk and competitiveness. If these suppliers have no intention to make the necessary improvements or are unable to meet the expectations of the Company after numerous rounds of communication and audit, the Company will no longer continue its cooperation with these suppliers and will search for other qualified suppliers. In addition, the safety and health management of contractors is based on the Group's safety and health management procedures for construction contractors, and the occupational safety and health unit is responsible for requesting the contractors to implement the procedures.

IV Procurement Risk Management

Cleanaway Group's partners in the supply chain can generally be divided into various categories, including raw materials, consumables, machinery and equipment and mobile machinery repair, labor and manpower, and project contracting. In order to avoid factors such as natural disasters or force majeure, the Company coordinates the material preparation mechanism with suppliers and establish safety stock based on the material preparation schedule at plant- or site-level units, so as to ensure an uninterrupted supply chain. On the other hand, in order to prevent the risk of material shortages or issues with having a single supplier, the Company will choose at least two qualified suppliers for each material in consideration of the material assessment mechanism, and seek new suppliers according to demand if any supplier is unable to provide services. Additionally, the Company will select new qualified suppliers through its assessment process to ensure uninterrupted supply of materials.

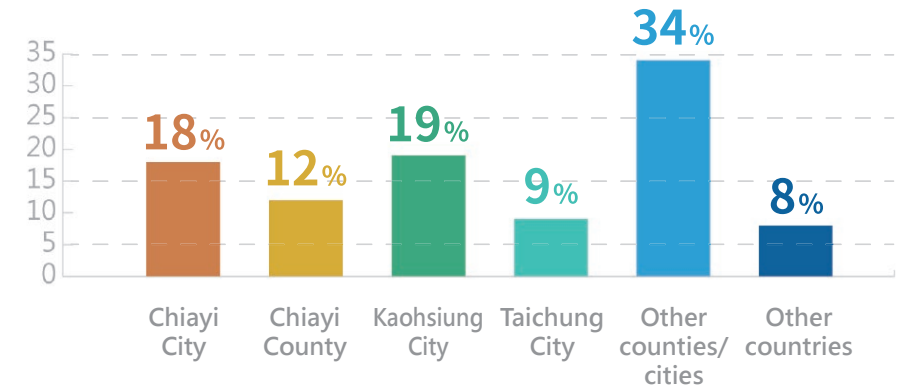
For equipment purchased in accordance with the procurement procedures, suppliers are required to provide the necessary safety features for the equipment, such as emergency stop switches, devices to prevent electrical leakage, overload protection devices, and other related measures for protecting the operators and the equipment itself. In addition, for maintenance, installation, or cleaning services provided by suppliers, suppliers should also provide service contents that require the factory's cooperation in terms of safety and hygiene of personnel and environment, such as safety signs in the work area, power outages, gas extraction (venting) control, and warnings for electric welding and flame cutting.

V Strengthen Local Supply Chain

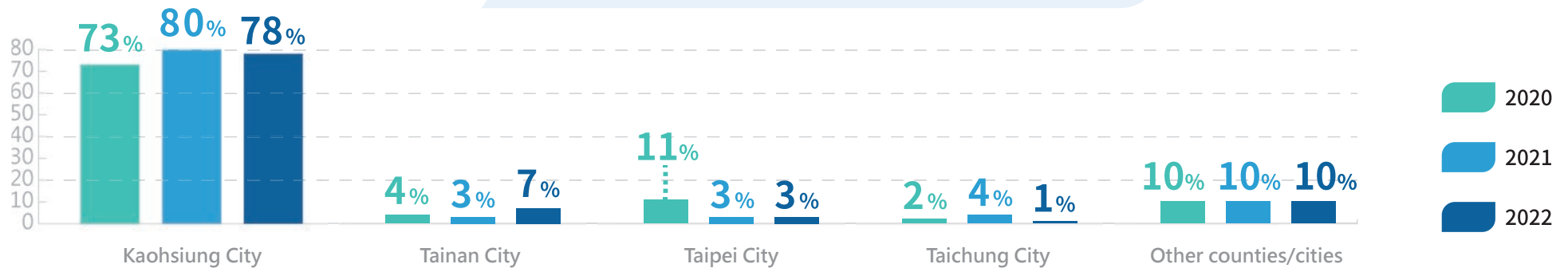
Cleanaway Group follows a sustainable development strategy and implements local procurement policies to enhance local economic development and reduce carbon emissions caused by the transportation process, minimizing the impact on the environment. Cleanaway's suppliers are local (Taiwan) vendors, and the local procurement ratio is 100%; Top-Comment mainly produces industrial paper, the main raw material is waste paper, which comes from domestic and foreign import sources. Domestic and foreign products have different raw material ratios due to different properties, and Top-Comment mainly purchase domestic waste paper as the raw materials. In order to strengthen local procurement, Top-Comment will actively develop local suppliers of waste paper in Taiwan to reduce carbon emissions from transportation; the local procurement proportion of Top-Comment was 92%.

In addition, the Company has been promoting the localization of procurement for many years, and has adopted local suppliers as a priority partnership to stimulate local economic growth. In 2022, based on qualified suppliers and new suppliers of raw materials and spare parts, Cleanaway's proportion of local procurement (Tainan City and Kaohsiung City) was about 85%, while the proportion of local procurement of Top-Comment (Chiayi County and Chiayi City) was about 30%. The Company actively upgrade local supply chains to strengthen corporate environmental responsibilities and grow together with local suppliers.

Top-Comment Resources' Supplier Location Distribution Chart 2022



Cleanaway's Supplier Location Distribution Chart 2020-2022



2.6.4 Supply Chain Audit Results

In 2022, Cleanaway had 67 qualified suppliers and Top-Comment had 108 qualified suppliers. All suppliers will undergo new or annual supplier audits. According to the statistics of the 2022 Qualified Supplier and New Supplier Assessment Form, all suppliers were rated A in 2022, and there was no supplier rated as B or C.

Summary Table of Audit Results for the Past Three Years (Unit: Suppliers)

Audit Results	2020	2021	2022	
Scope of Calculation	Headquarters, solidification plant, Da Ning, Chi Wei	Headquarters, solidification plant, Da Ning, Chi Wei, Kang Lien	Headquarters, solidification plant, Da Ning, Chi Wei, Kang Lien, Da Tsang, Cleanaway Enterprise	Top-Comment
Total number of suppliers (A) ^{Note 1}	456	445	412	224
Number of suppliers to be audited (B)	170	148	67	108
Percentage of suppliers to be audited (=B/A*100%)	37%	33%	16%	48%
Number of suppliers audited (C) ^{Note 2 Note 3}	170	148	67	89
Percentage of suppliers audited = C/B*100%)	100%	100%	100%	82%
Audit results				
A	170	148	67	89
B	0	0	0	0
C	0	0	0	0
Audit Pass Rate	100%	100%	100%	100%

Note 1: The standard for calculating the total number of suppliers is the number of suppliers with transaction records in the current year.

Note 2: In 2020, the audit standards for existing suppliers were the suppliers of raw materials and semi-finished products, or those who provide equipment repair or civil engineering, with an accumulated transaction amount of more than NT\$80,000.

Note 3: From 2021, the audit standards for existing suppliers changed to the suppliers of raw materials and semi-finished products, or those who provide equipment repair or civil engineering, with an accumulated transaction amount of more than NT\$200,000. Therefore, the number of suppliers audited decreased from 2021.

CHAPTER 3

Environmental Protection and Carbon Management

- 3.1 Carbon Management and Carbon Reduction Program
- 3.2 Energy Governance and Conservation
- 3.3 Water Resource Management
- 3.4 Waste Regulation



3.1 Carbon Management and Carbon Reduction Program

3.1.1 Carbon Management Policy and Greenhouse Gas Inventory

• Greenhouse Gas Inventory

Global warming and climate change caused by GHG emissions are important environmental issues for the world. Economically effective and active emission reduction measures must be taken to effectively reduce greenhouse gas emissions and reduce the impact on the global environment.

In order to fulfill corporate social responsibility, Cleanaway Group voluntarily introduced ISO 14064-1:2018 third-party greenhouse gas emission verification from 2019 (which is the base year) to manage the greenhouse gas emission status and assess the achieving rate of carbon reduction targets regularly. In addition, the Group obtained three carbon labels for the carbon footprint of industrial waste treatment in 2021, namely (1) Cleanaway Company Limited Hazardous Industrial Waste Solidification Treatment Service, (2) Chi Wei Company Limited Solidified and Fixed Wastes Landfill Treatment Service, and (3) Da Ning Co., Ltd. General Industrial Waste Landfill Treatment Service.

In order to realize independent management of greenhouse gas reduction, the Group has set greenhouse gas emission control targets: a 2% reduction in greenhouse gas emissions by 2030 compared to the base year of 2019. Every year, the Group also makes energy saving and emission reduction programs, sets environmental emission control targets, and holds regular review meetings to achieve the effect of reducing greenhouse gas emissions. In the future, the Group will continue to control the energy consumption of each plant, strive to improve the energy use efficiency, integrate energy resources, and use low-carbon fuels and biomass energy, in the hope that the Group's efforts can contribute to the reduction of greenhouse gases in the world and do our part for the earth.

Cleanaway Group also passed ISO 14064-1:2018 external third-party verification this year, and set up organizational boundaries using the operational control method. In 2022, the organizational boundaries include the Group's headquarters, Cleanaway solidification plant, Da Ning landfill, Chi Wei landfill, Kang Lien Enterprise and Top-Comment Resources Company Limited; and Da Tsang Industrial Landfill and Cleanaway Enterprise Landfill for independent greenhouse gas inventory. We measured the materiality of the emission sources in accordance with the regulatory requirements, the assessment results of the WRI Scope 3, the availability of activity data and the availability of emission factors. The greenhouse gases include carbon dioxide (CO₂), methane (CO₂), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).



After assessment, the inventory boundary in 2022 includes:

- Category 1 (direct GHG emissions): mainly from company cars, septic tanks, air-conditioning units, large-sized mobile equipment, etc.
- Category 2 (indirect emissions from imported energy): mainly from purchased electricity.
- Category 3 (indirect emissions from transportation): mainly from upstream transportation, staff commuting and business travel.
- Category 4 (indirect emissions from products used by the organizations): mainly from the purchase of raw materials, disposal of waste, transportation of waste and indirect emissions from purchased energy resources.

The Group's GHG emissions are calculated using "Emission Factor Method" and partially "Mass Balance Method"; the formula of Emission Factor Method is multiplying the activity data by the Emission Factor and the Global Warming Potential (GWP). All calculation results are converted to carbon dioxide equivalents (CO₂e) in metric tons (tCO₂e).

The sources of emission factors include the Greenhouse Gas Emission Factor Management Table (version 6.0.4) of the Environmental Protection Administration (EPA) of the Executive Yuan, the power factors for 2021 announced by the Energy Bureau in 2022, and factors and databases provided by suppliers (e.g., the carbon footprint database of EPA and Ecoinvent); for GWP value, please refer to IPCC AR6 (2018).

Greenhouse Gas Emission Analysis Table (Summary Table)

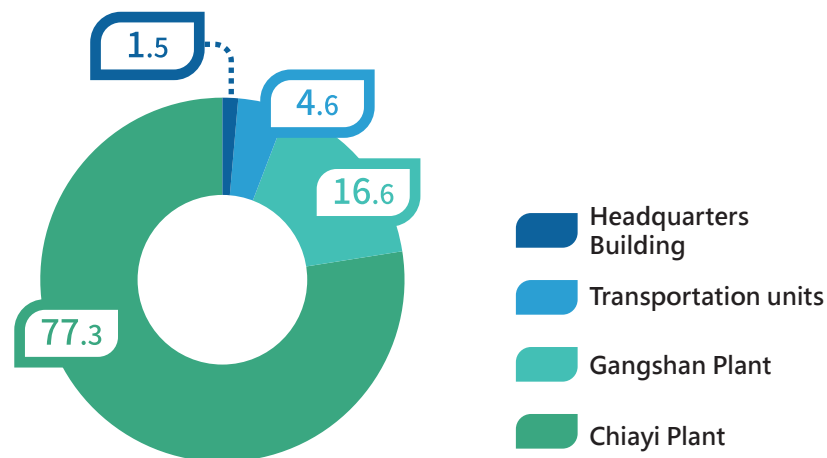
GHG emissions (unit: tCO ₂ e)		2019 (Base year)	2020	2021	2022
Old Category	New Category				
Scope 1	Category 1	2,375.1688	1,991.3604	2,004.2213	9,153.394
	Percentage (%)	26.5%	21.2%	24.6%	26.1%
Scope 2	Category 2	554.4741	615.4721	611.2811	15,862.417
	Percentage (%)	6.2%	6.5%	7.5%	45.2%
Scope 3	Category 3	190.3852	193.5904	190.3843	188.571
	Percentage (%)	2.1%	2.1%	2.3%	0.6%
	Category 4	5,832.2352	6,601.3582	5,335.7463	9,871.406
	Percentage (%)	65.2%	70.2%	65.6%	28.1%
Total Emissions	Total GHG Emissions	8,952.263	9,401.781	8,141.633	35,075.788

Note 1: The disclosure of emissions is consistent with the GHG Inventory Report, with individual emissions for Categories 1 to 4 accurate to the fourth decimal place and total emissions to the third decimal place.

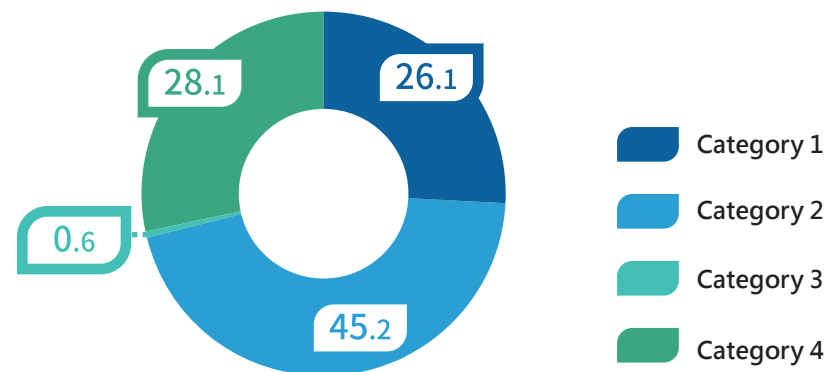
Note 2: In 2022, the scope of inventory included Top-Comment and closed landfills (Da Tsang Industrial and Cleanaway Enterprises). The inventory boundary for Top-Comment is Category 1, Category 2, and Category 4.

Due to the addition of the Gangshan Plant (closed landfill) and Chiayi Plant (Top-Comment) to the Cleanaway Group’s GHG inventory in 2022, the total GHG emissions were 35,075.788 tCO₂e, an increase of 292.6% compared to the base year (2019). The percentage of GHG emissions from each of the Group’s plants (sites) was 77.3% for Chiayi Plant (Top-Comment), 16.6% for Gangshan Plant, 4.6% for transportation units, and 1.5% for the headquarters building, and the percentage of emission categories was 26.1% for Category 1, 45.2% for Category 2, 0.6% for Category 3, and 28.1% for Category 4, as shown in the pie chart below:

Proportion of Greenhouse Gas Emissions by Region in 2022



Proportion of the Group’s Emissions by Category in 2022



Changes in emission intensity from the base year: Headquarters Building (tCO₂e/number of employees) increased by 30.9%; Transportation Units (tCO₂e/transport mileage) decreased by 0.1%; Gangshan Plant (tCO₂e/ton of waste) increased by 38.3%; and the emission intensity (tCO₂e/ton of production) of Chiayi Plant (Top-Comment) was 0.48373.

Compared to the base year, the increase in emission intensity of the headquarters building in 2022 was mainly due to the business development and expansion beyond the Group’s own business and the addition of new office space and manpower (an increase of 30%), resulting in a 35% increase in Category 2. The increase in emission intensity at Gangshan Plant was mainly due to the addition of the energy use for two closed landfill sites, Da Tsang and Cleanaway Enterprise in 2022. In the future, we will continue to improve the efficiency of machinery, replace and upgrade environmental protection equipment to reduce the consumption of electricity and diesel fuel, and at the same time, and strengthen the education and training of employees to minimize the unnecessary idling of gasoline and diesel equipment in the plants.

Greenhouse Gas Emission Analysis Table (Detailed Table)

GHG emissions per year (unit: tCO ₂ e)							
Region	New Category	2019 (Base year)	2020	2021	2022		
					Emissions	Total	Emission Intensity
Headquarters Building	Category 1	38.9460	38.9880	76.6529	100.1853	519.224	Number of Employees: 73 (persons) ^{Note 4} Emission Intensity: 7.1127 (tCO ₂ e/Number of Employees)
	Category 2	164.7530	209.2190	215.0110	223.3533		
	Category 3	30.5742	22.6711	127.4740	133.5644		
	Category 4	42.9436	51.8901	58.3371	62.1212		
Transportation units	Category 1	1,525.5000	1,494.9500	1,074.0238	1,258.3521	1,614.611	Transport mileage: 1,161,154 (km) Emission intensity: 0.0014 (tCO ₂ e/transport mileage)
	Category 2	33.2680	29.4410	27.2163	27.4518		
	Category 3	0.0435	0.0734	0.4580	0.2512		
	Category 4	404.4301	394.7387	289.0613	328.5554		
Gangshan Plant ^{Note 2}	Category 1	810.7250	457.4230	853.5450	515.6123	5,818.154	Waste disposal capacity: 122,680.904 (tons) Emission intensity: 0.0474 (tCO ₂ e/ton of waste)
	Category 2	356.4530	376.8130	369.0540	441.9868		
	Category 3	159.7675	170.8459	62.4523	54.7549		
	Category 4	5,384.8615	6,154.7294	4,988.3500	4,805.7998		
Chiayi Plant (Top-Comment) ^{Note 3}	Category 1	-	-	-	7,279.2447	27,123.800	Production volume: 56,072.704 (tons) Emission intensity: 0.4837 (tCO ₂ e/ton of production)
	Category 2	-	-	-	15,169.6252		
	Category 4	-	-	-	4,674.9297		

Note 1: The disclosure of emissions is consistent with the GHG Inventory Report, with individual emissions for Categories 1 to 4 accurate to the fourth decimal place.

Note 2: The headquarters building is Cleanaway's headquarters; the transportation unit is Kang Lien Enterprise; and Gangshan Plant includes Cleanaway's solidification plant, Da Ning, Chi Wei, Da Tsang, and Cleanaway Enterprise. In 2022, we added independent inventory, disclosed the closed landfill sites (Da Tsang Industrial and Cleanaway Enterprise), and added to the calculation of Gangshan Plant.

Note 3: Chiayi Plant (Top-Comment) added inventory and disclosed GHG emissions from 2022, and the inventory boundary was Category 1, Category 2, and Category 4.

Note 4: The calculation of the number of employees in the headquarter building includes other business units outside the scope of report, which is consistent with the unit (person-year) of energy performance in ISO50001.

3.1.2 Greenhouse Gas Reduction Strategy

Cleanaway Group began to make inventory of GHG emissions in 2019 (base year), with a goal of reducing GHG emissions by 2% by 2030 compared to the base year. We have taken the following actions and regularly track the results:

- **Practical Measures to Reduce GHG Emissions**

1. Carbon Management System

We have analyzed our energy use situation through the introduction of ISO 14064-1 and ISO 50001 standards, and have planned and implemented improvement measures for electricity and diesel.

<p>Power Equipment Management</p>	<ol style="list-style-type: none"> 1. The solidification plant has replaced 3 old and high energy-consuming lamps with LED lamps to achieve energy-saving lighting, which can save 560 kWh of electricity and reduce about 258 kg of carbon dioxide emission per month. 2. The solidification plant improved and reduced the power consumption of the plant through the installation of variable frequency energy-saving modules to achieve the goal of saving electricity. In 2022, it completed the installation of variable frequency modules in six high power-consuming equipment, which will save 700 kWh of electricity per month and reduce about 356 kg of carbon dioxide emission. 3. The Headquarters Building completed the replacement of a variable frequency air-conditioner to reduce power consumption and achieve the goals of energy saving and carbon reduction. 4. The Group introduces international standards year after year, continues to plan for the gradual replacement of faulty lamps with energy-saving LED lamps and purchasing electrical appliances with energy label, and formulates regulations related to the "Power Consumption Control for Various Types of Electrical Equipment of the Company", to enhance the energy management and electricity use efficiency.
<p>Diesel machine management</p>	<ol style="list-style-type: none"> 1. The solidification plant replaced one diesel forklift with an electric forklift, which can save 100 liters of diesel per month, and reduce carbon dioxide emission by about 70%. It is expected that the Group will continue to purchase one electric forklift in 2023, which will gradually reduce the fuel consumption. 2. In April 2022, the transportation fleet completed the installation of OBD system driving training module in the clearing and transport vehicles to analyze driving behavior. Through the data collation of the transportation fleet's energy saving plan and the vehicle GPS system, the driving behavior of the personnel can be analyzed, and regular guidance is provided to improve the bad driving behavior. Continue to strengthen regular maintenance for transportation vehicles and heavy equipment to maintain the normal performance and operation. Transportation vehicles are added with olein to clean the fuel system and lubricate to achieve the goal of saving fuel and improving equipment performance.
<p>Solidification Material Management</p>	<p>According to the concentration and characteristics of waste, we continue to test new solidification chemicals and change the solidification mixing and treatment methods for high concentration waste, in order to find the best solidification mixing ratio without affecting the solidification quality, and try to reduce the consumption of cement.</p>
<p>Change of Boiler Fuel</p>	<p>In 2022, the coal-fired boiler used coal as fuel from January to March, which was changed to wood from April. Therefore, the total carbon emission in 2022 was reduced by 22,249.3 tons compared with that in 2021.</p>

Note: The carbon reduction of electricity is calculated based on the power factors for 2021 announced by the Energy Bureau in 2022; the carbon reduction of oil products is calculated based on the Greenhouse Gas Emission Factor Management Table (version 6.0.4) of the Environmental Protection Administration (EPA) of the Executive Yuan.

On-Site Survey Meeting for Fleet Energy Saving Guidance Program



Electric forklift used in the solidification plant



Energy-saving variable frequency modules used in the solidification plant



Coal-fired boiler fuel changed to wood material



2. Renewable Energy Power Generation Achievements

The Group has set up four solar panel power generation zones on the idle land of the closed landfill and on the rooftop of the plant; roof-mounted solar panels have also been installed on the headquarters building to supply electricity to the building. In addition, we utilize our own biogas generator to recycle biogas generated in the landfill to produce green electricity for use in the plant. As of this year, the total electricity generation from solar energy and biogas is 31 million kWh, and a total of 15 million tons of carbon dioxide is reduced. The carbon reduction results from renewable energy^{Note 1} have been increasing year by year. In the future, the Group will continue to open up idle land and plan for the enhancement of renewable energy installation and use, and to increase the use proportion of green energy, so as to minimize the impact of carbon emissions on the environment.

Note 1: Contribution to carbon dioxide reduction (%) = Reduction of carbon dioxide emissions through renewable energy/total on-site carbon dioxide emissions.

Overview of Cleanaway Group's Performance in Electricity Generation from Renewable Energy

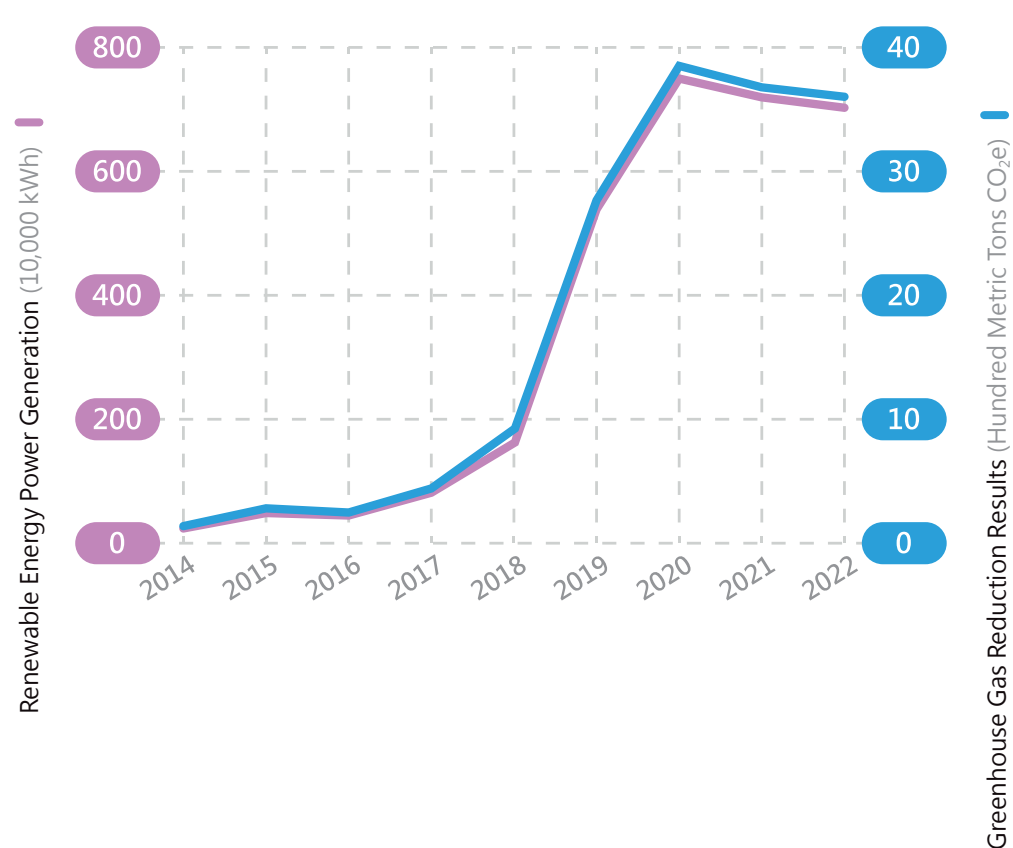
Item/Plant	Type of renewable energy	Installation completion time	Cumulative electricity generation (10,000 kWh) ^{Note 1}	CO ₂ e reduction (tons) ^{Note 2}
Cleanaway solidification plant	Solar energy	July 2014	406	15,995
Cleanaway Enterprise Landfill		April 2019	2,002	
Kang Lien Enterprise Landfill		August 2017	688	
Cleanaway Headquarters		January 2017	4.5	
Da Tsang Industrial Landfill	Biomass energy	October 2019	21	

Note 1: Electricity generation refers to cumulative electricity generation from each renewable energy source upon completion of installation till December 2022.

Note 2: Since the 2022 electricity carbon emission factor was yet to be announced by the Bureau of Energy before this report was published, carbon dioxide emission reduction was calculated using the 2021 electricity carbon emission factor of 0.509 kg CO₂e/kWh.

Note 3: Top-Comment had no electricity generated by renewable energy.

Renewable Energy Generation and Carbon Reduction Results over the Years



3. Create an Eco-Friendly Environment

<p>Plant (Site) Greening and Beautification and Guinness World Record Winning Plant Walls</p>	<p>The landfill has also built a vertical garden (plant wall) with an area of 2,593.77 square meters that held the Guinness World Record in 2015, and the plant cover in the Gangshan Plant is one-fourth of the total area. It is estimated to reduce carbon dioxide by more than 30,000 kg annually ^{Note}.</p>
<p>Eco-flood detention ponds</p>	<p>Eco-flood detention ponds are set in the Group's sites to collect rainwater and use for watering plants and cleaning the ground, which not only serves as a bioretention area, but also recycles water resources.</p>
<p>Green Building</p>	<p>The headquarters building has also been honored with the Kaohsiung Green-Building Award in 2017. It is equipped with solar power generation units to supply electricity for the building, which can save more than 8,000 kWh of electricity a year, making significant contribution to effectively reducing carbon dioxide emissions.</p>

Note: The amount of fixed carbon on plant walls and plant covers is calculated using an annual fixed carbon factor of 0.3 kg CO₂e/m² by reference to the Green Building Evaluation Manual (2a019 Edition).

Solar panels installed on the rooftops of landfill sites and the solidification plant



Biogas Power Generation System



The Plant Wall Listed in Guinness World Records



Cleanaway Group: 2017 Kaohsiung Green-Building Award



Plant (site) greening and beautification and eco-flood detention ponds



3.1.3 Other Air Pollutants Emissions

Cleanaway

The main air pollutants generated from manufacturing processes of Cleanaway solidification plant include particulate matter and heavy metals, such as lead, copper, mercury, and cadmium. The Company strictly controls the emission of these pollutants by setting more stringent standards than those stipulated in the regulations in the operation permit documents for stationary pollution sources, and test values meet the standards every year.

Note: The higher lead value in 2022 should be attributed to the higher amount of lead-containing wastes being treated; the test results for cadmium and mercury are all N.D over the past three years (below the detection limit of the method).

Test Items	Customized standard	2020	2021	2022
Particulate matter (g/s)	0.47	$<2.08 \times 10^{-3}$	$<5.52 \times 10^{-3}$	5.05×10^{-3}
Lead (g/s)	0.01	$<3.76 \times 10^{-5}$	$<9.63 \times 10^{-5}$	$<2.85 \times 10^{-5}$
Copper (mg/Nm ³)	1.02	$<1.97 \times 10^{-2}$	$<1.95 \times 10^{-2}$	$<1.93 \times 10^{-2}$
Mercury (mg/Nm ³)	0.05 (regulatory standard)	$<1.52 \times 10^{-3}$	$<1.64 \times 10^{-3}$	$<8.29 \times 10^{-4}$
Cadmium (g/s)	4.96×10^{-4}	$<2.73 \times 10^{-6}$	$<3.02 \times 10^{-6}$	$<1.06 \times 10^{-4}$

Top-Comment

The steam generation process of the boiler in Top-Comment mainly produces air pollutants particulate matters, sulfur dioxide, and nitrogen oxides. The Company strictly controls the emission of these pollutants, and test values meet the standards every year.

Test Items	Emission Standards for Air Pollutants from Stationary Pollution Sources	2022
TSP (total suspended particulates)	100mg/Nm ³	1.936 metric tons
Sox (Sulfur Dioxide)	300ppm	4.179 metric tons
Nox (Nitrogen Oxides)	350ppm	39.072 metric tons

3.2 Energy Governance and Conservation

3.2.1 Energy Management and Conservation Programs

In order to respond to the international trend of energy saving and carbon reduction as well as the future requirements of domestic and foreign laws and regulations, Cleanaway Group has independently introduced the greenhouse gas inventory operation of the international energy management system and implemented the energy management system standards to strengthen energy management and analyze the energy use efficiency, actively seek opportunities for energy saving, carbon reduction and energy efficiency enhancement. Cleanaway also holds quarterly meetings to review and plan energy-saving programs to reduce greenhouse gas emissions and mitigate the impact of climate change.

Based on the results of inventory and management system analysis, the Group has formulated strategies for the use of energy-saving equipment. In addition to striving to achieve higher production efficiency with lower energy consumption in the production process, the Group has also continued to promote energy-saving measures in lighting and electrical equipment, gasoline and diesel, green procurement, and other energy consumption reduction measures. In addition, the Group has also installed renewable energy power generation facilities to supply electricity for plant, thus enhancing the utilization efficiency of green energy and achieving energy-saving benefits.

I Strengthen Energy Systems and Management

Since 2020, the Group has independently implemented the first ISO 14064-1:2018 greenhouse gas inventory standard operation, and has entrusted an impartial third-party inspection organization to verify the Group's inventory data year after year, and obtained the verification statement. In order to more comprehensively analyze energy use and greenhouse gas emissions, and to evaluate and implement energy-saving and carbon reduction policies, in 2022, the Group independently conducted a inventory of the closed landfill site in the Gangshan Plant, as well as the Chiayi plant (Top-Comment), which is required by law to be inspected, and disclosed the results in the report.

In addition, in order to effectively improve the energy use efficiency, the Group's parent company (Cleanaway) has introduced the ISO 50001 energy management system standard, and the Sustainable Development Department is responsible for collecting the energy use status of each business location, understanding the types of bulk energy used in each site, identifying major energy-consuming equipment, and formulating energy performance indicators and short-, medium-, and long-term energy-saving plans; the Sustainable Development Department monitors the implementation of energy policies annually and makes timely adjustments to energy programs to ensure that energy saving targets are met. In 2022, the Group passed the ISO 50001 external certification for the headquarters building and the solidification plant. The Group has also strengthened the promotion of the Company's energy saving policy and announced the regulations related to the "Power Consumption Control for Various Types of Electrical Equipment of the Company", and organized related promotional activities and educational training courses to enhance energy efficiency and reduce greenhouse gas emissions, and enhance the employees' awareness of energy conservation and carbon reduction.

ISO 50001 External Verification Certificate



ISO 14064-1:2018 Greenhouse Gas Inventory Standard External Verification Certificate



II Expand the use of energy-saving equipment:

Highlights of Energy Saving Measures in 2022	Description
Upgrade LED lamps	In 2022, the solidification plant has replaced 3 old and high energy-consuming lamps with LED lamps to achieve energy-saving lighting, which can save 560 kWh of electricity per month. The Group is gradually replacing faulty lamps with energy-saving LED lamps and purchasing electrical appliances with energy label to enhance the electricity use efficiency.
Install energy-saving variable frequency modules	Improve and reduce the power consumption of the plant through the installation of variable frequency energy-saving modules to achieve the goal of saving electricity. In 2022, the solidification plant completed 6 high power-consuming power equipment in the plant, which will save 700 kWh of electricity per month.
Introduce electric forklifts	In 2022, the solidification plant replaced one diesel forklift with an electric forklift, which can save 100 liters of diesel per month. It is expected that the Group will continue to purchase one electric forklift in 2023, which will gradually reduce the fuel consumption.
Introduce Energy Saving Program for the Transportation Fleet	For the energy saving program for the transportation fleet, in 2021, the Group applied for the guidance program of the Automotive Research & Testing Center (ARTC) entrusted by the Energy Bureau of the Ministry of Economic Affairs, completed the installation of OBD system driving training module in the clearing and transport vehicles to analyze driving behavior in April 2022; the manager will conduct bad driving behavior control according to the analysis results and conduct regular training to reduce the fuel consumption.
Diesel Transportation Vehicles and Heavy Equipment Management	Transportation vehicles and heavy equipment are controlled at all times and regularly trained to improve idling and other bad driving behaviors. Continue to strengthen regular maintenance for transportation vehicles and heavy equipment to maintain the normal performance and operation. Transportation vehicles are added with olein to clean the fuel system and lubricate to achieve the goal of saving fuel and improving equipment performance.
Improvement of air-conditioning system of buildings	In 2022, the Headquarters Building completed the replacement of a variable frequency air-conditioner to reduce power consumption and achieve the goals of energy saving and carbon reduction.
Replacement of 500hp high-efficiency motor for #1 pulping center grinder	After replacing the high-efficiency motor, the process efficiency is improved and more energy is saved, which can save 1,015,18.167 kWh per year (NT\$304,555 per year).
Environmental blower: Replacement of water-sealed vacuum pump (150hp) with air-float turbine blower	Replacement of air-float turbine blower improves efficiency and saves energy, which can save 281,988 kWh (NT\$1,183,896) per year.

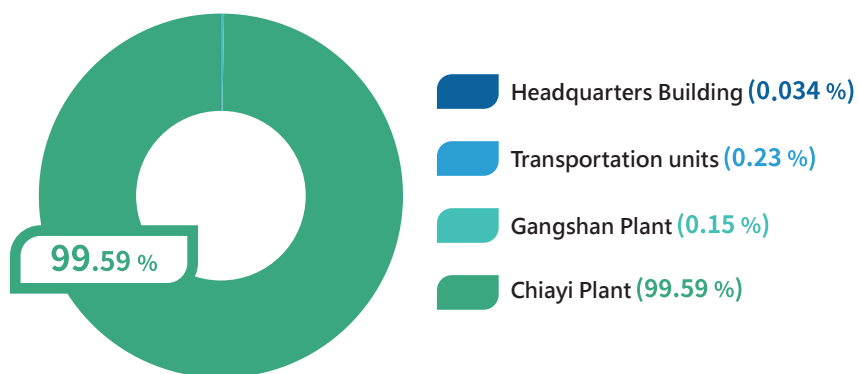
III Install renewable energy power generation equipment:

1. Solar power generation equipment: In order to effectively implement the policy of green energy construction and energy conservation and carbon reduction, the Group has been promoting the installation of solar power generation systems on flat spaces, such as the idle land of closed landfills and on the rooftops of factory buildings, and selling the generated green electricity to Taiwan Power Company; in addition, the Group Headquarters has set up solar power generation facilities on the roof of the building to supply electricity for internal use, which can save more than 8,000 kWh of electricity per year.
2. Biogas Power Generation Facility: The biogas generated from the landfill is recycled by gas turbine for power generation, and the green electricity generated from the biomass energy is supplied to the landfill, which not only mitigates the potential of the greenhouse effect caused by the methane in the biogas, but also properly utilizes the green biomass energy generated from the landfill; in addition, the Group continues to set up energy companies to respond to the national renewable energy development goal in recent years.

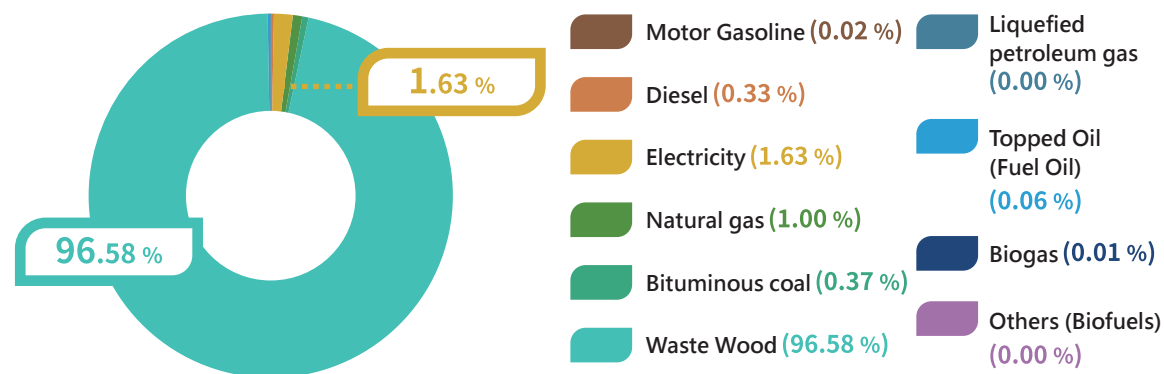
3.2.2 Energy Consumption

In order to understand the energy consumption within the organization, the Group has started to inspect and monitor the energy consumption within the organization since 2019. In 2022, the Group voluntarily added the disclose of Top-Comment Resources Company Limited, Da Tsang Industrial Landfill and Cleanaway Enterprise Landfill, and the types of energy used included purchased electricity, oils for gasoline-powered company cars and gasoline-powered engines, and diesel-powered heavy-duty machinery, vehicles and generators, boiler fuel and renewable energy. The percentages of energy used and energy types in each of the Group’s plants (sites) are shown in the figures below:

Proportion of Energy by Region in 2022



Proportion of the Group’s Energy by Category in 2022



We calculated the energy consumption by multiplying the energy usage by the unit calorific value and converting it to gigajoules (GJ) according to the energy product unit calorific value table in the 2021 Energy Statistics Manual issued by the Bureau of Energy of the Ministry of Economic Affairs. Due to the Cleanaway Group’s GHG inventory in 2022 included the closed landfill site and the Chiayi plant (Top-Comment), the total energy consumption of Cleanaway in 2022 was 6,893,957.286 GJ, an increase of 23,336.08% compared to the base year (2019). Changes in energy density from the base year: headquarters building (GJ/number of employees) increased by 9.5%, transportation unit (GJ/transport mileage) decreased by 19.0%, Gangshan Plant (GJ/ton of waste) increased by 67.7%; the energy density (GJ/ton of production) of Chiayi plant (Top-Comment) was 122.443.

The increase in energy density of the headquarters building in 2022 was mainly due to the business development and expansion beyond the Group's own business and the addition of new office space and manpower. The increase in energy density at Gangshan Plant was mainly due to the addition of the energy use for two closed landfill sites, Da Tsang and Cleanaway Enterprise in 2022. The energy consumption statistics and energy density analysis tables for each of the Group's plants (sites) are shown below:

Summary Table of Cleanaway Energy Consumption Analysis

Energy Consumption Item		Energy Consumption (Unit: Gigajoule GJ)			Energy Consumption Percentage (%)		
		2020	2021	2022	2020	2021	2022
Purchased Renewable Energy ^{Note 2}	Solid Recovered Fuel	-	-	6,657,967.993	-	-	96.58
	Biofuels	-	-	27.755	-	-	0.00
Purchased Non-renewable Energy	Fossil fuels ^{Note 3}	24,339.000	19,956.000	122,988.407	84.8	82.0	1.78
	Purchased electricity	4,353.000	4,385.000	112,215.538	15.2	18.0	1.63
Self-generated energy ^{Note 4}	Self-generated renewable energy	1,796.000	1,641.000	25,940.247	-	-	0.01
	Sale of renewable energy	(1,796.000)	(1,641.000)	(25,182.654)			
Total Energy Consumption ^{Note 5}		28,692.000	24,341.000	6,893,957.286	Note: The energy consumption increased compared to previous years, which was due to the addition of new inspected locations, including Top-Comment, Da Tsang and Cleanaway Enterprise from 2022.		

Note 1: The calorific value is based on the latest energy product unit calorific value table published on the website of the Bureau of Energy of the Ministry of Economic Affairs. The energy consumption is calculated by multiplying the energy usage by the unit calorific value and converting it to gigajoules (GJ).

Note 2: Among the purchased renewable energy, solid recovered fuel refers to the use of waste wood as energy by Top-Comment; and biofuel refers to the use of pulping sludge as energy by Top-Comment.

Note 3: Fossil fuels include gasoline for company cars and engines, diesel fuel for stationary generators and mobile machine, and bituminous coal, natural gas, liquefied petroleum gas, and fuel oil for boilers.

Note 4: Self-generated energy includes biogas power generation and solar energy, and all biogas generated electricity in Da Tsang is used by itself. The solar energy power generation includes the solidification plant, headquarters, Kang Lien, and Cleanaway Enterprise, and the electricity generated is sold to Taiwan Power Company.

Note 5: Total energy consumption = Purchased renewable energy consumption + Purchased non-renewable energy consumption + Self-generated renewable energy consumption – Self-generated renewable energy sold.

Analysis of Energy Consumption within the Organization

Energy Consumption (Gigajoules: GJ)					
Region	Type of Energy	2019	2020	2021	2022
Headquarters Building	Gasoline	326.352	226.856	511.218	760.568
	Diesel	2.362	2.362	1.407	0.844
	Electricity	1,165.248	1,479.744	1,542.260	1,580.069
Transportation units	Gasoline	-	-	-	9.257
	Diesel	19,160.648	18,741.129	13,189.147	15,510.132
	Electricity	235.296	208.224	195.221	194.203
Gangshan Plant Note 2	Gasoline	162.835	277.104	537.055	545.309
	Diesel	6,168.487	5,318.297	5,717.541	5,636.402
	Electricity	2,521.080	2,665.076	2,647.207	3,126.748
	Others (Biofuels)	-	-	-	757.593
Chiayi Plant (Top-Comment) Note 3	Gasoline	-	-	-	280.279
	Diesel	-	-	-	1,729.812
	Electricity	-	-	-	107,314.518
	Natural gas	-	-	-	68,974.762
	Bituminous coal	-	-	-	25,619.885
	Wood	-	-	-	6,657,967.993
	Liquefied petroleum gas	-	-	-	22.222
	Topped Oil (Fuel Oil)	-	-	-	3,898.934
Others (Biofuels)	-	-	-	27.755	

Analysis of Energy Density within the Organization

Region	Energy Intensity Unit	2019	2020	2021	2022
Headquarters Building	(GJ/Number of Employees)	29.293	28.965	30.670	32.075
Transportation units	(GJ/transport mileage)	0.014	0.013	0.009	0.011
Gangshan Plant Note 2	(GJ/ton of waste)	0.045	0.049	0.057	0.076
Chiayi Plant (Top-Comment) Note 3	(GJ/ton of production)	-	-	-	122.443

Note 1: The headquarters building is Cleanaway's headquarters; the transportation unit is Kang Lien Enterprise; and Gangshan Plant includes Cleanaway's solidification plant, Da Ning, Chi Wei, Da Tsang, and Cleanaway Enterprise.

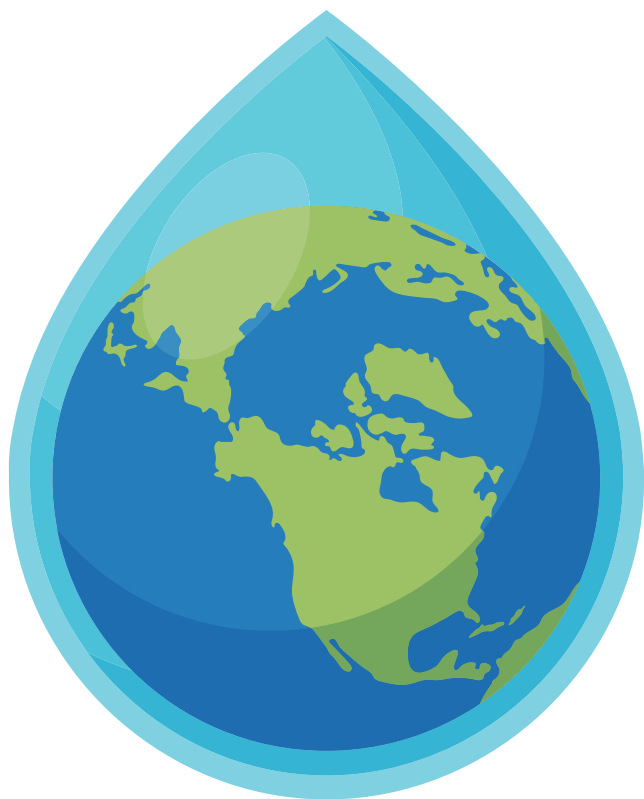
Note 2: In 2022, the Group voluntarily made an inventory and disclosed the closed landfill sites (Da Tsang Industrial and Cleanaway Enterprise), and added to the calculation of Gangshan Plant.

Note 3: Energy consumption increased compared to previous years due to the addition of Top-Comment into inventory and disclosure of energy consumption from 2022.

3.3 Water Resource Management

3.3.1 Water Resource Impact Assessment

In recent years, climate change and global warming have caused rapid changes in the water environment, with more frequent floods and droughts, and external stakeholders are becoming increasingly concerned about water resource issues. In addition, the failure of enterprises to properly treat discharged water may also affect the ecological environment or the health of local residents. Therefore, enterprises should establish a comprehensive water resource management system to identify the relevance of water and wastewater used for/generated from the company's operations to the company's internal and external environment or society, determine the risks and impacts of water resources, and minimize the impacts of water resources on the enterprise and the environment through an effective water resource management model.

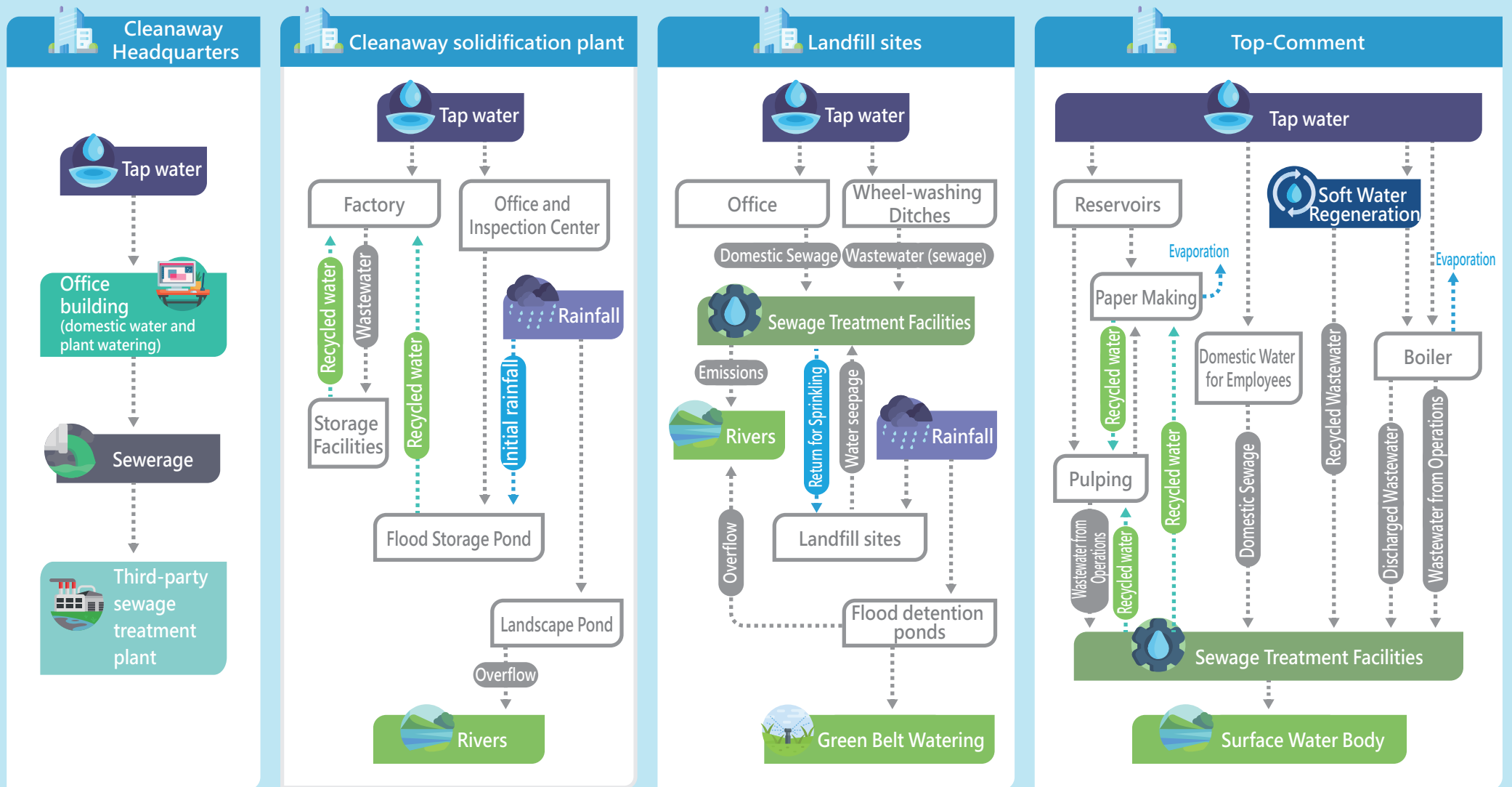


- **Water Use Structure**

Cleanaway Group is actively improving the efficiency and value of water use to minimize the impact on water resource environment, and strive to increase the consumption of recycled water. In 2022, the water use structure of the headquarters and Gangshan Plant consisted of third-party water, surface water and recycled water, accounting for approximately 18.14%, 42.25% and 39.61% respectively; the total water consumption was 87.591 million liters, an increase of 25.967 million liters compared to the previous year, which was mainly due to the increase of the boundary of the inventory organization (Da Tsang Industrial Landfill and Cleanaway Enterprise Landfill were added into the scope of calculation) and lower rainfall in 2022, resulting in a higher volume of surface water being used for green belt watering.

In 2022, the total water consumption of Top-Comment Resources was 696.016 million liters. The main source of water is tap water for the production process, the boiler water and domestic water for employees are discharged to a wastewater treatment plant for treatment, with part of the water recycled for reuse in the production process, and the remaining discharged to surface water bodies.

Water Resource Relationship Diagram



• **Water Resources Risk and Impact Path Assessment**

The Group identifies the pressure on water resources and the level of risk of our business locations according to the Water Risk Atlas of the World Resources Institute (WRI). According to the Environmental Impact Pathway Report of PwC, we also assessed the source of water, discharge destination, and quality of water and wastewater of each location, and drew the map of water resources of each location, and assessed the impacts and extent of impact on the surrounding environment or society.

Water resource pressure and risk value of Cleanaway locations

Location	Place	Water resource pressure	Physical Risk (Water Quantity)	Physical Risk (Water Quality)	Reputation and Transformation Risk	Overall Risk Value
Cleanaway Headquarters	Taiwan – Kaohsiung City, Gangshan District	Low	Medium-high	Medium-high	Low	Low-medium
Cleanaway solidification plant	Taiwan – Kaohsiung City, Gangshan District	Low	Medium-high	Medium-high	Low	Low-medium
Landfill sites	Taiwan – Kaohsiung City, Gangshan District	Low	Medium-high	Medium-high	Low	Low-medium
Top-Comment	Taiwan-Chiayi County	Low	Medium-high	Medium-high	Low	Low-medium

Cleanaway Water Environmental Assessment

Location	Cleanaway Headquarters	Cleanaway solidification plant	Landfill sites	Top-Comment
Source of Water	Waterworks	Waterworks and flood storage ponds	Waterworks and flood storage ponds	Waterworks
Evaluation Factors:	Frequency of water shortage	Never occurred	Never occurred	Never occurred
	Shortage rate of clean water source	High	High	High
	Percentage of groundwater use	Not used	Not used	Not used
	Amount of water subsidy provided by the government	No water subsidy	No water subsidy	No water subsidy
	Degree of competition in water use among enterprises	Low	Low	Low
	Environmental Impact of Water Supply Plants	Not assessable	Not assessable	Not assessable

Cleanaway Discharge Water Environmental Assessment

Location	Cleanaway Headquarters	Cleanaway solidification plant	Landfill sites		Top-Comment
			Da Ning, Da Tsang	Chi Wei, Cleanaway Enterprise	
Nature of wastewater	Organic wastewater	No wastewater discharge	Organic wastewater	Inorganic wastewater	Organic wastewater
Evaluation Factors:	Potential to contaminate drinking water	Low	Low	Low	Low
	Degree of contamination of drinking water	Low	Low	Low	Low
	Potential to contaminate ecological plants	Low	Low	Low	Low
	Degree of contamination of ecological plants	Low	Low	Low	Low
	Potential to affect algal growth	Low	Low	Low	Low
	Degree of effect on algal growth	Low	Low	Low	Low

• Discharge Water Quality Standards

The Group sets quality standards for discharged wastewater in accordance with local laws and regulations, and all discharged water is properly treated internally to meet internal and regulatory standards before discharge.

Since the Group's headquarters is an administrative office and located in a residential area, only irrigating water and a small amount of domestic water are discharged into the urban sewers; most of the wastewater generated from the landfill in the Gangshan Plant is stored, recycled and returned to the landfill surface to be sprinkled in order to suppress flying dust, and only a small amount of the wastewater is discharged in accordance with the quality standards for discharged wastewater set by the local laws and regulations, in order to achieve environmental protection and reduce the burden on the water body; in addition, in accordance with the environmental protection laws and regulations and the implementation of pollution prevention, each plant (site) in the Gangshan Plant not only conducts self-test, but also regularly entrusts qualified environmental protection testing organizations to conduct water quality testing, which show that the water quality meets the requirements of the laws and regulations, thus achieving effective management.

Location	Region	Water Quality Indicator	Minimum Regulatory Standards	Water quality test results
Landfill sites	Taiwan – Kaohsiung City, Gangshan District	pH	6-9	Test results meet the standards
		Temperature (T)	Below 38° C (applicable from May to September); Below 35° C (applicable from October to April of next year)	Test results meet the standards
		Chemical Oxygen Demand (COD)	200mg/L	Test results meet the standards
		Suspended solids (SS)	50mg/L	Test results meet the standards
		Ammonia nitrogen (NH ₃ -N)	150mg/L	Test results meet the standards
Top-Comment	Taiwan- Chiayi County, Minxiang Township	pH	6-9	Test results meet the standards
		Temperature (T)	Below 38° C (applicable from May to September); Below 35° C (applicable from October to April of next year)	Test results meet the standards
		Chemical Oxygen Demand (COD)	180mg/L	Test results meet the standards
		Suspended solids (SS)	30mg/L	Test results meet the standards
		Ammonia nitrogen (NH ₃ -N)	150mg/L (not controlled)	Test results meet the standards

3.3.2 Water Withdrawal/Discharge/Consumption

• Water Consumption Inventory

In 2022, Cleanaway's total water withdrawal was 657.917 million liters, total water discharge was 496.723 million liters, total water consumption was 161.194 million liters, and recycled water consumption was 125.690 million liters. Due to the addition of Top-Comment, Da Tsang and Cleanaway Enterprise landfill sites into the calculation scope for 2022, the total water withdrawal, total water discharge, total water consumption and recycled water consumption were much higher than in previous years.

• Water Withdrawal

The Group's headquarters and various plants (sites) of Gangshan Plant withdraw water from third-party water supply (tap water) and groundwater (rainwater collected by detention ponds).

Water withdrawal by source and water quality indicators (unit: millions of liters)

Type of water source	Water Quality Indicator	2020		2021		2022	
		All regions	Region with water resource pressure	All regions	Region with water resource pressure	All regions	Region with water resource pressure
Surface Water Note 2	Fresh water	0	0	0	0	0	0
	Other water Note 1	30.679	0	28.191	0	37.011	0
Third-Party Water Note 3	Fresh water	13.179	0	14.593	0	620.906	0
	Other water Note 1	0	0	0	0	0	0
Total Water Withdrawal		43.858	0	42.784	0	657.917	0

Note 1: Other water refers to the water with a total dissolved solids concentration above 1,000mg/L.

Note 2: Surface water is used for watering plants in green belts at the landfill and for the process of solidification plant.

Note 3: Tap water is used to provide domestic water for employees at the headquarters and plants (sites), as well as for watering plants at the headquarters and process of solidification plant.

• Water discharge

Since the Group's headquarters is an administrative office and located in a residential area, only irrigating water and a small amount of domestic water are discharged into the urban sewers, with a discharge of 10.966 million liters; the sources of wastewater generated by the plants (sites) in Gangshan Plant include not only domestic water, but also water used for cleaning equipment in the solidification plant, water seepage from the landfill, and wastewater from washing vehicles. Wastewater (sewage) is recycled and reused (as produced water) or discharged by plants (sites) after treatment. Specifically, wastewater at the solidification plant is stored in storage tanks after undergoing the primary precipitation process, and then fully recycled and reused for various processes, thereby achieving the goal of zero discharge. Meanwhile, wastewater generated by landfills is either collected and stored before being sprinkled on the surface of the landfills to suppress dust or discharged into receiving waters after undergoing biological or chemical treatment, with a discharge volume of 0.397 million liters; the discharge volume of Top-Comment was 486.206 million liters. Regular testing and reporting of related water quality items are carried out on both stored water at the solidification plant and discharged water from landfills and Top-Comment in accordance with the Water Pollution Control Measures and Test Reporting Management Regulations. The relevant test reports for the most recent three years complied with regulatory requirements. Please refer to page 119 for the volume of recycled water.

Discharge volume by discharge destination and water quality indicator (Unit: Million Liters)

Type of discharge destination	Water Quality Indicator	2020		2021		2022	
		All regions	Region with water resource pressure	All regions	Region with water resource pressure	All regions	Region with water resource pressure
Surface Water	Fresh water	0.214	0	0.210	0	486.603	0
	Other water ^{Note 1}	0	0	0	0	0	0
Seawater	Fresh water	0	0	0	0	0	0
	Other water	0	0	0	0	0	0
Third-party water	Fresh water	0	0	0	0	0	0
	Other water	8.406	0	10.262	0	10.966	0
Total Water discharge		8.620	0	10.472	0	497.569	0

Note 1: Other water refers to the water with a total dissolved solids concentration above 1,000mg/L.

Note 2: Surface water discharge is misplaced to seawater in 2020 and 2021.

• **Water Consumption**

The Group’s headquarters consumed 1.218 million liters of water, the Gangshan Plant consumed 40.316 million liters of water, and Top-Comment consumed 118.814 million liters of water. The Group has actively taken various management actions, such as building rainwater storage facilities and recycling reclaimed water to respond to complex water resource issues as early as possible and effectively integrate management concepts, including prevention, conservation, and contingency. In 2020, the Group fully replaced domestic water devices for employees with products with the water label through water conservation management at various plants (sites). Additionally, high-water consumption equipment at the Inspection Center (e.g., pure water generator) has been installed with recycled water circulation systems, and we continue to implement improvement measures for water recycling and reuse, so as to gradually achieve the goal of optimizing the use of water resources.

Water Consumption Over Past Three Years (Unit: Million Liters)

Item	2020		2021		2022	
	All regions	Region with water re-source pres-sure	All regions	Region with water re-source pres-sure	All regions	Region with water re-source pres-sure
Total Water Withdrawal	43.858	0	42.784	0	657.917	0.000
Total Water discharge	8.620	0	10.472	0	497.569	0.000
Total Water Consumption	35.238	0	32.312	0	160.348	0.000

Note: Total Water Consumption = Total Water Withdrawal – Total Water Discharge

Note: In the 2021 Report, the total water discharge for 2020 and 2021 was mistakenly presented.

• **Recycled water**

There is no wastewater generated from the waste treatment process of the Group’s solidification plant in the Gangshan Plant. Only the wastewater generated from equipment cleaning is recycled for use in the solidification process, achieving “zero wastewater discharge”. Most of the wastewater generated in the landfill is collected and stored before being sprinkled on the surface of the landfills to suppress dust. The Chiayi Plant (Top-Comment) is in the paper manufacturing industry, and because a large amount of water is required in the paper manufacturing process, the paper mill recycles and reuses part of the white water used in the manufacturing process through the white water recycling system to reduce the water consumption. The following table shows the recycled water consumption by year:

Recycled water consumption by business locations (Unit: million liters)

Business locations	2020	2021	2022
Solidification plant	0.264	0.254	0.239
Landfill sites (Da Ning, Chi Wei, Da Tsang and Cleanaway Enterprise)	22.561	18.586	34.455
Chiayi Plant (Top-Comment)^{Note}	-	-	90.996
Total recycled water	22.825	18.840	125.690

Note: The Chiayi Plant (Top-Comment) has been included in the inventory from 2022.

Information re-editing description:

In the 2020 Report, the recycled water in the plant is considered as produced water and is included in the calculation of water withdrawal. However, the recycled water from self-recycling process does not meet the definition of produced water or other water sources, and should not be included in the calculation of water withdrawal. Therefore, since 2021, the recycled water has been disclosed independently, and the water withdrawal and water consumption for each year have been recalculated.

3.4 Waste Regulation

3.4.1 Waste Impact Assessment

Cleanaway Group continues to actively improve and gradually implement the management principle of “proper waste treatment and sustainable utilization of resources” through the policies of “reduction at source, circular economy, auditing and guidance”. During the operation process of various plants (sites), the Group identifies the waste generated from the activities of each location and evaluates the possible impact on the environment and society in accordance with the regulations of Environmental Protection Administration, in order to know the value chain and the waste impact chart of each plant (site). Based on the potential impact items evaluated through the value chain chart, we implement corresponding preventive management measures in response to the potential impacts and set targets to gradually mitigate or avoid negative impacts on the Group’s internal or external environment.

Due to the industry characteristics of the Group, the source of our waste is mainly the solidified waste (non-hazardous industrial waste) generated from the receipt and treatment of waste from external organizations, which accounts for more than 90% of the total waste, and the solidified waste after treatment will be buried by the Group for final disposal; the other part is the waste generated from the Group’s own operating activities, which include hazardous industrial waste and general industrial waste. Most of the waste generated from operations will be properly disposed of by the Group’s own treatment facilities, while only some of the waste liquids generated from experimental procedures and domestic waste will be entrusted to third-party organizations (with contracts signed) to properly dispose of them in accordance with laws and regulations.

The sources of waste of Top-Comment are mainly cardboard manufacturing process, boiler steam generation process, land preparation, foundation and structural engineering process (all non-hazardous industrial waste). A small amount of pulping sludge is used as recycled fuel for boiler, and most of the pulping sludge and waste plastic mixture are outsourced for treatment, and the waste paper mixture will be temporarily stored in the plant for use as SRF for boiler, and the waste generated from the boiler is outsourced for treatment. In addition, hazardous wastes of asbestos are solidified and treated by the Group.

The types of wastes and potential impact assessment of the Group are shown in the table below:

Location	Value Chain Stage	Activity Item	Waste type (Waste Reporting Code)	Waste category	Disposal Method	Disposal Unit	Potential Impact	Preventive Management
Cleanaway solidification plant	Own operating activities	Experimental procedures	Mixed Waste Containing Heavy Metals (C-0119)	Hazardous industrial waste	Solidification	Self-treatment	<ul style="list-style-type: none"> Dust in plant Wastewater (sewage) from cleaning equipment Solids after solidification of hazardous industrial waste, and derived waste generated from operating activities 	<ul style="list-style-type: none"> Installation of air pollutants and dust collection equipment Installation of pre-treatment facilities for wastewater (sewage) (all of which are recycled for use in the solidification process to achieve “zero wastewater discharge”) Installation of proper storage facilities for solidification products Solidification operation management follows the requirements of environmental protection laws and regulations, and proper operation and management are implemented to reduce energy and resource consumption
			Waste liquid with a flash point below 60° C (C-0301)	Hazardous industrial waste	Incineration	Outsourced disposal		
			Flammable waste liquid (C-0399)	Hazardous industrial waste	Incineration	Outsourced disposal		
			Waste glass (D-0499)	General industrial waste	Self-treatment	Outsourced disposal		
	Wastewater treatment program	Inorganic sludge (D-0902)	General industrial waste	Recycled as additives for solidification in the plant to reduce the consumption of raw materials	Self-treatment			

Continued

Location	Value Chain Stage	Activity Item	Waste type (Waste Reporting Code)	Waste category	Disposal Method	Disposal Unit	Potential Impact	Preventive Management
Cleanaway solidification plant	Own operating activities	Waste gas treatment program	Non-hazardous scrapped furnace dust (D-1099)	General industrial waste	Recycled as additives for solidification in the plant to reduce the consumption of raw materials	Self-treatment	<ul style="list-style-type: none"> Dust generated from landfilling Wastewater (sewage) Derived waste generated from operating activities 	<ul style="list-style-type: none"> Installation of air pollutants and dust collection equipment Installation of pre-treatment facilities for wastewater (sewage) (all of which are recycled for use in the solidification process to achieve "zero wastewater discharge") Installation of proper storage facilities for solidification products Solidification operation management follows the requirements of environmental protection laws and regulations, and proper operation and management are implemented to reduce energy and resource consumption
			Waste fiber or other mixtures of cotton, cloth, etc.	General industrial waste	Solidification	Self-treatment		
		Non-manufacturing process	Mixture of waste plastics (D-0299)	General industrial waste	Solidification	Self-treatment		
			Mixture of waste wood (D-0799)	General industrial waste	Incineration	Outsourced disposal		
			Waste fiber or other mixtures of cotton, cloth, etc. (D-0899)	General industrial waste	Solidification	Self-treatment		
			Scrapped lubricating oil (R-1703)	General industrial waste	Recycling	Outsourced disposal		
	Upstream – Waste from other organizations	Solidification process	Domestic garbage (H-0002)	General industrial waste	Incineration	Outsourced disposal		
			Solidified objects after intermediate treatment (D-2002)	General industrial waste	Landfill	Outsourced disposal		
Chi Wei Landfill	Own operating activities	Wastewater treatment program	Inorganic sludge (D-0902)	General industrial waste	Landfill	Outsourced disposal	<ul style="list-style-type: none"> Dust generated from landfilling Wastewater (sewage) Derived waste generated from operating activities 	<ul style="list-style-type: none"> Cover the nonlandfilling areas with impervious cloth to lessen the impact of rainwater, reduce water seepage, and decrease foul odor diffusion Most of the wastewater (sewage) collected from the landfills is channeled back to the surface of the landfills in the landfilling areas to suppress dust, thereby realizing the principles of recycling and reuse
			Waste Activated Carbon (D-2403)	General industrial waste	Landfill	Outsourced disposal		
		Non-manufacturing process	Domestic garbage (H-0002)	General industrial waste	Incineration	Outsourced disposal		

Continued

Location	Value Chain Stage	Activity Item	Waste type (Waste Reporting Code)	Waste category	Disposal Method	Disposal Unit	Potential Impact	Preventive Management
Da Ning Landfill	Own operating activities	Wastewater treatment program	Sludge mixture (D-0999)	General industrial waste	Landfill	Self-treatment	<ul style="list-style-type: none"> Dust generated from landfilling Foul odor Wastewater (sewage) Derived waste generated from operating activities 	<ul style="list-style-type: none"> Cover the nonlandfilling areas with impervious cloth to lessen the impact of rainwater, reduce water seepage, and decrease foul odor diffusion Most of the wastewater (sewage) collected from the landfills is channeled back to the surface of the landfills in the landfilling areas to suppress dust, thereby realizing the principles of recycling and reuse
			Waste Activated Carbon (D-2403)	General industrial waste	Landfill	Self-treatment		
		Non-manufacturing process	Domestic garbage (H-0002)	General industrial waste	Incineration	Outsourced disposal		
Cleanaway Enterprise Landfill	Own operating activities	Wastewater treatment program	Inorganic sludge (D-0902)	General industrial waste	Landfill	Outsourced disposal	<ul style="list-style-type: none"> Wastewater (sewage) Derived waste generated during the restoration period of the closed site 	<ul style="list-style-type: none"> Cover impervious cloth on landfill before final earth covering to prevent rainwater from infiltrating into the landfill layer Most of the wastewater (sewage) collected from the landfills is channeled back to the surface of the landfills in the landfilling areas to suppress dust, thereby realizing the principles of recycling and reuse
			Waste Activated Carbon (D-2403)	General industrial waste	Landfill	Outsourced disposal		
		Non-manufacturing process	Domestic garbage (H-0002)	General industrial waste	Incineration	Outsourced disposal		
Da Tsang Landfill	Own operating activities	Wastewater treatment program	Sludge mixture (D-0999)	General industrial waste	Landfill	Outsourced disposal	<ul style="list-style-type: none"> Wastewater (sewage) Derived waste generated during the restoration period of the closed site 	<ul style="list-style-type: none"> Cover impervious cloth on landfill before final earth covering to prevent rainwater from infiltrating into the landfill layer Most of the wastewater (sewage) collected from the landfills is channeled back to the surface of the landfills in the landfilling areas to suppress dust, thereby realizing the principles of recycling and reuse
			Waste Activated Carbon (D-2403)	General industrial waste	Landfill	Outsourced disposal		
		Non-manufacturing process	Domestic garbage (H-0002)	General industrial waste	Incineration	Outsourced disposal		

Continued

Location	Value Chain Stage	Activity Item	Waste type (Waste Reporting Code)	Waste category	Disposal Method	Disposal Unit	Potential Impact	Preventive Management
Top-Comment	Own operating activities	Cardboard manufacturing process	Waste bricks (R-0402)	General industrial waste	Use of recycled raw materials	Outsourced disposal	<ul style="list-style-type: none"> Dust in plant Wastewater (sewage) 	The stockpile area is covered with waterproof canvas to minimize wetting by rainwater
			Pulp sludge (R-0904)	General industrial waste	Use of recycled raw materials	Outsourced disposal	<ul style="list-style-type: none"> Wastewater (sewage) Foul odor 	The stockpile area is covered with waterproof canvas to minimize wetting by rainwater and foul odor diffusion
		Boiler steam generation process	Fly ash from coal combustion (R-1106)	General industrial waste	Use of recycled materials or additives	Outsourced disposal	Dust in plant	Fly ash from coal combustion is stored in bulk bags, placed on pallets and covered with waterproof canvas to reduce dust
			Bottom ash from coal combustion (R-1107)	General industrial waste	Use of recycled materials or additives	Outsourced disposal		
			Scrapped furnace dust (D-1099)	General industrial waste	Landfill	Outsourced disposal		
			Bottom residue mixture (D-1199)	General industrial waste	Landfill	Outsourced disposal		
		Cardboard manufacturing process	Organic sludge (D-0901)	General industrial waste	Biological	Outsourced disposal	<ul style="list-style-type: none"> Wastewater (sewage) Foul odor 	The stockpile area is covered with waterproof canvas to minimize wetting by rainwater and foul odor diffusion
			Waste paper mixture (D-0699)	General industrial waste	Use of recycled fuel	Recycled in factory		
			Mixture of waste plastics (D-0299)	General industrial waste	Incineration	Outsourced disposal		
		Land preparation, foundation and structural engineer operation procedures	Waste of asbestos and its products (C-0701)	General industrial waste	Solidification	Outsourced disposal	Dust in plant	Asbestos shingle is stored in bulk bags, placed on pallets and covered with waterproof canvas to reduce dust

3.4.2 Waste Management Policy

Waste is not only an important international issue but also a challenge for enterprises. In addition to reducing the potential impact risks mentioned above, the Group has set management policies and objectives in accordance with the ISO 9001 Quality Management System and ISO 14001 Environmental Management System in order to achieve recycling, stabilization, harmless and economic disposal of waste. A dedicated unit is responsible for controlling the output and disposal way of waste, and the industrial waste should be disposed of according to the requirements of the Environmental Protection Administration (EPA). The Group utilizes a digital control model to establish information on incoming waste and import the operation information of each stage to effectively track the flow of waste.

In order to create a sustainable environment, the Group continues to incorporate the concepts of waste “recycling” and “reduction at source” into its policies, and makes good use of cross-organizational cooperation and learning to achieve environmental sustainability.

I Waste Recycling

In order to effectively utilize waste resources and reduce end-of-pipe treatment and environmental burden, the Group has continuously invested in resource waste recycling and reuse programs to recycle waste materials such as inorganic sludge, sludge mixture, non-hazardous scrapped furnace dust and ash residue from its own production process and its customers to produce recycled pellets, which are resold to the upstream and downstream companies, thus achieving the benefits of circular economy. In order to effectively reuse waste and reduce end-of-pipe treatment and environmental burden, Top-Comment will continue to invest in gas-electricity co-generation boilers to treat and recycle the waste generated from the paper manufacturing process in the plant, and send the non-hazardous scrapped furnace dust and ash residue generated by boilers back to the Group for recycling and production of regenerated pellets, thus achieving the benefits of circular economy.

II Waste Reduction at Source

In order to achieve waste resource recycling management, the first step is to reduce waste at source and minimize the consumption of resources in the operation process. The Group promotes waste reduction control measures by controlling pollution in the production process, extending maintenance schedules, implementing resource classification and reducing the consumption of raw materials in all aspects. The waste reduction at source in 2022 was about 23% less than that in the base year, as explained in the note below the table. The Group will continue to require each unit to take the initiative in waste reduction management to achieve the medium- and long-term management targets as soon as possible. Top-Comment will achieve the reduction at source by waste plastics scrapping management mechanism of waste paper supplier.

Cleanaway’s waste management responsible departments are as follows:

Waste Classification	Operation Department	Waste Reporting	Business Department
Waste Storage		Waste Disposal – Self Disposal	Operation Department
Waste Data Collection		Waste Disposal – Outsourced Disposal	Operation Department, Clearing and Transport Department

Top-Comment’s waste management responsible departments are as follows:

Waste Classification	Works Department/ Energy Department	Waste Reporting	Factory Affairs Department
Waste Storage		Waste Disposal – Outsourced Disposal	Factory Affairs Department
Waste Data Collection		Waste Disposal – Self Disposal	Energy Department

Cleanaway’s Waste Management Strategy and Objectives:

Management Strategy		Reduction at Source and Circular Economy
Management Objectives	Short-term	Reduce waste generated from the own operating activities by 20% (Base year: 2018)
	Medium-term	Reduce waste generated from the own operating activities by 25% (Base year: 2018)
	Long-term	Reduce waste generated from the own operating activities by 30% (Base year: 2018)
KPI Achieved in 2022		Reduce waste generated from the own operating activities by 23% ^{Note} (Base year: 2018)
Improvement Measures		Continue to promote the implementation of environmental management systems, promote the separation and reduction of waste at source, seek cooperation with other companies to research new waste recycling technologies, and strengthen the circular economy of waste recycling and reuse

Note: The base year of this report is 2018, and the scope includes Cleanaway solidification plant, Chi Wei Landfill and Da Ning Landfill; the total waste generated from our own operating activities in this year was 45.08 metric tons, which is inconsistent with the scope of calculation of the base year due to the addition of the waste tonnage of Cleanaway headquarter, Da Tsang, Cleanaway Enterprise and Top-Comment in this year. For the purpose of calculating the target achievement rate of the current year, the wastes generated by Cleanaway headquarter, Da Tsang, Cleanaway Enterprise and Top-Comment were excluded, the remaining waste was 33.45 metric tons, decreasing by 23% compared to 43.57 metric tons in 2018.

3.4.3 Waste clearing, transport and disposal

The Group is specialized in the intermediate and final disposal of wastes generated by enterprises in Taiwan, and in the course of operation, derived wastes will still be generated that needs to be cleared to avoid causing environmental burden. Therefore, special personnel are assigned to record the monthly waste generated, and measure the waste by load count analysis method. Both the waste disposed of by ourself or thirty party has to be measured by a fair weighbridge to comply with the regulatory reporting procedures.

1. Output of industrial waste

The total output of waste generated by the Group in 2022 was 39,712.720 metric tons, including 6.473 metric tons (0.02%) of hazardous industrial waste and 39,706.247 metric tons (99.98%) of non-hazardous industrial waste; among the non-hazardous industrial waste, the output from our own operations was 7,248.557 metric tons (18%), and the output not from our own operations (upstream – external organizations) was 32,457.690 metric tons (82%). We have differentiated the output of waste generated in the current year according to the source of the waste value chain, as shown in the table below. The total output generated from our own operations in 2022 increased compared to 2021, which was due to the addition of the Da Tsang, Cleanaway Enterprise, and Top-Comment Resources into the calculation scope from 2022.

In addition to striving to reduce the waste at source, in order to enhance the value of existing waste resources, Cleanaway recycles and reuses the waste as far as possible to make the best use of waste resources while complying with local laws and regulations and existing feasible technologies. In 2022, 4.36% of the Company's non-hazardous industrial waste was recycled.

Waste Output by Source of Value Chain and Type of Waste – By Source of Value Chain
(Total of Locations, Unit: Metric Tons)

Year	Value Chain Source	Item ^{Note}	Output	Percentage
2022	Own operating activities	Hazardous industrial waste	6.473	18.08%
		Non-hazardous industrial waste	7,248.557	
		Subtotal	7,255.030	
	Upstream – Other external organizations	Non-hazardous industrial waste	32,457.690	81.92%
Total of value chain		Total	39,712.720	100.00%
2021	Own operating activities	Hazardous industrial waste	2.89	0.11%
		Non-hazardous industrial waste	39.86	
		Subtotal	42.75	
	Upstream – Other external organizations	Non-hazardous industrial waste	37,282.99	99.89%
Total of value chain		Total	37,325.74	100.00%
2020	Own operating activities	Hazardous industrial waste	2.61	0.08%
		Non-hazardous industrial waste	32.77	
		Subtotal	35.38	
	Upstream – Other external organizations	Non-hazardous industrial waste	43,133.67	99.92%
Total of value chain		Total	43,169.05	100.00%

Note: In 2020, the scope of waste calculation included solidification plant, Da Ning and Chi Wei; Cleanaway headquarters was added from 2021; Da Tsang, Cleanaway Enterprise and Top-Comment Resources were added from 2022.

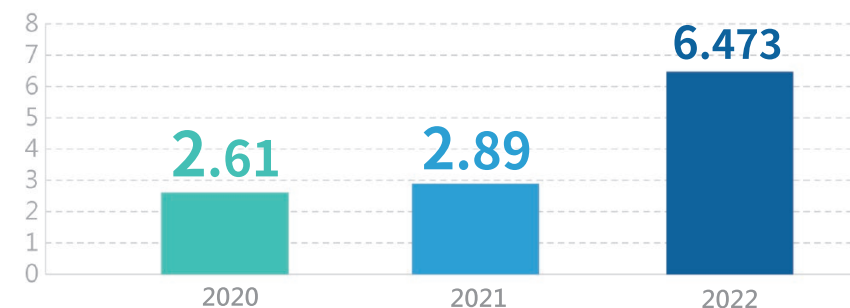
Summary Table of Industrial Waste Generation, Transfer During Disposal, and Direct Disposal (Total of Locations, Unit: Metric Tons)

Year	Item ^{Note}	Output	Volume diverted from disposal	Volume directed to disposal	Stored Volume
2022	Hazardous industrial waste	6.473	0.000	6.473	0.000
	Non-hazardous industrial waste	39,706.247	1,559.310	34,183.939	3,962.998
	Total	39,712.720	1,559.310	34,190.412	3,962.998
2021	Hazardous industrial waste	2.89	0.00	2.89	0
	Non-hazardous industrial waste	37,325.75	2.90	37,322.85	0
	Total	37,328.64	2.90	37,325.74	0
2020	Hazardous industrial waste	2.61	0.00	2.61	0
	Non-hazardous industrial waste	43,168.72	2.28	43,166.44	0
	Total	43,171.33	2.28	43,169.05	0

Note: The classification of hazardous and non-hazardous waste is based on the local regulations of each location.

Note: In 2020, the scope of waste calculation included solidification plant, Da Ning and Chi Wei; Cleanaway headquarters was added from 2021; Da Tsang, Cleanaway Enterprise and Top-Comment Resources were added from 2022.

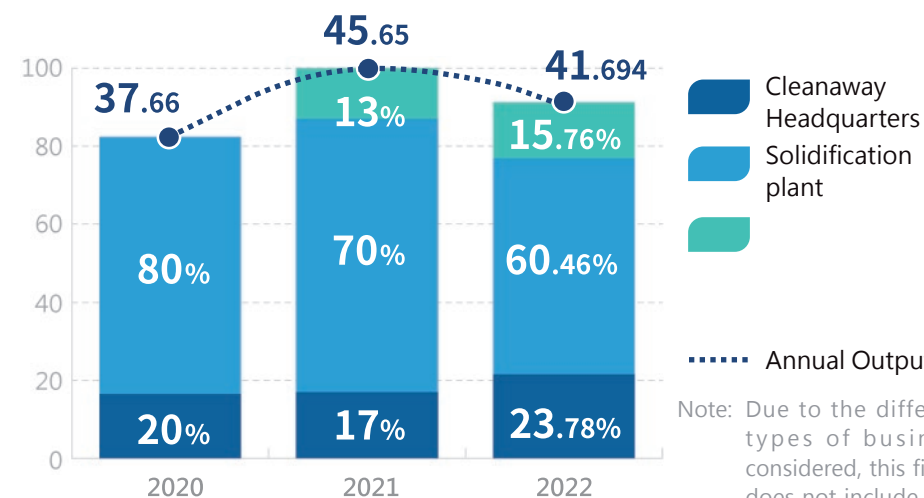
Own hazardous industrial waste output (volume of waste directed to disposal)



Summary Table of Waste Output from Own Operating Activities and Disposal Volume (Unit: Metric Tons)

Year	Item ^{Note}	Output	Volume diverted from disposal	Volume directed to disposal	Stored Volume
2022	Hazardous industrial waste	6.473	0.000	6.473	0.000
	Non-hazardous industrial waste	7,248.557	1,559.31	1,726.249	3,962.998
	Total	7,255.03	1,559.31	1,732.722	3,962.998
2021	Hazardous industrial waste	2.89	0.00	2.89	0
	Non-hazardous industrial waste	42.76	2.90	39.86	0
	Total	45.65	2.90	42.75	0
2020	Hazardous industrial waste	2.61	0.00	2.61	0
	Non-hazardous industrial waste	35.05	2.28	32.77	0
	Total	37.66	2.28	35.38	0

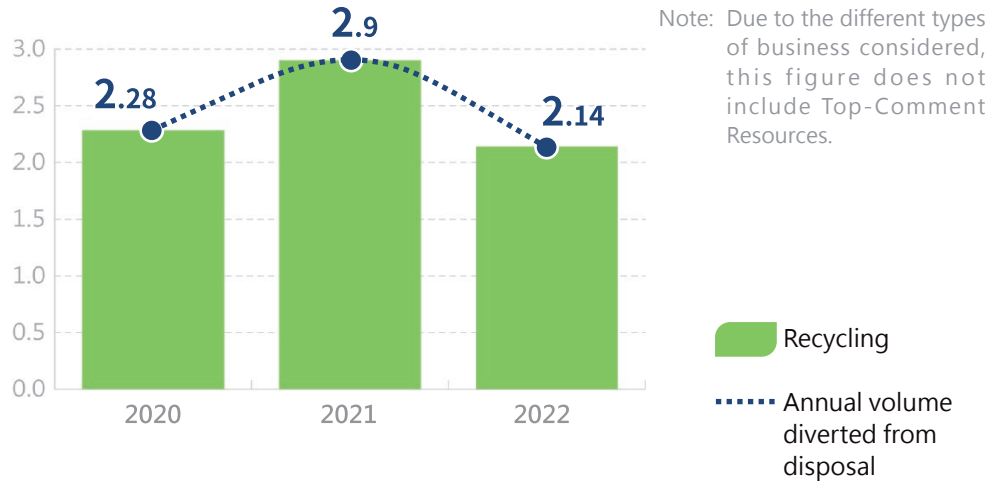
Waste Output from Own Operating Activities (Unit: Metric Tons)



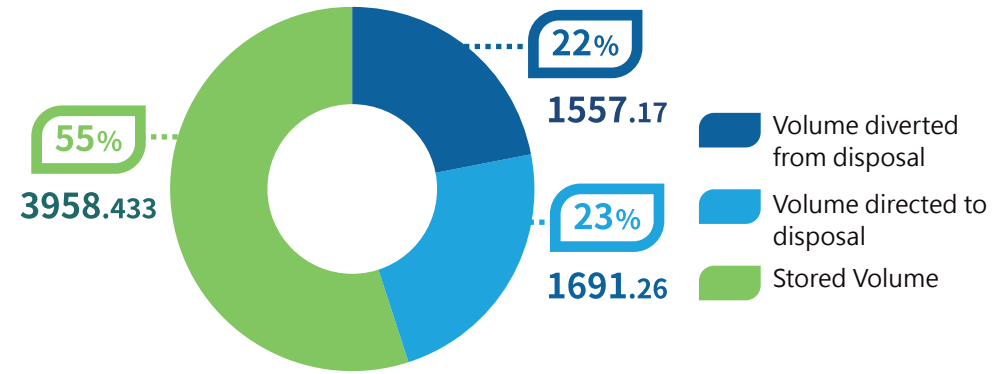
Note: Due to the different types of business considered, this figure does not include Top-Comment Resources.

Note: In 2020, the scope of waste calculation included solidification plant, Da Ning and Chi Wei; Cleanaway headquarters was added from 2021; Da Tsang, Cleanaway Enterprise and Top-Comment Resources were added from 2022.

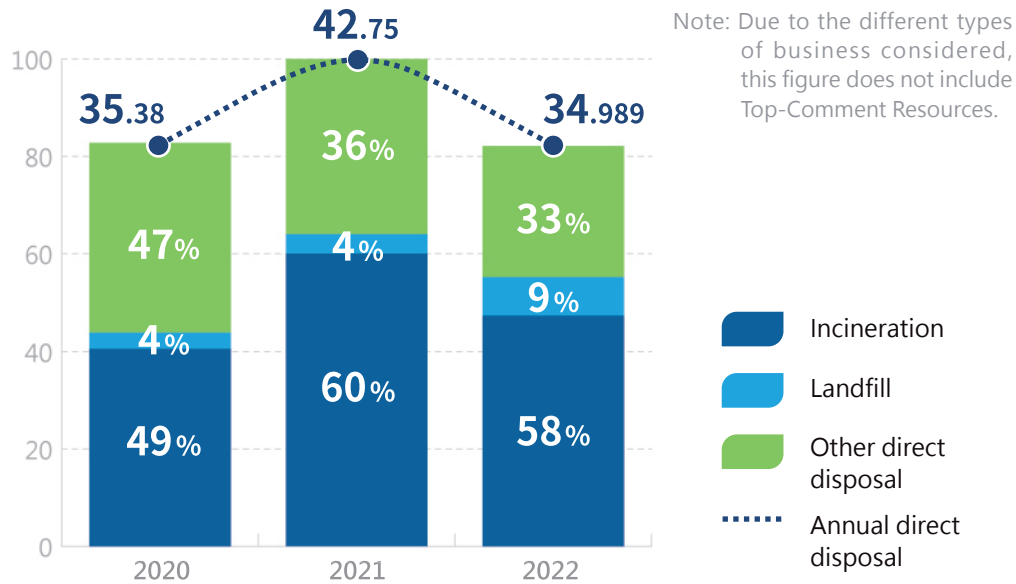
Volume of waste diverted from disposal (Unit: Metric Tons)



Waste disposal data of Top-Comment (unit: metric tons)



Volume of waste directed to disposal (Unit: Metric Tons)



Summary Table of Waste Output from External Organizations and Disposal Volume (Unit: Metric Tons)

Year	Item	Output	Volume diverted from disposal	Volume directed to disposal	Stored Volume
2022	Non-hazardous industrial waste	32,457.69	0	32,457.69	0
2021	Non-hazardous industrial waste	37,282.99	0	37,282.99	0
2020	Non-hazardous industrial waste	43,133.67	0	43,133.67	0

Note: The scope of calculation for disposal of waste from external organizations includes solidification plant.

2. Industrial waste diverted from disposal

In 2022, a total of 1,559.310 metric tons of wastes were diverted from disposal by third party, and 1,559.310 metric tons of wastes were disposed of off-site. The waste recycled in the current year increased compared to 2021, which was mainly due to the inclusion of Top-Comment in 2022.

Waste diverted from disposal by recycling operations (Total of Locations, Unit: Metric Tons)

Item	Method of diverting from disposal	2020			2021			2022		
		On-site	Off-site	Subtotal	On-site	Off-site	Subtotal	On-site	Off-site	Subtotal
Hazardous industrial waste	Preparation for reuse	0	0	0	0	0	0	0.000	0.000	0.000
	Recycling	0	0	0	0	0	0	0.000	0.000	0.000
	Other recycling operations	0	0	0	0	0	0	0.000	0.000	0.000
	Subtotal	0	0	0	0	0	0	0.000	0.000	0.000
Non-hazardous industrial waste	Preparation for reuse	0	0	0	0	0	0	0.000	0.000	0.000
	Recycling	0	2.28	2.28	0	2.90	2.90	0.000	1,559.310	1,559.310
	Other recycling operations	0	0	0	0	0	0	0.000	0.000	0.000
	Subtotal	0	2.28	2.28	0	2.90	2.90	0.000	1,559.310	1,559.310

Note: On-site refers to the waste treated by the Company in plant (site), while off-site refers to the waste that the Company entrusts an external third-party company to clear, transport and treat.

3. Direct disposal of industrial waste

In 2022, a total of 34,190.412 metric tons of wastes were directed to disposal by the Group, all of which were outsourced to a third party for disposal, and 34,175.202 metric tons of wastes were disposed of off-site. The waste directed to disposal in the current year decreased by 8.45% compared to 2021, which was mainly due to the inclusion of Top-Comment this year and the fact that most of the waste was diverted from disposal.

Waste Directed to Disposal by Disposal Operation (Total of Locations, Unit: Metric Tons)

Item	Direct disposal method	2020			2021			2022		
		On-site	Off-site	Subtotal	On-site	Off-site	Subtotal	On-site	Off-site	Subtotal
Hazardous industrial waste	Disposal (including energy recovery)	0	0	0	0	0	0	0.000	0.000	0.000
	Incineration (excluding energy recovery)	0	0.21	0.21	0.000	0.03	0.03	0.000	0.093	0.093
	Landfilling	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000
	Other direct disposal	2.40	0	2.40	2.86	0.000	2.860	3.320	3.060	6.380
	Total	2.40	0.21	2.61	2.86	0.03	2.89	3.320	3.153	6.473
Non-hazardous industrial waste	Incineration (including energy recovery)	0	0	0	0	0	0	0.000	0.000	0.000
	Incineration (excluding energy recovery)	0	16.96	16.96	0	25.51	25.51	0.000	579.799	579.799
	Landfilling	0.42	43,134.8	43,135.22	0.44	37,284.16	37,284.6	0.440	33,164.320	33,164.760
	Other direct disposal	14.26	0	14.26	12.74	0	12.74	11.450	427.930	439.380
	Total	17.08	43,151.97	43,169.05	16.04	37,309.7	37,325.74	11.890	34,172.049	34,183.939

Note: On-site refers to the waste treated by the Company in plant (site), while off-site refers to the waste that the Company entrusts an external third-party company to clear, transport and treat.

CHAPTER 4

Diversified and Healthy Workplace

- 4.1 Diversified Workplace and Manpower Recruitment
- 4.2 Create Opportunities for Enhancing Abilities and Skills
- 4.3 Happy and Friendly Workplace
- 4.4 Protect Workplace Safety



4.1 Diversified Workplace and Manpower Recruitment

4.1.1 Manpower Structure and Recruitment Plan

• Manpower Structure Analysis

Cleanaway's employees are all permanently employed and full-time employees, and there are no temporary, part-time employees or employees with no guaranteed working hours. In 2022, the Company had a total of 311 employees, including 60 new employees and 53 resigned employees (including 1 retired employee). Due to the addition of a new business location into the scope of this report, the number of employees increased as compared to that of previous years (the number of employees is calculated by the "annual weighted average").

The percentage of local residents employed as senior management was 100% (local residents are defined as employees with Taiwanese nationality).

Note: Definition of Employment Type

- Regular employees: Employment contracts with no fixed term (indefinite contracts).
- Temporary employees: Employment contracts with fixed term (fixed-term contracts).
- Full-time employees: Employees whose weekly working hours meet the definition of weekly working hours for full-time employees as defined by local regulations.
- Part-time employees: Employees whose weekly work hours do not meet the definition of weekly working hours for full-time employees as defined by local regulations.
- Employees with no guaranteed working hours: Employees whose weekly working hours are not fixed, such as on-call employees.

Total number of employees by gender and type of employment (unit: persons)

Type of Employment	Gender	2020	2021	2022		
		Kaohsiung City	Kaohsiung City	Kaohsiung City	Chiayi County	Total
Permanent Employment	Male	107	113	123	120	243
	Female	39	44	48	20	68
Temporary	Male	0	0	0	0	0
	Female	0	0	0	0	0
Full-time	Male	107	113	123	120	243
	Female	39	44	48	20	68
Part-time	Male	0	0	0	0	0
	Female	0	0	0	0	0
No guaranteed working hours	Male	0	0	0	0	0
	Female	0	0	0	0	0
Total	Male	107	113	123	120	243
	Female	39	44	48	20	68
	合計	146	157	171	140	311

• Diversified Structure of Employee

The percentage of male and female employees in our company is 77% and 23% respectively, with the majority of employees in the age group of 31-50 years old, accounting for 55% of the total number of employees. In addition, we employ 3 employees with physical and mental disabilities in accordance with the law, and 1 indigenous employee in order to realize our philosophy of diversity and equality.

Total Number of Employees by Function and Diversity Indicators (Unit: Persons)

		2020						2021						2022					
Function		Direct employees		Indirect employees		Total		Direct employees		Indirect employees		Total		Direct employees		Indirect employees		Total	
Diversity Indicators		Number of employees	Percentage	Number of employees	Percentage	Number of employees	Percentage	Number of employees	Percentage	Number of employees	Percentage	Number of employees	Percentage	Number of employees	Percentage	Number of employees	Percentage	Number of employees	Percentage
Gender	Male	83	86%	24	49%	107	73%	86	83%	26	49%	112	71%	214	85%	29	49%	243	78%
	Female	14	14%	25	51%	39	27%	18	17%	27	51%	45	29%	39	15%	29	51%	68	22%
Age	30 and below	9	9%	5	10%	14	10%	14	13%	4	8%	18	12%	44	17%	5	9%	49	16%
	31-50	65	67%	30	61%	95	65%	59	57%	34	64%	93	59%	142	56%	35	60%	177	57%
	51 and above	23	24%	14	29%	37	25%	31	30%	15	28%	46	29%	67	26%	18	31%	85	27%
Nationality	Taiwan	97	100%	49	100%	146	100%	104	100%	52	99%	156	99%	229	91%	58	100%	287	92%
	Foreign nationality	0	0%	0	0%	0	0%	0	0%	1	1%	1	1%	24	9%	0	0%	24	8%
Indigenous status		2	2%	0	0%	2	1%	4	4%	1	1%	5	3%	1	0%	0	0%	1	0%
Physical and mental disabilities		4	4%	0	0%	4	3%	4	4%	0	0%	4	3%	3	1%	0	0%	3	1%
Total number of employees by function		97		49		146		104		53		157		253		58		311	
Percentage of employees in each function category in the annual total number of employees (%)		66%		34%		100%		66%		34%		100%		81%		19%		100%	

Note: Percentage = Number of employees in a diversity indicator category ÷ Total number of employees in this function category x 100%

• Turnover

We have a well-established recruitment system and expect our employees to work together with the Company for mutual prosperity and development, and we respect their career transition choices. In 2022, the Company recruited a total of 60 new employees, including 37 males and 23 females, mainly under the age of 30; 53 employees resigned (including one retired employee), including 38 males and 15 females, for reasons of family care, relocation of place of residence, and change of work.

Total number and ratio of new employees (unit: persons)

Gender	Age	2020			2021			2022			
		Kaohsiung City	Total	Ratio of new employees	Kaohsiung City	Total	Ratio of new employees	Kaohsiung City	Chiayi County	Total	Ratio of new employees
Male	30 and below	10	18	17%	1	14	13%	8	11	37	15%
	31-50	6			11			12	4		
	51 and above	2			2			2	0		
Female	30 and below	2	4	10%	5	9	2%	8	4	23	32%
	31-50	2			4			6	4		
	51 and above	0			0			1	0		
Total		22	22	15%	23	23	15%	37	23	60	19%

Note: Ratio of new employees (%) = Number of new employees in the category/Total number of employees in the category × 100%

Total number and ratio of resigned employees (unit: persons)

Gender	Age	2020			2021			2022			
		Kaohsiung City	Total	Ratio of new employees	Kaohsiung City	Total	Ratio of new employees	Kaohsiung City	Chiayi County	Total	Ratio of new employees
Male	30 and below	1	11	10%	3	10	9%	3	6	38	16%
	31-50	7			4			15	8		
	51 and above	3			3			2	4		
Female	30 and below	1	2	5%	2	5	11%	4	2	15	21%
	31-50	1			3			5	3		
	51 and above	0			0			1	0		
Total		13	13	9%	15	15	10%	30	23	53	17%

Note: Turnover ratio (%) = Number of resigned employees in the category ÷ Total number of employees in the category × 100%.

4.2 Create Opportunities for Enhancing Abilities and Skills

4.2.1 Talents Cultivation and Performance Assessment

In order to enhance the professional ability of our employees through education and training, Cleanaway has established employee education and training programs, the department heads can file an application according to the department needs, or employees can submit their own education and training needs and obtain the approval of the department head, and finally the department head or the personnel department will approve the education and training subsidy. Education and training methods are divided into internal and external training, and courses mainly include professional function courses, routine occupational safety and health education and training, new employees and supervisors education and training, and anti-corruption policy education and training, to enhance the all-around skills and knowledge of employees. In addition, in order to actively promote the cultivation of innovative talents and the industry development, and to achieve the exchange of practices and experience, the Company has signed an industry-academia and talent cultivation cooperation with National University of Kaohsiung to implement the deep cultivation in campus and talent training.

In 2022, a total of 94 courses were held, with a total of 783 trainees and a cumulative total of 2,748 person-hours. Overall, the number of training hours per person is 9 hours, showing a growing trend compared to 2021, which demonstrates the company's emphasis and investment in employee education and training.

Our employee education and training policy does not vary by gender. In 2022, the average number of training hours was 9.24 hours for males and 7.38 hours for females.

Total training hours and average training hours by gender (unit: hours)

Gender	2020		2021		2022	
	Total training hours	Average training hours	Total training hours	Average training hours	Total training hours	Average training hours
Male	1,214	11.35	623	5.56	2,246.5	9.24
Female	288	7.38	220	4.89	502	7.38
Total	1,502	10.29	843	5.37	2,748.5	8.84

Note 1: Average training hours = Total training hours for the gender ÷ Total number of employees of the gender

Note 2: In 2022, the number of training hours increased compared to previous hours due to the addition of Top-Comment into the scope of statistics and the inclusion of internal training hours into the calculation.

The average number of training hours for each function in 2022 is shown in the table below. The total number of training hours for each function showed a steady growth trend compared to the previous two years, reflecting that the Company has been investing more and more resources in the education and training of employees, and investing in the career development of employees to create a win-win situation for the Company and its employees.

Total training hours and average training hours by function (unit: hours)

Function	2020		2021		2022	
	Total training hours	Average training hours	Total training hours	Average training hours	Total training hours	Average training hours
Direct employee	1,324	13.65	773	7.43	2,030.5	8.36
Indirect employee	178	3.63	70	1.32	718	10.56
Total	1,502	10.29	843	5.37	2,748.5	8.84

Note 1: Average training hours = Total training hours for a function ÷ Total number of employees of the function

Note 2: In 2022, the number of training hours increased compared to previous hours due to the addition of Top-Comment into the scope of statistics and the inclusion of internal training hours into the calculation.

• Employee Performance Appraisal System

The Company's performance appraisal system consists of probationary appraisal for new employees and regular performance appraisal for employees. Except for new employees who have been on the job for less than one year, the annual performance appraisal is conducted for all employees in principle in December of each year or in January of the following year. Employees fill out a self-assessment form, which is submitted to the department head for appraisal, and the appraisal results will be submitted to the Human Resources Department.

In addition, the Company's Personnel Regulations provide for employee rewards and punishments. If an employee's workplace performance or behavior meets or violates the Company's standards for rewards and punishments, the supervisor of each department will submit a reward or penalty report to the General Manager for approval and announcement. Employee reward and punishment records and annual performance appraisal results are the basis for employee promotion, salary adjustment or bonus distribution.

In 2022, 100% of new employees completed the probationary appraisal for new employees, and 100% of the remaining employees completed the annual performance appraisal.

4.3 Happy and Friendly Workplace

4.3.1 Equal and Favorable Remuneration

The basic salary of new employees of the Company is determined by the head of employer and the personnel supervisor according to the basic information of the employees and the Company's salary standard. Cleanaway's salary standard is set according to the minimum wage stipulated by local laws and regulations, the standard of peer companies, and the local living standard. Employee's salary includes basic salary, board wages, bonuses or allowances; some bonuses such as dividends and performance bonuses are paid according to the Company's operating conditions and the employee's performance. The job performance of employees shall be assessed by the department head annually, which will serve as the basis for salary adjustments and promotions.

The Company strictly adheres to the requirements of local labor laws and regulations. In Taiwan, the standard starting salary is higher than the basic salary stipulated by the Labor Standards Act, and in other operating regions, we also comply with the local minimum salary regulations.

In 2022, the standard salary of the Company's entry-level personnel (including females and males) is 1.2 times Note the local minimum salary (the statutory minimum salary in 2022 is NT\$25,250), and the highest monthly individual income is 8.93 times the median monthly income of all employees. The Chairman's salary is the employee's salary attributable to the current year, which is accrued on an accrual basis and consists of regular salary (basic salary, monthly allowances and bonuses), overtime pay (taxable or tax-exempt) and irregular salary (non-monthly allowances, bonuses, and employee rewards, etc.).

Note: The basic salary plus remuneration for male employees is 1.

In addition, the Company discloses the remuneration information of "full-time employees not in supervisor position" in accordance with the regulations of the Financial Supervisory Commission (FSC). In 2022, there were 109 full-time employees not in supervisor position, and their "average salary" and "median salary" were NT\$889 thousand and NT\$688 thousand, respectively. The salary in 2022 increased compared to the previous year.

4.3.2 Diverse and Inclusive Environment and Measures

In accordance with the Labor Standards Act, the Labor Insurance Act, the National Health Insurance Act, the Labor Pension Act, the Occupational Safety and Health Act, and other labor-related laws and regulations, which serve as the blueprint for our human resources management system, we have formulated the operating procedures for all processes, employee remuneration standards, and employee work rules, and regularly review the latest laws and regulations to safeguard the basic labor rights and interests of employees. The Company explicitly prohibits child labor, discrimination, workplace sexual harassment, and forced labor, and establishes independent complaint channels to provide employees with a safe, equal, and free working environment.

The employees of Top-Comment include migrant workers, for whom we hold regular monthly meetings, and some of our workplaces have signs posted in both Chinese and English, and we will increase the such signs in the future.

Important Processes of Human Resource Management

Human Resource Planning	Each department head shall submit the labor requirements for the following year when preparing the annual budget, stating the number of labors required for each position; the personnel department shall summarize such information and submit to the General Manager for approval, which will also be approved by the Board of Directors.
Demand application of the Employer	In the event that additional personnel are required due to business needs or resignation or retirement of existing departmental personnel, the head of each department shall submit a new employee application form to the personnel department, which will be approved by the relevant responsible department.
Recruitment and Interview	After the responsible department approves the application form for new employees, the personnel department is responsible for placing recruitment advertisements and initially reviewing the applicants' resume, and then submitting the list of qualified candidates to the personnel supervisor for screening and deciding on the list of candidates, who will be interviewed by the personnel supervisor and the head of the department with manpower need respectively. Resume review and interview focus on the candidates' education and working experience, knowledge, and professional skills, regardless of gender, age, nationality, or ethnicity.
Employment	The supervisors of employment department and personnel department will determine the basic salary based on the employee's basic information of and the Company's remuneration standards. Employees are enrolled in the labor and health insurance program on the day they officially report to work, and the personnel department conducts training for new employees to explain the Company's work rules (including sexual harassment prevention) and the related welfare system.
Salaries and Benefits	Based on the industry characteristics and the local living standard, the responsible supervisors jointly set the salary standards for different functions and levels, which are approved by the Board of Directors and serve as the basis for the salaries of new employees or promoted employees. The Company has an Employee Welfare Committee, which is responsible for planning employee welfare programs for all employees.
Education and Training	<ul style="list-style-type: none"> • Training for new employees: New employees will receive training on work rules and regulations from the personnel department upon reporting to work • Occupational safety and health training: The Occupational Safety and Health Committee plans internal and external training courses • Professional skills and other training courses: The Company has formulated the "Guidelines for Employee Education and Training" and each department can submit its own application as needed
Performance Appraisal	The appraisal is divided into probationary appraisal for new employees and annual performance appraisal, and the appraisal results are used as the basis for employee retention, promotion, salary adjustment, or bonus distribution.
Resignation, Retirement or Severance	<ul style="list-style-type: none"> • Resignation: Employees should submit an application for resignation before the deadline in accordance with the advance notice date stipulated in the Labor Standards Act. Supervisors should interview employees to understand the reasons for their resignation, which will serve as a reference for future management improvement. • Retirement: In accordance with the Company's work rules and laws, eligible employees may voluntarily apply for retirement or the Company may force them to retire. • Severance: In the event that the Company must terminate the employment relationship due to an organizational adjustment, manpower demand adjustment, force majeure, or when the Company deems an employee unsuitable for his/her position, the company must notify the employee in advance in accordance with the advance notice period stipulated in the Labor Standards Act and pay severance pay. <p>Advance Notice Period for Severance More than 3 months and less than 1 year of employment: 10 days in advance More than 1 year and less than 3 years of employment: 20 days in advance More than 3 years of employment: 30 days in advance</p>

4.3.3 Complete Welfare Measures

The Company has an Employee Welfare Committee, which is responsible for promoting and planning various employee welfare measures. Full-time employees are entitled to the welfare measures of the Employee Welfare Committee. The Company will allocate a fixed amount of welfare fund, and the employees can voluntarily allocate funds, to the account of the Employee Welfare Committee every month, which will be used for various activities or subsidies, and the Employee Welfare Committee will track the utilization of the welfare funds and the feedback from the employees on a regular basis, so as to ensure the welfare funds are used appropriately.

- The Company's welfare system is described below:

Item	Welfare Policy
Insurance	<ul style="list-style-type: none"> Buy labor insurance and national health insurance in accordance with the regulatory range of remuneration Plan group comprehensive insurance, including group accident insurance and group life insurance
Pension	<ul style="list-style-type: none"> Old pension: The Company makes adequate contributions to the pension reserve for workers under the old pension system in accordance with the Labor Pension Act New Pension: 6% monthly contribution in accordance with the Labor Pension Act
Vacation	<ul style="list-style-type: none"> Special leave: granted in accordance with regulations Unpaid parental leave One-day ritual leave for indigenous employees in accordance with the list of indigenous rituals and ceremonies announced by the Council of Indigenous Peoples each year Unpaid sick leave and paid natural disaster leave more favorable than those provided by law
Subsidies and Welfare Items	<ul style="list-style-type: none"> Lunar New Year Festival and wedding and funeral cash gifts: Labor Day, Dragon Boat Festival, Mid-autumn Festival, hospitalization allowance, birthday and childbirth gifts, wedding gift, new residence gift, and condolence money Company trips: Company trips are organized twice a year, where one immediate family member of each employee is fully subsidized for these trips. Health examination subsidy Education and training subsidies (refer to courses arranged by the employees themselves, not the Company's original courses). Subsidies for club activities Scholarship for children's education Employee Gym

Parental Leave Information

In accordance with the Law on Gender Equality at Work, employees who have been employed for more than six months and have children under the age of three may apply for unpaid parental leave for a maximum of two years.

	2020				2021				2022			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Number of employees eligible to apply for parental leave in the current year (A)	7	3	0	10	1	1	0	2	4	1	0	5
Number of employees who actually applied for parental leave in the current year (B)	0	0	0	0	0	0	0	0	0	0	0	0
Number of employees to be reinstated after parental leave in the current year (C)	0	0	0	0	0	0	0	0	0	0	0	0
Number of employees reinstated after parental leave in the current year (D)	0	0	0	0	0	0	0	0	0	0	0	0
Number of employees reinstated after parental leave in the previous year (E)	0	0	0	0	0	0	0	0	0	0	0	0
Number of employees who were reinstated after parental leave and continued working at the Company for 12 months (F)	0	0	0	0	0	0	0	0	0	0	0	0
Application rate of unpaid parental leave (%) (=B/A)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Reinstatement rate (%) (=D/C)	-	-	-	-	-	-	-	-	-	-	-	-
Retention rate (%) (=F/E)	-	-	-	-	-	-	-	-	-	-	-	-

4.3.4 Provide labor-management communication channels

Cleanaway does not have a labor union or sign group agreements. Instead, it holds labor-management meetings in accordance with the Labor-Management Meeting Regulations and establishes other diversified communication channels so that employees and the Company can have a harmonious and equal communication platform, including the Employee Welfare Committee meetings, internal communication platforms, and employee grievance channel, in order to safeguard the rights and obligations of employees and employers and make timely improvements to labor-management regulations.

Communication Channels

Communication Channels	Description
Labor-Management Communication Meeting	All labor-management communication meetings are held by three labor representatives elected by all employees and three representatives appointed by the employer. In accordance with the law, meetings are held at least once every three months. In this year, a total of four labor-management meetings were held. During this period, no representative of the labor-management meetings was dismissed or transferred or given a pay cut or other unfavorable treatment due to exercise of their powers. The scope of discussion at labor-management meetings is applicable to all employees.
Employee Welfare Committee Meetings	In accordance with relevant laws and regulations, the Company's Employee Welfare Regulations and the Employee Welfare Committee Charter, quarterly meetings are held to formulate or amend various employee welfare plans. During the year, a total of 4 meetings of the Employee Welfare Committee were held.
Internal Announcement and Internet Communication Platform	From time to time, we make announcements on our internal EB system.
Employee grievance channel	Employees at the Company can send their grievances to the e-mail addresses of the General Manager and unit supervisors, which can be obtained from the employee directory. In 2022, there was no employee grievance.

4.4 Protect Workplace Safety

4.4.1 Occupational Safety and Health Management

Employees and external workers are important members of the Company's operating activities. Any safety and health risks in the workplace may have a significant impact on the Company's economy and the health and lives of employees or external workers. Cleanaway Solidification Plant identifies the hazards that may occur in the operating environment in accordance with the requirements of occupational safety and health regulations and ISO 45001 management system standard. Evaluation showed that the operating activities in solidification plant belong to high-risk area, therefore, we established an occupational safety and health management system based on the management framework of Plan-Do-Check-Act cycle, and passed the ISO 45001:2018 routine tracking and auditing again in 2022, which included hazard identification, risk and opportunity assessment, emergency response, and contractor management. The Company has formulated various occupational safety procedure documents, management methods and control procedures to control the details of each area of the solidification plant to ensure that solidification plant's employees and external workers will not be exposed to hazards at work or be injured due to incorrect operation, thus protecting the health and safety of workers. (Note: External workers refer to all workers, other than employees, who carry out the company's designated work items within or outside the company's premises, such as raw material suppliers, equipment repairers, external consultants, etc.)

Cleanaway Occupational Safety and Health Management System covers 45 employees and 328 external workers in the solidification plant. One internal audit and one external audit will be conducted annually on occupational safety and health management to implement occupational safety and health control. No major management deficiencies were found in both internal and external audits in the current year. In addition, the Company has set up an environmental safety mailbox in the staff lounge of the solidification plant, where employees or external workers can anonymously report others for violating the management control procedures or make suggestions for improvement of the management procedures, which can help to improve the safety of the overall working environment. No complaints or suggestions for improvement were received in 2022, indicating that the Company's workplace safety and health meet the needs of employees. The Company will continue to engage in improving workplace safety and health.

- **Occupational Safety and Health Management Unit**

In accordance with Article 10 of the Occupational Safety and Health Management Regulations, Cleanaway is not required to establish an Occupational Safety and Health Committee, but has established an Occupational Safety and Health Management Unit (the "Environmental Security Office"). Members of the Environmental Security Office are responsible for reviewing the procedural documents of Cleanaway's Occupational Safety and Health Management System, conducting regular risk assessments, as well as auditing the effectiveness of the implementation of the management procedures and precautionary measures. The Environmental Security Office is also responsible for investigating and reporting occupational hazards and occupational diseases at all Cleanaway locations (not limited to the solidification plant), as well as arranging occupational safety education and training programs, occupational health services and health promotion activities.



• **Occupational Safety and Health Risk Assessment**

Cleanaway has formulated hazard identification and risk assessment management procedures, whereby each unit reviews the working environment and operating procedures of employees and contractors annually, identifies possible hazards and major occupational hazards or occupational diseases, confirms the existing protective facilities, and evaluates the risk levels. The low level of risk is tolerable, which, in addition to regular evaluation in the future, will be controlled, managed and supervised daily according to the original control methods; the medium and high level of risks are intolerable, for which control measures to eliminate or reduce the risks should be proposed.

Hazard Identification and Risk Assessment Process



In order to encourage employees to report possible hazards (false alarm incidents) at work, employees can submit proposals during departmental meetings via the Company’s internal communication procedures. Employees who submit proposals that contribute to or assist in safety and environmental operations upon review and approval will be rewarded according to the Company’s Work Rules. We hope to identify the relevant risks through the risk assessment process above and strictly control medium- and high-risk factors, so that the Company can achieve the vision and goal of zero occupational accidents in the workplace.

Hazard Identification and Risk Assessment Results in 2022

Hazard Category	Hazard Factor	Potential Disaster or Occupational Disease	Risk Level	Preventive Management Measures
Physical Hazards	Fire	Smoking and littering of cigarette butts, which cause fires in the factory	Medium risk	1. Program control 2. Factory inspection 3. Setup of smoking areas
	Entanglement, fall	Personal injury due to conveyor belt entanglement or fall	Medium risk	Emergency brake for stopping conveyor belt (safety buttons, pull cords), protecting net, and video recording equipment
	Fall	Falls due to slippery floor during inspection of activities in the factory	Medium risk	Non-slip safety shoes
	Electric shock	When turning on the power supply at the power box, a person may suffer electric shock due to electric leakage of power box	Medium risk	Installation of a safety separator in the power box
	Fall due to missing foot	The iron plate on the floor of the mixing machine room is rusting, and a person may miss his foot and fall	Medium risk	Conduct regular inspection, and reinforce or replace the rusted plate immediately
	Falls or drop of objects	Clean up the environment after typhoon	Medium risk	1. Personal Protective Equipment 2. Professional Training
	High Temperature, Fall	Heat exhaustion due to overheating during cleaning of rooftop solar power system; fall due to inattention	Medium risk	1. Supervision by rooftop operation supervisor 2. Operations by more than two persons 3. Adjustment of rest time (rest for 10 minutes after every 1 hour of work) 4. Program control



Hazard Identification and Risk Assessment Results in 2022

Hazard Category	Hazard Factor	Potential Disaster or Occupational Disease	Risk Level	Preventive Management Measures
Physical Hazards	Cut, incised wound, bruise	When high-pressure water jet is used for cleaning in the factory, it may injure the employees who are close to it	Medium risk	1. Designate a special area for high pressure water jet operation 2. Do not approach when high pressure water jet is used
	Collision	The employee may be collided by moving vehicles when entering or leaving the rest room	Medium risk	Stipulate the speed limit in the factory
	High Temperature	Injuries may be caused by high temperatures in the furnace during material preparation and feeding operations in the thermal desorption pre-treatment process	Medium risk	1. Ventilation 2. Adjustment of rest time
Chemical Hazards	Contact with hazardous materials	In the factory, dust is discharged through ventilation fans, which may be inhaled by workers outside the factory, affecting their health	Medium risk	Cover roof fans with filter material
		The back door of the factory is not closed properly, which may lead to dust leakage, causing inhalation by the workers outside the factory and affect their health	Medium risk	1. Education and Training 2. Posting of signs
Biological Hazards	Oxygen deficiency	Poor ventilation in the factory	Medium risk	Increase ventilation equipment (roof fans) and perform regular maintenance
	COVID-19 infection	Guests, outsourcers, contractors, and employees entering and leaving the factory may cause human-to-human transmission	High risk	Take control measures for people entering the factory, including temperature measurement and visitor real-name registration system

• Occupational safety and health education and training



Occupational safety and health education and training and promotion are the basis for enhancing the safety and health awareness of employees and contractors. All employees of Cleanaway must receive general occupational safety education and training every year, and according to the work type and work environment of different departments, we also organize employee knowledge and skills training to enhance employees' safety awareness and prevent disasters. In addition to knowledge and skills, the Company also organizes incident response drills, including chemical leakage drills, fire drills, and abnormalities in wastewater treatment facilities, to simulate emergencies that may be encountered during the work process, so that on-site personnel are clear about the standard procedures for dealing with accidents, thus reducing the probability of injuries and deaths. Hazard notification and safety and health training on relevant operations are provided to construction contractors and collection and disposal vehicle drivers before entering various sites. These personnel are also required to sign the "Statement of Commitment for Suppliers" to ensure that they carry out the relevant operations in accordance with Cleanaway's Regulations Governing Contractor Safety and Health Management.

Total Hours and Number of Trainees of Occupational Safety and Health Education and Training Programs

Category	Course Content	Trainees	Total training hours/number of trainees		
			2020	2021	2022
Internal Training					
General Training	Disaster response measures, hazard education, occupational safety and health regulations, occupational safety and health concepts and operating instructions, electrical safety regulations and fire prevention, respiratory protection equipment testing and introduction, carbon dioxide fire extinguishing system operation and maintenance, dust hazards and prevention, hazards of organic solvents or mixtures and prevention, operating standards promotion and discussion (working at heights, hot work and electric welding, operation inspection and basic maintenance of machinery, maintenance of work environment)	Related Workers	1,059 hours/ 381 persons	1,164 hours/ 388 persons	<ul style="list-style-type: none"> Cleanaway: 1,314 hours/ 497 persons Top-Comment: 544 hours/ 454 persons 1,858 hours/ 951 persons
Emergency Response Training	Fire drills, earthquake drills, abnormalities in wastewater treatment facilities, abnormalities in air pollution control facilities, falling of solidification products during clearing and transport, collapsing walls in the transfer area, and first aid for shock	Employees of Gangshan Plant	448 hours/ 132 persons	702 hours/ 282 persons	532 hours/ 184 persons
External trainings					
Licenses and qualifications of occupational safety and health related personnel	Safety and health education and training for occupational safety and health supervisor, organic solvent operations supervisor, operators engaged in metal fusion, cutting or heating of acetylene fusion device or gas gathering device, fire prevention management personnel, dust operations supervisor, first aid personnel, roof operations supervisor, specific chemical substance operations supervisor, oxygen-deficient operations supervisor, operators of forklift with loads of more than one metric ton, scaffold erection operations supervisor, hazardous goods road transportation personnel, mobile crane operators, radiation operators, crane operators, and aerial truck operators, etc.	Related Workers	952 hours/ 66 persons	636 hours/ 44 persons	<ul style="list-style-type: none"> Cleanaway: 1,377 hours/ 139 persons Top-Comment: 728 hours/ 50 persons 2,105 hours/ 189 persons

- Note: 1. The above data does not include education and training hours of external contractors or clearing and transport service providers.
 2. The increases in the training hours and number of trainees in 2022 are due to the inclusion of the statistics of Top-Comment in 2022.

• **Occupational Health Services**

Cleanaway is a general industrial waste and hazardous industrial waste treatment plant (site), and our employees often come into contact with hazardous industrial wastes containing heavy metals and asbestos in the operating environment. In order to ensure the health and safety of employees, contractors, clearing and transport vehicle drivers and other external workers, the monitoring of hazardous substance concentrations, the wearing of respiratory protection equipment, and the professional skills and qualifications of construction workers all comply with the laws and regulations, and are even more stringent than such regulations. Cleanaway also provides on-site workers with regular special health examinations and blood tests for the eight heavy metals (arsenic As, cadmium Cd, chromium Cr, copper Cu, mercury Hg, nickel Ni, lead Pb, and zinc Zn) to ensure that the employees' health is not at risk.

Summary table of special health examinations (unit: person-time)

Year		2020	2021	2022		
				Cleanaway	Top-Comment	Total
Examination Results	Level 1 Management	87	156	117	107	224
	Level 2 Management	81	40	55	53	108
	Level 3 Management	0	0	0	0	0
	Level 4 Management	0	0	0	0	0
Number of persons receiving health examinations		168	196	172	160	332

Note: The increases in the training hours and number of trainees in 2022 are due to the inclusion of the statistics of Top-Comment in 2022.

• **Health promotion activities**

In addition to regular special health examinations for special operators, Cleanaway also arranges regular health examinations for regular full-time employees every year, and only the employees themselves can obtain health examination reports. If there are any abnormalities in the health examinations, we can arrange for a contracted service doctor to come to the factory for evaluation and recommendation, and carry out health management related measures based on the health examination results. In order to maintain the physical and mental health of our employees, **we regularly arrange nursing staff to provide on-site health services twice a month and doctors to provide on-site health services quarterly.** We also regularly publish health promotion articles and organize health lectures to enhance the promotion of health concepts. In 2022, two health lectures were organized in the solidification plant and the head office, with 55 and 37 participants respectively.

- **Prevent and Mitigate Occupational Safety and Health Impacts in the Workplace**

- ◆ **Safety and health inspection and change management**

Based on a complete environmental safety and health audit program, the Environmental Safety and Health Team and relevant departments regularly implement various environmental safety and health documents and operation control items of the plant, monitor the measurement results, evaluate risks, and audit contractors; for high-risk operations (working at heights/hot work/hoisting/work in confined space), conduct audits from time to time to actively identify potential hazards, and monitor and control various energy-consuming facilities. When the plant facilities, process equipment, workflow, or chemicals used are changed, all relevant units must jointly evaluate and review the changes in accordance with the safety change management system to ensure that they are safe before implementation.



- ◆ **Operating Environment Measurement**

We regularly entrust the operating environment monitoring organization accredited by the Occupational Safety and Health Administration of the Ministry of Labor to conduct operating environment measurements to monitor the concentration of hazardous substances, and carry out risk control and timely engineering improvements or operational controls based on the monitoring results to prevent the occurrence of occupational diseases and enhance the protection of health and safety of employees.

- ◆ **Health Management**

Cleanaway attaches importance to the health of its employees and conducts regular health examinations for its employees every year, and provides doctor consultation and emergency medical treatment services. If there are any abnormalities in the health examinations of employees, we can arrange for a contracted doctor to come to the factory to conduct assessment and make recommendations, and take health management measures based on the health examination results. In addition to routine health examination, special health examinations are also conducted regularly for employees involved in special operations in accordance with laws and regulations.

- ◆ **Hazard risk identification**

In order to control the high-risk and high-hazard potential factors in the plant, we regularly organize all units to perform hazard identification and risk assessment in the plant every year. The factors of the plant were ranked according to the level of hazard risk, and the intolerable risk in 2022 was the transmission of COVID-19 among employees. Safe work procedures and related safety protection measures are formulated, and risk control is carried out through management programs and engineering improvements.

- ◆ **Disaster Prevention and Emergency Response**

Regularly organize annual fire drills and various emergency response events in the plant, formulate emergency response measures and post-disaster recovery plans, so that employees are aware of various fire prevention information, including the use of fire fighting equipment, plant evacuation routes, and related emergency response measures. Establish an emergency response team to facilitate the timely transmission and mastery of emergency response information. In 2022, three emergency response and disaster prevention safety drills were organized. Fire drills and earthquake drills were held twice a year, in the first and second half of the year respectively; there is also a first-aid drill for shock.

- **COVID-19 Epidemic Prevention Policy**

In 2022, the COVID-19 epidemic continued to affect the health of people in Taiwan. Cleanaway strengthened the health management of internal employees, external vendors, and related parties to avoid the impact of the epidemic on our operations, and reduce the risk of transmission. Therefore, the epidemic response strategy can be divided into "Track Epidemic Changes and Promote Epidemic Prevention", "Prepare Epidemic Prevention Supplies", "Health and Hygiene in the Factory", and "Management of Personnel Entry".

I Track Epidemic Changes and Promote Epidemic Prevention

Keep abreast of the latest information on COVID-19 from the Central Epidemic Command Center or the CDC's official LINE and changes in the epidemic situation, and inform internal employees of all units through the Company's LINE group, MAIL, and other electronic channels.

II Prepare Epidemic Prevention Supplies

At present, epidemic prevention supplies in the factory can be divided into epidemic prevention masks, gloves, quick-screening reagents, forehead thermometers, and cleaning supplies for disinfection and sterilization, etc. The Environmental Security Office is responsible for the distribution and storage of such supplies, and maintaining a smooth supply from suppliers to ensure that there is a sufficient stocking level of epidemic prevention supplies in the factory.

III Health and Hygiene Management in the Plant (Site)

1. During the epidemic period, people should minimize gathering in the plant, and all people entering the plant should wear masks. Indoor office personnel should adopt a scattered seating mode, and offices with limited seats should install partitions as an alternative measure.
2. Employees should keep a safe distance from each other when moving around in closed spaces such as lounges and meeting rooms, and should strengthen the cleaning of the office environment and perform regular cleaning and disinfection.
3. Employee's forehead temperature is measured once in the morning and once in the afternoon.
4. Customers and vendors should be mainly communicated by phone, e-mail or video to minimize on-site contact.
5. Employees with symptoms of upper respiratory tract infections should be screened as soon as possible.
6. Investigate employees' COVID-19 vaccination status and encourage them to get vaccinated.

IV Management of Personnel Entry

In response to the possible impact of the epidemic changes, all employees and external organizations entering the plant are required to measure their body temperature through the access control, and a real-name system is implemented to effectively control the incoming personnel.

V Provide COVID-19 fast screening reagent for employees to use

In view of the mutation of the COVID-19 virus strain, which has increased the transmission of the virus, in addition to strict adherence to the original epidemic prevention policy, the Company also provides rapid screening reagents to employees who have the need for rapid screening due to official duties, and the relevant applicable users are as follows:

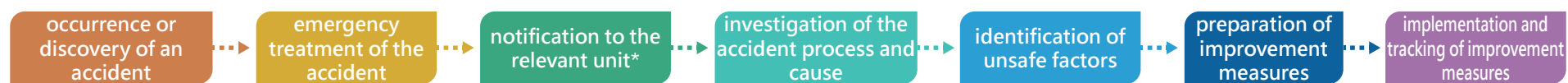
1. Employees who have been in contact with confirmed cases
2. Employees who have been in contact with close contacts
3. Employees who are responsible for clearing and transporting the medical wastes generated by confirmed cases
4. Those who are required by customers to carry out clearing and transport tasks
5. Others who need to undergo rapid screening after discussion by department heads

4.4.2 Occupational Injuries and Diseases

Reporting Process of Occupational Injury Events

When an occupational accident occurs, the person involved or the employee of department involved must report the accident to the Environmental Security Office for investigation, confirm the factors leading to the accident, and work with the person involved and the department supervisor to develop improvement measures to prevent the occurrence of same work accident. Upon completion of the investigation, the accident affecting unit is required to fill out an occupational accident investigation report and submit it to the Environmental Security Office and the Human Resources Department. The Environmental Security Office will continue to strengthen education and training and promote improvement measures to reduce the occupational accident rate.

Occupational injury notification SOP



* Notification units include: Environmental Security Office, Human Resources Department, and the supervisors of all relevant units, as well as the Labor Inspection Division in the case of major occupational accidents

Statistics of Occupational Injuries and Diseases

In 2022, the Group suffered 11 occupational injury accidents, all of which were general accidents with no special hazards or major occupational injuries occurred. The increase in 2022 was due to the inclusion of the statistics of Top-Comment.

Hazard Factor	Employees		External workers ^{Note 2}		Total
	Occupational injuries (times)	Occupational Diseases ^{Note 1} (times)	Occupational injuries (times)	Occupational diseases (times)	
Physical Hazards	11	0	0	0	11
Chemical Hazards	0	0	0	0	0
Biological Hazards	0	0	0	0	0
Human Hazards	0	0	0	0	0
Psychosocial Hazards	0	0	0	0	0
Total	11	0	0	0	11

Note 1: Occupational diseases are recognized by obtaining occupational disease diagnosis certificates issued by physicians, which did not occur in the current year.

Note 2: External workers include contractors, clearing and transport companies, etc.

Note 3: In 2022, the statistical data of the Top-Comment was added.

Hazard Factor	Physical Hazards
Main causes of occupational hazards	<ul style="list-style-type: none"> Inadvertent operation of equipment or improper posture Failure to pay attention to the surrounding environment and equipment, resulting in accidental crushing, twisting, falling, cutting injuries.
Improvement Measures	<ul style="list-style-type: none"> Conduct education and training and publicize proper operation method Provide education and training and promotion, and require workers in the area to wear reflective vest

Statistical Table of Occupational Injuries and Occupational Diseases of Employees

Statistical Items (Unit)	2020	2021	2022
Total working hours (hours)	333,917	302,690	620,728
Deaths caused by occupational Injury (times)	0	0	0
Rate of death caused by occupational Injury ^{Note 1}	0	0	0.0
Number of serious occupational injuries (times) ^{Note 2}	0	0	0
Rate of serious occupational injuries ^{Note 3}	0	0	0.0
Number of recordable accidents (times) ^{Note 4}	1	3	11
Rate of recordable accident ^{Note 5}	2.99	9.91	17.7
Number of occupational diseases (cases)	0	0	0
Rate of occupational diseases ^{Note 6}	0	0	0.0

Note 1: Rate of death caused by occupational Injury = Deaths caused by occupational Injury ÷ Total working hours × 1,000,000.

Note 2: Serious occupational injuries are those that make it impossible or difficult for employees to return to their health status before injury within 6 months, excluding the number of deaths.

Note 3: Rate of serious occupational injuries = Number of serious occupational injuries ÷ Total working hours × 1,000,000.

Note 4: The number of recordable accidents refers to all occupational injuries that occurred in the current year, including the number of serious occupational injuries and the deaths caused by occupational Injury.

Note 5: Rate of recordable accident = Number of recordable occupational injuries ÷ Total working hours × 1,000,000.

Note 6: Rate of occupational diseases = Number of occupational diseases ÷ Total working hours × 1,000,000.

Note 7: In 2022, the statistical data of the Top-Comment was added.

Analysis of Occupational Injuries to Employees (Unit: person-time)

Type of accident	2020		2021		2022	
	Recordable accident	Occupational disease	Recordable accident	Occupational disease	Recordable accident	Occupational disease
Physical Hazards	1	0	3	0	11	0
Chemical Hazards	0	0	0	0	0	0
Biological Hazards	0	0	0	0	0	0
Human Hazards	0	0	0	0	0	0
Psychosocial Hazards	0	0	0	0	0	0
Total	1	0	3	0	11	0

Note 1: In 2022, the statistical data of the Top-Comment was added.



CHAPTER 5

Social Inclusion and Common Good

5.1 Social Inclusion Goals and Strategies

5.2 Social Engagement Achievements

5.1 Social Inclusion Goals and Strategies

5.1.1 Social Inclusion Goals and Strategies

WASTE means rejected materials. Waste treatment is the main business of Cleanaway Group, and professional waste terminal treatment technology makes us an important promoter to protect the national environment and promote the circular economy. However, in the era of scarce energy and resources, Cleanaway is committed to changing at source, and we give WASTE another spiritual meaning, that is, **W: waken; A: active; S: sustainable; T: teamwork; E: environment** (waken active & sustainable teamwork for environment). In accordance with such spirit, Cleanaway has been actively investing in CSR related activities in the aspects of “environmental friendliness” and “humanistic care” for a long time, and is committed to assisting in the promotion of environmental education, climate action, and care for the socially disadvantaged, etc. We also take concrete actions to respond to the United Nations Sustainable Development Goals, including SDG2 “Zero Hunger”, SDG3 “Good Health and Well-being”, SDG4 “Quality Education”, SDG11 “Sustainable Cities and Communities”, SDG13 “Climate Action”, and SDG17 “Partnerships for the Goals”. We hope we can work together with our partners from all walks of life to create a positive influence and promote the vision of social inclusion and common good.

The infographic is divided into three horizontal sections. The top section, titled 'Sustainability Goals', features six icons representing different goals: 2 (stop sign), 3 (heart with pulse), 4 (open book), 11 (city buildings), 13 (globe with leaf), and 17 (interlocking circles). The middle section, titled 'Goal strategy', contains two boxes: 'Environmental friendliness' with a tree icon and 'Humanistic Care' with a group of people icon. The bottom section features the word 'WASTE' in large, bold, orange letters, with a quote symbol on either side. Below the word, the text '(Waken Active & Sustainable Teamwork for Environment 為環境喚醒主動且可持續的團隊合作)' is displayed.

• Management Process of Social Engagement

We build our social engagement process through evaluation, planning, execution and feedback, in the hope of enhancing the well-being of stakeholders, creating positive social value, and reducing negative impacts such as human rights hazards through our core operational capabilities, thus giving full play to our social influence. This process helps us to effectively track the effectiveness of our activities and programs, and serves as a reference for the Company to optimize programs and make decisions. Cleanaway continues to invest in this process and track improvements on a regular basis, in the hope of achieving the most efficient allocation of resources and deepening its social engagement.

Evaluation: Evaluate our negative and positive impacts on the SDGs.

Planning: Propose plans and strategies to decrease negative impacts and increase positive impacts.

Execution: Execute our activities and programs according to the plan to decrease negative impacts and increase positive impacts.

Feedback: Evaluate the performance of plans, activities and programs to confirm whether the goals have been met, which will also serve as the basis for future revisions of plans, activities and programs.

• Promote Communication and Understanding through “Environmental Education”, and Realize the Spirit of “Resource Coexistence and Environmental Reconstruction”

Over the past decades, under the linear economic model of “extract, manufacture, use, and discard”, the global business development model has resulted in the massive depletion of the earth’s resources and the generation of various wastes. In the past, the wastes were not properly disposed of and therefore had a negative impact on the environment. In recent years, with the development of a circular economy, these wastes have been transformed into a major opportunity for “resources recycling”! Through the recycling management of waste resources, the development of the industry and the protection of the environment can go hand in hand. However, the general public is unfamiliar with the environmental protection industry, making it difficult for waste treatment facilities to be understood by the public, but the two parties are not unrelated in the process of achieving the vision of inclusion, instead, a communication channel should be built to promote mutual understanding. In order to create a communication platform for enterprises to communicate with the public, Cleanaway has chosen the gentle and heartwarming “education” approach to bridge the information gap between stakeholders such as the general public, so that participants can establish a correct sense of value regarding human-environment interactions, and work together to explore the optimal balance between human civilization and the natural environment.

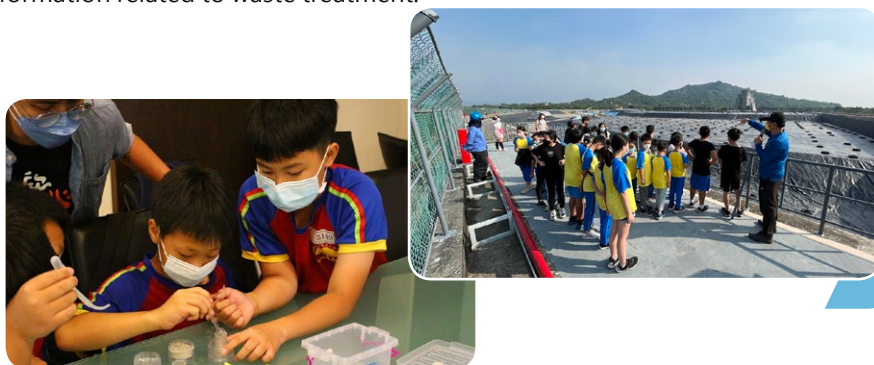
5.2 Social Engagement Achievements

5.2.1 Cleanaway Environmental Education Sustainability Program

Since 2018, Cleanaway has been promoting environmental education and the “Cleanaway Environmental Education Sustainability Program”. In terms of overall development and management, Cleanaway is committed to implementing the United Nations Sustainable Development Goals (SDGs) 4 – Quality Education Guidelines, and has adopted “Resource Coexistence and Environmental Reconstruction” as its core value in promoting environmental education. The Group also utilizes its corporate core competence to enhance the waste management level through intelligent technology, and its rich experience in waste treatment and open and transparent plant (site) resources lay a solid foundation for the optimization of teaching capacity. In addition, through the cultivation of talents in environmental education and the promotion of the originally developed “Project WASTE” (a systematic environmental education course), Cleanaway is implementing environmental education at grassroots level and balancing the difference in the teaching resources in remote areas. Cleanaway hopes to utilize its corporate influence to promote the participation of all people in environmental education, and help the public understand the circular economy and environmental sustainability from a macro perspective to develop corresponding actions, and create more global citizens with correct environmental value.

- **Utilize Intelligent Technology to Enhance Waste Management Level and Integrate Teaching Capacity**

Due to the Not-In-My-Back-Yard nature of waste management industry and the public’s rising awareness of environmental protection, domestic waste treatment facilities are seriously inadequate. Enterprises investing in local market have difficulties in operating, and cases of illegal dumping also frequently occur in society, exposing the country to the risk of environmental pollution. Cleanaway utilizes its professional expertise to help solve the shortage of waste disposal capacity in Taiwan, and uses GPS, artificial intelligence and cloud services to effectively track the process of industrial waste from clearing and transport, treatment to reuse, thus greatly enhancing the waste management level. The professional and honest corporate culture has enhanced the standard of the environmental protection industry and gained the trust of the public. In addition to putting our commitments into practice, Cleanaway has also integrated its rich experience in waste treatment and open and transparent plant (site) resources to invest in the optimization of the teaching of environmental education, so that the general public can better understand the information related to waste treatment.



- **The Company Takes the Lead in Disclosing “Secrets Within the Walls” to Dispel Stereotypes and Rumors**

Since outsiders seldom have the opportunity to get close to environmental treatment sites, Cleanaway, in order to dispel stereotypes and rumors among the general public, has been promoting environmental education since 2018, and further taken the lead in opening up the plant (site) for scheduled visits, and allowed visitors to understand the general situation of waste treatment in Taiwan through “The Truth That Can’t Be Hidden – Secrets Within the Walls” environmental education course under the “Project WASTE” series. In addition, the visitors can get a close experience of the actual conditions of sanitary landfill sites through diverse and interesting teaching interactions and on-site visits, thus overturning their prejudice of environmental disposal sites as being dirty or smelly. In 2022, a total of five plant (site) visits (with 185 visitors) were organized to promote the environmental education course. Cleanaway continues to guide visitors to reflect on their daily practices of reducing waste at source and encourage them to take practical actions to change their lives.

- **On-site Environmental Education Programs to Balance the Difference in Teaching Resources in Remote Areas**

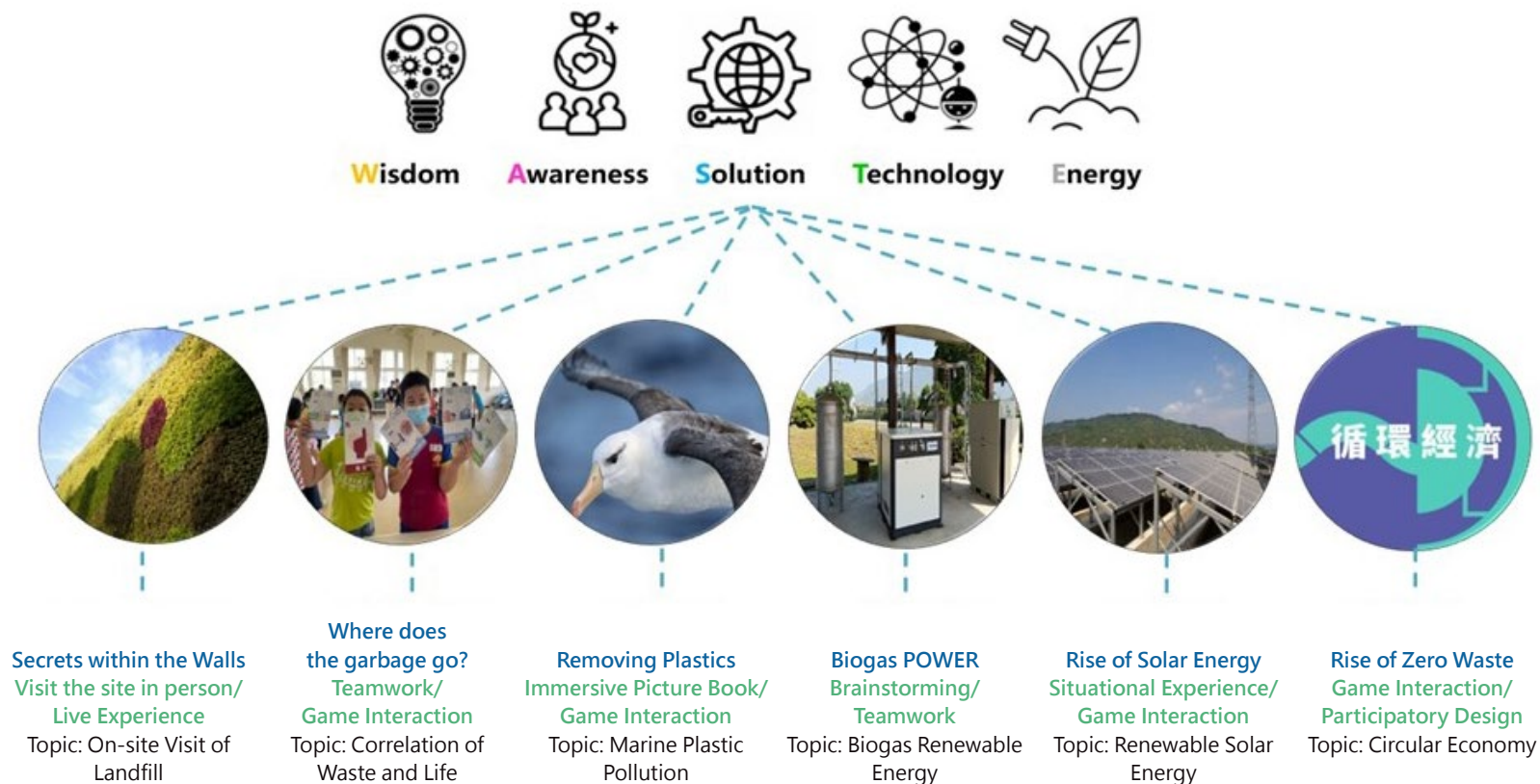
The pressure of the waste problem on back-end treatment, but it is more important to raise “environmental awareness” at the front end. How to strengthen people’s action to reduce waste at source and environmental sensitivity in their daily lives is the only way to alleviate the fundamental problem, and “education” is the key to promote sustainable development and is also a gentle force to deepen environmental protection down to grassroots and into people’s hearts. However, despite the popularization of education among Taiwanese citizens and the government’s efforts to invest resources in education, there are still many children in remote areas who face the difficulty of “no teacher” or “unstable teachers”. Education is not just about reducing the number of illiterate people, but also about the proper distribution of teaching resources, the integrity of children’s right to education, and whether every citizen can receive a fair and free education.

Cleanaway attaches importance to the environmental problems in the shallow mountainous areas, and is well aware that education is an important way to improve the environment and get rid of poverty. Since the promotion of environmental education in 2018, in addition to the promotion of environmental education courses for factory (site) visitors, it has also launched on-site environmental education programs for the Gangshan area and other remote shallow mountainous areas. In 2022, Cleanaway environmental education team conducted a total of 14 on-site environmental education programs, benefiting 488 students. Cleanaway environmental education team plays the role of companion and study guidance, leads students to explore themselves in the land, environment, and culture, expands the scope of learning for students, and enhances the stimulation of learning. Through deepening environmental education in the remote areas, we hope to balance the dilemma of the difference in educational resources, and build an equal and high-quality educational environment.



• **Develop the industry’s original systematic “Project Waste” series environmental education programs**

Since the environmental industry and waste treatment facilities are not easily understood by the public, and the role of “environmental protector” has even been misinterpreted as “mess maker”. In order to improve the general public’s misinterpretation of waste and the attention to the issue of circular economy, Cleanaway reviewed current environmental education programs and found that there are few educational programs that focus on the above issues. Therefore, based on our own professional expertise in waste treatment, the Group cooperated with the Energy Technology Research Center, National Kaohsiung University of Science and Technology to develop an industrial original systematic “Project Waste” series environmental education program; although WASTE means the materials that are not needed after being used in human activities, waste is actually a misplaced resource. If people can introduce the spirit of circular economy, implement the traditional 3R (Reduce, Reuse, Recycle), and redefine and redesign (2R) the product and service model, the waste can transform from “Unavoidable Evil” to “Sustainable Resource”. The Project WASTE program includes: W – Wisdom Ability; A – Awareness of Environment; S – Solve Pollution; T – Technological Innovation; and E – Energy Regeneration. Cleanaway’s environmental education team completed the development of four teaching plans in 2021, and completed the development and addition of two teaching plans in 2022, covering topics such as waste landfills, renewable energy power generation, marine waste, and circular economy, etc. Through the leading and promotion of this series of courses, Cleanaway hopes to make more people understand the sources, treatment process and future outlook of “waste”, and further cultivate the public to have the attitude and value of the proper use of environmental resources.



• **Feedback from Beneficiaries of Cleanaway’s Environmental Education**

The Cleanaway environmental education team will give out questionnaires after each course, to understand the learning effectiveness of the students according to the feedback, as well as the teachers’ and adults’ recognition or opinion on the Company’s promotion of environmental education, which will serve as the reference for future activity improvement and course revision. 102 students were interviewed for the environmental education course in 2022, and a five-point scale was used to analyze the mean value of overall satisfaction (5: very satisfied; 1: very dissatisfied). According to the statistical analysis results, the mean value of overall satisfaction was 4.63, which indicated that the trainees were generally satisfied with the appropriateness of the course arrangement and the richness of the content of the Cleanaway environmental education team, and recognized the environmental knowledge and environmental literacy conveyed by the Project Waste courses, and also recognized the sustainable promotion of environmental education made by the Company for environmental protection. Cleanaway hopes that the environmental education programs and activities that are spontaneous, interactive and beneficial to people and the natural environment could stimulate the students’ desire to learn and courage to innovate, as well as encourage more global citizens to practice environmentally friendly actions in their daily lives, thus creating a beautiful home with sustainable and inclusive environment, economy and society.



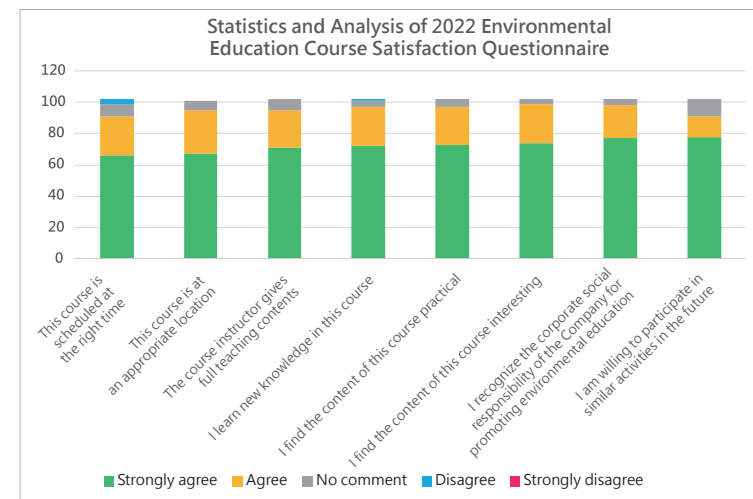
Statistics and Analysis of 2022 Satisfaction Questionnaire

2022 年度環教課程受訪共計102位學員，另採用五點量表分析整體滿意度平均值，經統計分析結果整體滿意度平均值為4.63，顯示學員普遍對於本團隊活動安排之妥適性及內容充實表示同意

活動名稱	2022年度環境教育課程滿意度問卷統計與分析						
樣本數	102份						
題號	題目	非常同意	同意	沒意見	不同意	非常不同意	加權平均數
1	本課程/活動時間安排恰當	66	25	8	3	0	4.50
2	本課程/活動地點安排恰當	67	28	6	0	1	4.56
3	本課程/活動講師授課內容充實	71	24	7	0	0	4.62
4	我在本次課程/活動學習到新知識	72	25	4	1	0	4.64
5	我對於本課程/活動內容覺得實用	73	24	5	0	0	4.66
6	我對於本課程/活動內容覺得有趣	74	25	3	0	0	4.69
7	我認同企業推動環境教育的企業社會責任	77	21	4	0	0	4.71
8	未來舉辦類似的課程/活動，我願意再參加	78	13	11	0	0	4.65
加權平均值							4.63



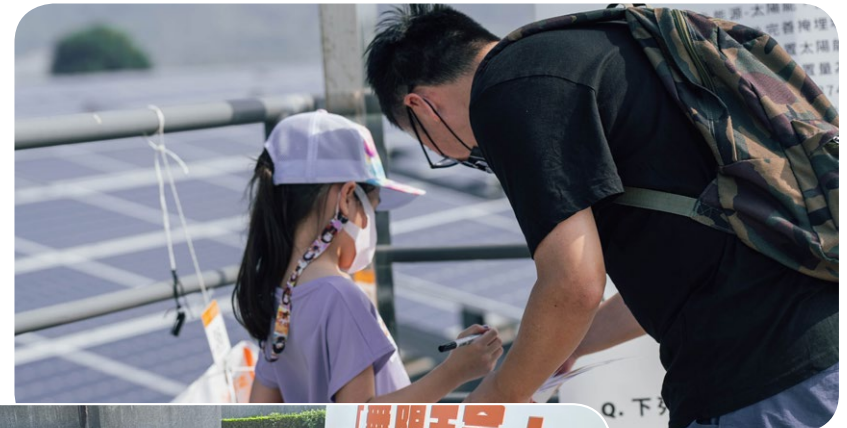
Statistics and Analysis of 2022 Satisfaction Questionnaire



5.2.2 Cleanaway's "Environmental Education X Parent-Child Orientation" Program to Change the World with Action

Orienteering, which originated from Sweden in Northern Europe, is internationally known as the sport of the "wise", requiring the use of map interpretation and path planning strategies to complete the challenge. Therefore, environmental education combined with orienteering will effectively enhance the participants' learning motivation and active thinking ability.

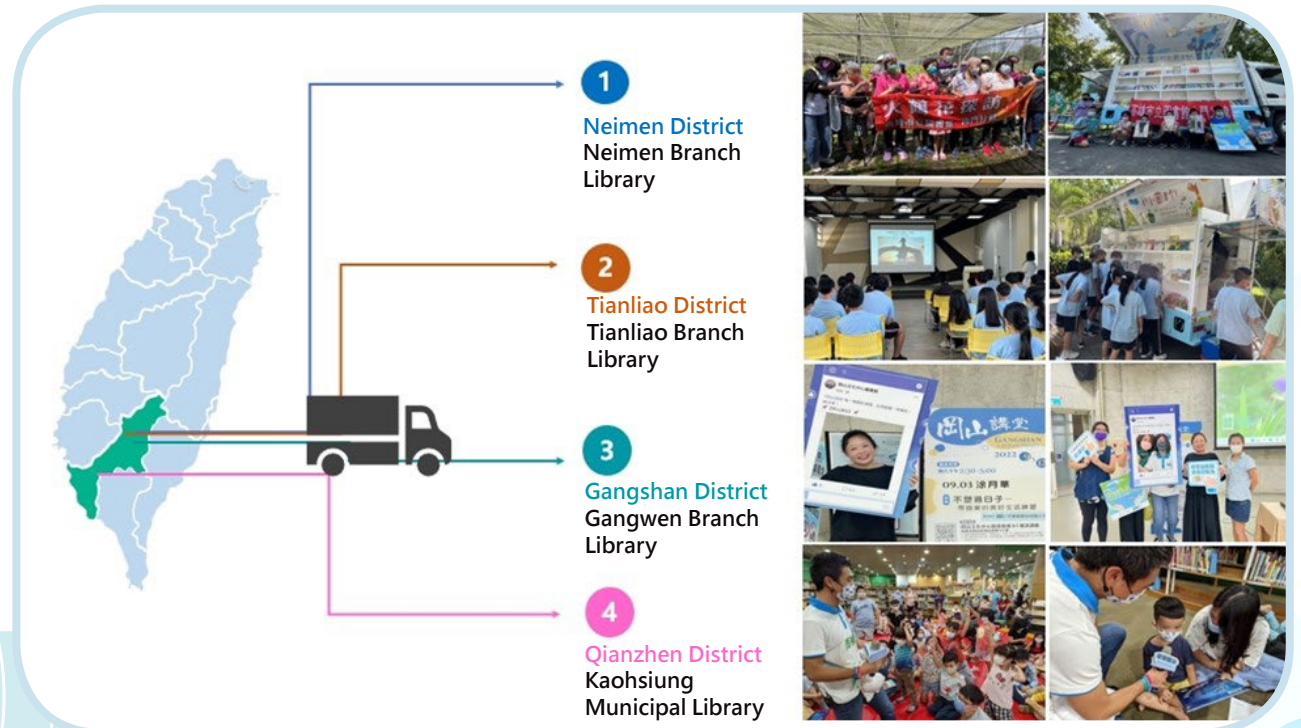
In order to fulfill corporate social responsibility and employee care, Cleanaway has skillfully linked the development results of environmental education courses with the Group's Employee Family Day. We invited Liu, Cheng-Hsun, a national orienteering expert, to be the course planner and teaching leader of this event, and held the "Cleanaway Changing the World with Action" Environmental Sustainability Education and Parent-Child Orientation Event for the first time on November 19, 2022 (Sat.) at Cleanaway's Gangshan Plant, in order to cultivate positive parent-child education and proper environmental awareness among employees, and incorporate the spirit of exploration and environmental education into the promotion and practice of ESG of the Company!



5.2.3 Cooperated with the Kaohsiung Municipal Library to promote the “Environmental Education, Reading for Sustainability” Program

The Kaohsiung Municipal Library in Qianzhen District, Kaohsiung City became the first public library with administrative legal person status in Taiwan on September 1, 2017. Since its opening, the Library has launched many innovative events, and the activities and services have become more and more diversified and lively. However, it is also under the pressure of self-financing. Therefore, the Kaohsiung Municipal Library is actively connecting with national resources and striving to open up the corporate fundraising channels.

The Kaohsiung Municipal Library has been promoting reading activities for the public good for many years, hoping to promote reading in remote areas through the soft power of “education”, balance the gap in learning resources between urban and rural school children, and promote the concept of equal rights to reading. The Kaohsiung Municipal Library’s approach to deepen education into grassroots coincides with Cleanaway’s concept of promoting environmental education. Therefore, in 2022, we cooperated with the Kaohsiung Municipal Library for the first time in the “Environmental Education, Reading for Sustainability” Program, which included six events, such as reading tours in villages of Neimen District and Gangshan District, promotion of the “Plastic Removal” environmental education course at the Library, environmental education and bookmobile tours in remote areas of Neimen District and Tianliao District, and lectures on the topic of plastic reduction in Gangshan, and 253 people participated in and benefited from these events. We hope to cooperate with Kaohsiung Municipal Library to spread environmental knowledge and reading needs in a more comprehensive way.



二、回饋意見(心得感想或建議):

感謝安排精彩課程，讓孩子內化保護環境的觀念

二、回饋意見(心得感想或建議):

謝謝你們為這堂課準備這麼充實、生動、有趣的課程

5.2.4 Implement the Monthly “Vegan Day” Corporate Sustainability Initiative

In response to global climate change, the government has been promoting the “Green Life for All” policy to encourage the public to enhance the green life concept and develop green living behaviors, and focusing on appeals of “using local resources”, “cherishing resources”, and “protecting environment”, in the hope that the government will lead the public to live a green life and build an environmentally friendly attitude towards life. “Green Diet” is one of the five main axes of green life, and includes “Low Carbon Diet” and “Cherish Food”.

Through the “Monthly Vegan Day” corporate sustainability action voted by employees, we encourage colleagues to eat more seasonal fruits and vegetables and less meat, so that a low-carbon diet will gradually become a habit in their daily lives. Cleanaway has designated the fourth Monday of each month as “Meatless Vegetable Day” since April 2022, and in order to respond to the “World Vegetarian Day” on November 25, the Company’s administration department will assist in ordering vegetarian (vegan) lunch boxes for the lunches on the above dates, in the hope that through the practice of one vegetable (vegan) meal per month, the greenhouse gas emissions can be reduced more efficiently, thus building the physical and mental health of employees and promoting the environmental sustainability. According to the U.S. Environmental Working Group (EWG), eating no meat for one meal can reduce carbon dioxide emissions by about 760 grams; therefore, since the launch of the above event in April 2022, we have organized 10 “Vegan Day” events and helped to reduce carbon emissions by 608,000 grams.



一月一「蔬食」
減碳現主時
EAT NOW!

01 . 計畫說明

「現主時」-是「現在」的意思，沒錯！我們現在就要啟動一月一蔬食計畫，「現主時」取諧音同時也是「現煮食」，從一餐選擇不吃肉開始，減少肉類攝取量，比搭乘大眾交通工具更能有效率減少溫室氣體的排放快為自己安排一頓美味又友善環境的蔬食餐點，讓自己「蔬」暢一下吧！

02 . 實施作法

111年4月起將每月第四週的星期一訂為「無肉蔬暢日」
午餐提供美味的蔬食選擇供同仁訂購

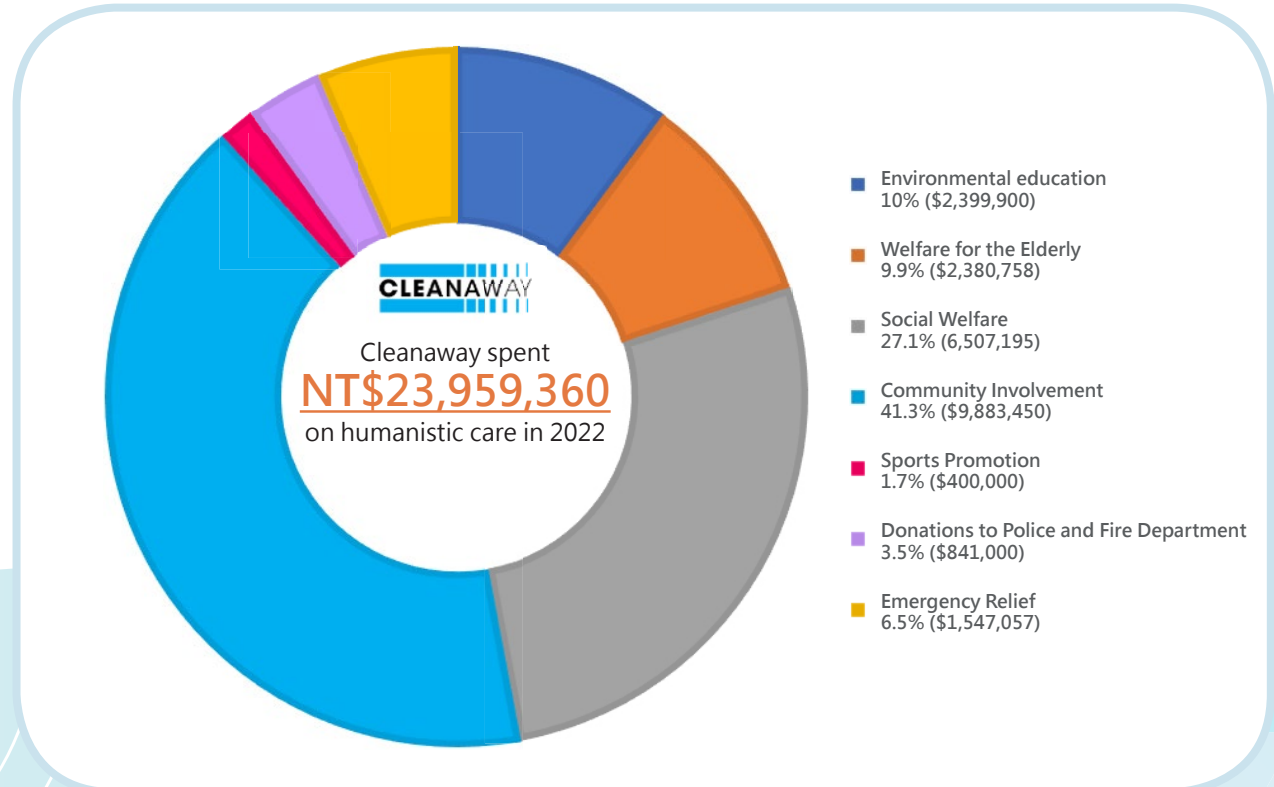
03 . 實施日期

預計實施日期			
01	111年4月25日(一)	06	111年9月26日(一)
02	111年5月30日(一)	07	111年10月31日(一)
03	111年6月27日(一)	08	111年11月25日(五)
04	111年7月25日(一)	09	111年11月28日(一)
05	111年8月29日(一)	10	111年12月26日(一)

5.2.5 Humanitarian and social welfare care, assistance and support

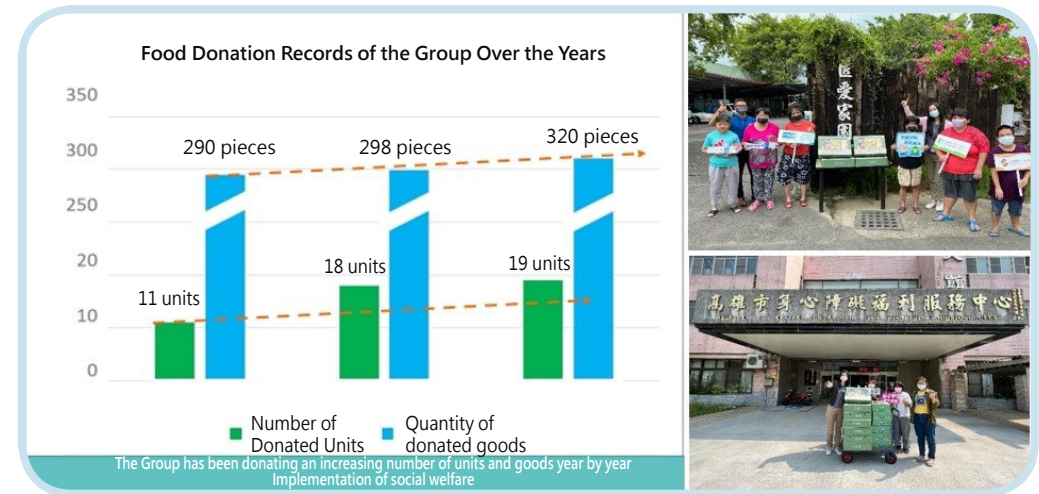
Cleanaway is committed to improving the professional technology of environmental protection services, and is also actively involved in social care and assisting in the sustainable development of communities. We work together with the Yang Chi-Chuan Foundation (YCCF) to promote the various public welfare activities in the Group's locations. Upholding the philosophy of "giving back to society what is taken from society", Cleanaway continues to provide support and assistance in environmental education, public welfare and care, charity activities and life care, express sincere care for remote villages, communities, and disadvantaged groups, and initiate the warmest blessings and care with concrete actions.

In the aspect of humanistic care, we mainly invest our funds in "environmental education", "welfare for the elderly", "social welfare (for physically disabled, low-income groups, etc.)", "community involvement (neighborliness)", "donations to police and fire department", "sports promotion", and "emergency relief", and participate in the social inclusion by means of "teaching resources", "time contribution", "donations", and "public welfare activities". With the full support of the Company's senior management, we continue to expand and launch new public welfare programs. In 2022, the total humanistic care fund of Cleanaway was NT\$23,959,360, with a breakdown of various funds as shown in the figure below:



5.2.6 Share Good Food for Public Welfare and Build New Philosophy of Green Diet

Cleanaway attaches importance of food waste and the implementation of the "Green Diet" part of the national green life. In order to respond to the "cherish food" program, we joined the "Taiwan Share Association"; "Yu Chun" means "surplus" in Taiwanese, and we are very happy to share our own resources with others. Every year, Yang Chi-Chuan Foundation, an affiliate of Cleanaway, collects and donates the materials from the ceremonies of Qing-Ming Festival and Zhong-Yuan Festival to the disadvantaged groups or low-income households. In 2022, Yang Chi-Chuan Foundation donated 19 units with a total of 320 pieces of supplies; from 2020 to 2022, the Group's food donation program has already donated 48 units with a total of 908 pieces of supplies, and the numbers of donated units and donations are increasing year by year, which help alleviate the problem of leftovers and implement social welfare, and continuously promote the cycle of goodness.



5.2.7 Care for home safety of disadvantaged groups and donate one thousand residential fire alarms

Smoke is the number one killer of fire hazards, as it easily creates a visual masking effect, affects the speed of escape, and trapped people often suffocate or fall unconscious due to inhalation, which is often the main cause of death in fires.

In response to the "Smoke Detection of Houses in Kaohsiung" program launched by the Fire Department of Kaohsiung City Government, Cleanaway Group donated 1,000 residential fire alarms to the 5th Brigade of Fire Department, Kaohsiung City Government; the residential fire alarms are designed with built-in batteries and do not need to be wired, can be mounted independently on ceilings or walls, and can detect the smoke and heat from the fire at the first time, and emit a loud alarm to alert the It can detect the smoke and heat generated by the fire at the first time and send out a loud alarm to alert the occupants, so that people can put out the fire or escape in time before the fire spreads. We hope that our efforts could inspire enthusiastic people or enterprises from all walks of life to make donations, so that people will pay more attention to fire prevention in their homes, and through the installation of residential fire alarms, we can ensure that the disadvantaged groups in our jurisdiction could live a safe life in their homes.



5.2.8 Organize I IN Gangshan Charity Bazaar

March 19 is the anniversary of the death of Mr. Yang Chi-Chuan and Mrs. Yang Yao Ching-Chiang, parents of Yang Ching-Hsiang, Chairman of Cleanaway Group. Mr. Yang Chi-Chuan started his business in Gangshan in his early years. Upholding the philosophy of “giving back to society what is taken from society”, he had been giving back to the society and helping the disadvantaged groups. After his death, the Group established the “Yang Chi-Chuan Foundation” and organizes public welfare activities on this occasion every year in the hope of continuing his father’s spirit of benevolence and carrying it forward.

On March 19, 2022 (Sat.), the “I In Gangshan” charity bazaar was held, inviting more than 1,000 disadvantaged families and 600 physically and mentally disabled people from Gangshan, Yanchao, Luzhu, Alian, and Tianliao districts, and providing free charity vouchers to care for the local disadvantaged groups in a practical way, in the hope of assisting the small farmers who have been affected by the epidemic to revitalize their livelihoods. In addition, the Cleanaway environmental education team also set up a publicity booth to share our achievements in promoting environmental education with the public.



Appendix – GRI Standards Comparison Table

- **Statement of use:** Cleanaway has reported the ESG information for the period from January 1 to December 31, 2022 in accordance with the GRI Standards
- **Applicable GRI 1:** GRI 1: Foundation 2021
- **Applicable GRI Sector Standards:** Not applicable (not yet announced)

GRI Standards	Disclosure	Location in This Report	Page	Description of Omission	
				Disclosure Omitted	Reason and Explanation
GRI 2: General Disclosures 2021	2-1 Organizational details	1.4.1 About Cleanaway	16	-	-
	2-2 Entities included in the organization's sustainability reporting	About this Report	2	-	-
	2-3 Reporting period, frequency and contact point	About this Report	2	-	-
	2-4 Restatements of information	No information has been restated for Cleanaway in 2022		-	-
	2-5 External assurance	About this Report	2	-	-
	2-6 Activities, value chain and other business relationships	1.3 Sustainability Blueprint	9	-	-
		2.6 Sustainable Supply Chain	61	-	-
	2-7 Employees	4.1.1 Manpower Structure and Recruitment Plan	104	-	-
	2-8 Workers who are not employees	-	-	Total number of workers who are not employees	Due to the difficulty of data collection, the number of workers who are not employees is not yet available
	2-9 Governance structure and composition	2.1.1 Governance Structure	29	-	-
		2.1.2 Functional Committee	35	-	-
	2-10 Nomination and selection of the highest governance body	2.1.1 Governance Structure	29	-	-
	2-11 Chair of the highest governance body	2.1.1 Governance Structure	29	-	-
	2-12 Role of the highest governance body in overseeing the management of impacts	1.5.3 Material Issue Impact Management	26	-	-
		2.1.2 Functional Committee	35	-	-
2-13 Delegation of responsibility for managing impacts	1.5.3 Material Issue Impact Management	26	-	-	
	2.1.2 Functional Committee	35	-	-	
2-14 Role of the highest governance body in sustainability reporting	1.5.3 Material Issue Impact Management	26	-	-	
	2.1.2 Functional Committee	35	-	-	
2-15 Conflicts of interest	2.1.1 Governance Structure	29	-	-	

Continued

GRI Standards	Disclosure	Location in This Report	Page	Description of Omission	
				Disclosure Omitted	Reason and Explanation
GRI 2: General Disclosures 2021	2-16 Communication of critical concerns	2.1.1 治理架構	29	-	-
		2.1.2 Functional Committee	35	-	-
	2-17 Collective knowledge of the highest governance body	2.1.1 Governance Structure	29	-	-
	2-18 Evaluation of the performance of the highest governance body	2.1.1 Governance Structure	29	-	-
	2-19 Remuneration policies	2.1.1 Governance Structure	29	-	-
	2-20 Process to determine remuneration	2.1.2 Functional Committee	35	-	-
	2-21 Annual total compensation ratio	4.3.1 Equal and Favorable Remuneration	109	-	-
	2-22 Statement on sustainable development strategy	1.1.1 Message from Chairman	6	-	-
	2-23 Policy commitments	2.5.1 Ethical corporate management	56	-	-
		2.5.2 Human Rights Policy	58	-	-
	2-24 Embedding policy commitments	2.5.1 Ethical corporate management	56	-	-
		2.5.2 Human Rights Policy	58	-	-
	2-25 Processes to remediate negative impacts	1.5.3 Material Issue Impact Management	26	-	-
	2-26 Mechanisms for seeking advice and raising concerns	2.5.1 Ethical corporate management	56	-	-
		1.5.2 Human Rights Policy	23	-	-
	2-27 Compliance with laws and regulations	2.5.3 Compliance with laws and regulations	59	-	-
	2-28 Membership associations	2.5.4 Sustainability Associations	60	-	-
	2-29 Approach to stakeholder engagement	1.5.1 Type of Stakeholders and Communication	21	-	-
	2-30 Collective bargaining agreements	4.3.4 Provide labor-management communication channels	-	Collective bargaining agreements	Since the Company does not have a labor union, this disclosure is not applicable.
	GRI 3: Material Topics 2021	3-1 Process to determine material topics	1.5.1 Material Issues Evaluation Process	21	-
3-2 List of material topics		1.5.3 Material Issue Impact Management	26	-	-

- Disclosure of material topics

Material	GRI Standards	Disclosure	Location in This Report	Page	Description of Omission	
					Disclosure Omitted	Reason and Explanation
	GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	2.2.1 Economic Value	40	-	-
		201-2 Financial implications and other risks and opportunities due to climate change	2.3 Climate Change Risk Management TCFD	42	-	-
	GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	4.3.1 Equal and Favorable Remuneration	109	-	-
		202-2 Proportion of senior management hired from the local community	4.1.1 Manpower Structure	104	-	-
★	GRI 3: Material Topics 2021	3-3 Management of material topics	2.6.2 Supply Chain Structure	65	-	-
			2.6.3 Supply Chain Management Policy	67	-	-
			2.6.4 Supply Chain Audit Results	70	-	-
	GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	2.6.2 Supply Chain Structure	65	-	-
	GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	2.5.1 Ethical corporate management	56	-	-
★	GRI 3: Material Topics 2021	3-3 Management of material topics	2.6.1 Green Procurement for Raw Material Management	61	-	-
	GRI 301: Materials 2016	301-1 Materials used by weight or volume	2.6.1 Green Procurement for Raw Material Management	61	-	-
★	GRI 3: Material Topics 2021	3-3 Management of material topics	3.2.1 Energy Management and Conservation Programs	81	-	-
	GRI 302: Energy 2016	302-1 Energy consumption within the organization	3.2.2 Energy Consumption	83	-	-
		302-3 Energy intensity	3.2.2 Energy Consumption	83	-	-
★	GRI 303: Water and Effluents 2018	303-3 Water withdrawal	3.3 Water Resource Management	86	-	-
	GRI 3: Material Topics 2021	3-3 Management of material topics	3.1.1 Carbon Management Policy and Greenhouse Gas Inventory	72	-	-
	GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	3.1.1 Carbon Management Policy and Greenhouse Gas Inventory	72	-	-
		305-2 Energy indirect (Scope 2) GHG emissions	3.1.1 Carbon Management Policy and Greenhouse Gas Inventory	72	-	-
		305-3 Other indirect (Scope 3) GHG emissions	3.1.1 Carbon Management Policy and Greenhouse Gas Inventory	72	-	-
	305-4 GHG emissions intensity	3.1.1 Carbon Management Policy and Greenhouse Gas Inventory	72	-	-	

Continued

Material	GRI Standards	Disclosure	Location in This Report	Page	Description of Omission	
					Disclosure Omitted	Reason and Explanation
★	GRI 305: Emissions 2016	305-5 Reduction of GHG emissions	1.3.4 Replace Fuel Coal – Top-Comment’s Solid Recovered Fuel Turns Waste into Energy	12	-	-
		305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	3.1.3 Other Air Pollutants Emissions	80	-	-
★	GRI 3: Material Topics 2021	3-3 Management of material topics	3.4.1 Waste Impact Assessment	93	-	-
			3.4.2 Waste Management Policy	97	-	-
	GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	3.4.1 Waste Impact Assessment	93	-	-
		306-2 Management of significant waste-related impacts	3.4.1 Waste Impact Assessment	93	-	-
			3.4.2 Waste Management Policy	97	-	-
		306-3 Waste generated	3.4.3 Waste clearing, transport and disposal	98	-	-
		306-4 Waste diverted from disposal	3.4.3 Waste clearing, transport and disposal	98	-	-
306-5 Waste directed to disposal	3.4.3 Waste clearing, transport and disposal	98	-	-		
★	GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	2.6.3 Supply Chain Management Policy	67	-	-
			2.6.4 Supply Chain Audit Results	70	-	-
		308-2 Negative environmental impacts in the supply chain and actions taken	2.6.4 Supply Chain Audit Results	70	-	-
★	GRI 3: Material Topics 2021	3-3 Management of material topics	4.1.1 Manpower Structure and Recruitment Plan	104	-	-
★	GRI 401: Employment 2016	401-1 New employee hires and employee turnover	4.1.1 Manpower Structure and Recruitment Plan	104	-	-
		401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees.	4.3.3 Complete Welfare Measures	111	-	-
		401-3 Parental leave	4.3.3 Complete Welfare Measures	111	-	-
★	GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	4.4.1 Occupational Safety and Health Management	112	-	-
		403-2 Hazard identification, risk assessment, and incident investigation	4.4.1 Occupational Safety and Health Management	112	-	-
			4.4.2 Occupational Injuries and Diseases	119	-	-
		403-3 Occupational health services	4.4.1 Occupational Safety and Health Management	112	-	-
		403-4 Worker participation, consultation, and communication on occupational health and safety	4.4.1 Occupational Safety and Health Management	112	-	-
		403-5 Worker training on occupational health and safety	4.4.1 Occupational Safety and Health Management	112	-	-
403-6 Promotion of worker health	4.4.1 Occupational Safety and Health Management	112	-	-		

Continued

Material	GRI Standards	Disclosure	Location in This Report	Page	Description of Omission	
					Disclosure Omitted	Reason and Explanation
	GRI 403: Occupational Health and Safety 2018	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4.4.1 Occupational Safety and Health Management	112	-	-
		403-8 Workers covered by an occupational health and safety management system	4.4.1 Occupational Safety and Health Management	112	-	-
		403-9 Work-related injuries	4.4.2 Occupational Injuries and Diseases	119	Working hours of all workers who are not employees but whose work and/or workplace is controlled by the organization	Due to the difficulty of data collection, the number of workers who are not employees is not yet available
		403-10 Work-related ill health	4.4.2 Occupational Injuries and Diseases	119		
	GRI 3: Material Topics 2021	3-3 Management of material topics	4.2.1 Talents Cultivation and Performance Assessment	107	-	-
★	GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	4.2.1 Talents Cultivation and Performance Assessment	107	-	-
		404-2 Programs for upgrading employee skills and transition assistance	4.2.1 Talents Cultivation and Performance Assessment	107	-	-
		404-3 Percentage of employees receiving regular performance and career development reviews	4.2.1 Talents Cultivation and Performance Assessment	107	-	-
	GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	2.1.1 Governance Structure	29	-	-
		405-2 Ratio of basic salary and remuneration of women to men	4.1.1 Manpower Structure and Recruitment Plan	104	-	-
★	GRI 3: Material Topics 2021	3-3 Management of material topics	5.1.1 Social Inclusion Goals and Strategies	122	-	-
	GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	5.2 Social Engagement Achievements	123	-	-
	GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	2.6.3 Supply Chain Management Policy	67	-	-
		414-2 Negative social impacts in the supply chain and actions taken	2.6.4 Supply Chain Audit Results	70	-	-
	GRI 3: Material Topics 2021	3-3 Management of material topics	1.3.1 Sustainability Strategy and Layout Blueprint	9	-	-
★	Custom Topics	Green Investment	1.3.3 Practice Low Carbon and Net Zero – The Group's Green Energy Investments	11	-	-
		Circular Economy	1.3.4 Replace Fuel Coal – Top-Comment's Solid Recovered Fuel Turns Waste into Energy	12	-	-
			1.3.5 Expand Diversified Green Products – Research and Development of Recycled Pellets	13	-	-

Appendix – SASB Standards Comparison Table

- **Statement of use:** Cleanaway has reported the ESG information for the period from January 1 to December 31, 2022 in accordance with the SASB Standards
- **SASB Sector:** Waste Management (IF-WM)

Disclosure Topic	Index Type	SASB Index Number	Disclosure	Nature	Quantity	Unit	Location in This Report	Page
Greenhouse Gases	Accounting index	IF-WM-110a.1	Under the emission limitation and emission reporting regulations: Scope 1 emissions, Scope 1 emission ratio	Quantitative analysis	9,153.394; 26.1%	Metric tons of carbon dioxide equivalent (tCO ₂ -e); Percentage (%)	3.1.1 Carbon Management Policy and Greenhouse Gas Inventory	72
		IF-WM-110a.2	Amount of buried biogas generated	Quantitative analysis	718.061 (Converted from 757.593 GJ)	Million British Thermal Units (MMBtu)	3.2.2 Energy Consumption	83
			Biogas combustion ratio	Quantitative analysis	100	Percentage (%)	-	-
			Percentage of biogas used as energy	Quantitative analysis	100	Percentage (%)	-	-
		IF-WM-110a.3	Long- and short-term strategies or management plans for Scope 1, life-cycle emissions and emission reduction targets, as well as performance analysis of related targets	Description and Analysis	-	-	3.1 Carbon Management and Carbon Reduction Program	72
						3.2 Energy Governance and Conservation	81	
Fuel management of clearing and transport vehicles	Accounting index	IF-WM-110b.1	Fuel consumption	Quantitative analysis	15,519.389	Gigajoules (GJ)	3.2.2 Energy Consumption	83
			Percentage of natural gas consumption	Quantitative analysis	0	Percentage (%)	3.2.2 Energy Consumption	83
			Percentage of renewable energy consumption	Quantitative analysis	0	Percentage (%)	3.2.2 Energy Consumption	83
		IF-WM-110b.2	Percentage of vehicles using alternative fuels	Quantitative analysis	0	Percentage (%)	-	-
Air Quality	Accounting index	IF-WM-120a.1	NOx (excluding N ₂ O) emissions	Quantitative analysis	39.072	Metric tons (t)	3.1.3 Other Air Pollutants Emissions	80
			SOx emissions	Quantitative analysis	4.179	Metric tons (t)	3.1.3 Other Air Pollutants Emissions	80
			VOCs emissions	Quantitative analysis	Not generated during the reporting period	Metric tons (t)	-	-
			HAPs emissions	Quantitative analysis	Not generated during the reporting period	Metric tons (t)	-	-
		IF-WM-120a.2	Number of plants located in or near densely populated areas	Quantitative analysis	Not generated during the reporting period	Quantity	-	-
		IF-WM-120a.3	Number of violations related to air emissions	Quantitative analysis	No violation during the reporting period	Quantity	2.5.3 Compliance with laws and regulations	59

Continued

Disclosure Topic	Index Type	SASB Index Number	Disclosure	Nature	Quantity	Unit	Location in This Report	Page
Management of waste water seepage and hazardous waste	Accounting index	IF-WM-150a.1	1. Release amount of Toxic Release Inventory (TRI) related substances 2. Percentage of discharging into water	Quantitative analysis	-	Metric tons (t); Percentage (%)	-	-
		IF-WM-150a.2	Number of improvement measures for substances released from landfill	Quantitative analysis	-	Quantity	-	-
		IF-WM-150a.3	Number of violations related to environmental impacts	Quantitative analysis	-	Quantity	-	-
Labor Practices	Accounting index	IF-WM-310a.1	Percentage of labor force protected by collective bargaining agreements	Quantitative analysis	Not recorded during the reporting period	Percentage (%)	4.3.4 Provide labor-management communication channels	111
		IF-WM-310a.2	Number of workers affected by lockout; number of idle days	Quantitative analysis	No lockout during the reporting period	Quantity; number of days	4.4.2 Occupational Injuries and Diseases	119
Health and safety of workers	Accounting index	IF-WM-320a.1	Recordable incident rate	Quantitative analysis	17.7%	Rate	4.4.2 Occupational Injuries and Diseases	119
			Death rate	Quantitative analysis	0%	Rate	4.4.2 Occupational Injuries and Diseases	119
		IF-WM-320a.2	False alarm incident rate	Quantitative analysis	Not recorded during the reporting period	Rate	-	-
			Basic percentage of safety management system: 1. Unsafe Driving 2. Working Hour Compliance 3. Driver Adaptability 4. Controlled Substances/Drinking 5. Vehicle Maintenance 6. Hazardous Substance Compliance	Quantitative analysis	Not recorded during the reporting period	Percentile	-	-
IF-WM-320a.3	Number of road traffic accidents	Quantitative analysis	0	Quantity	4.4.2 Occupational Injuries and Diseases	119		
Resources Recovery	Accounting index	IF-WM-420a.1	Weight of incinerated waste	Quantitative analysis	579.892	Metric tons (t);	3.4.3 Waste clearing, transport and disposal	98
			Percentage of hazardous waste incinerated	Quantitative analysis	0.016	Percentage (%)	3.4.3 Waste clearing, transport and disposal	98
			Percentage of incineration (including energy recovery)	Quantitative analysis	0	Percentage (%)	3.4.3 Waste clearing, transport and disposal	98
		IF-WM-420a.2	By customer type: 1. Percentage of customers accepting recycling 2. Percentage of customers accepting composting service	Quantitative analysis	Not recorded during the reporting period	Percentage (%)	-	-

Continued

Disclosure Topic	Index Type	SASB Index Number	Disclosure	Nature	Quantity	Unit	Location in This Report	Page
Resources Recovery	Accounting index	IF-WM-420a.3	Amount of Resources Recovered	Quantitative analysis	1,559.31 (Volume diverted from disposal)	Metric tons (t)	3.4.3 Waste clearing, transport and disposal	98
			Composting volume	Quantitative analysis	No waste was used for composting during the reporting period	Metric tons (t)	-	-
			Amount of waste converted to energy	Quantitative analysis	0 (Incineration – including energy recovery)	Metric tons (t)	3.4.3 Waste clearing, transport and disposal	98
		IF-WM-420a.4	Weight of electronic waste collected and percentage recovered	Quantitative analysis	Investigation shows that no electronic waste is generated at any location, so it is not calculated	Metric tons (t); Percentage (%)	-	-
	Accounting index	IF-WM-000.A	Number of customers by category: 1. Municipal 2. Commercial 3. Industrial 4. Residential 5. Others	Quantitative analysis	According to Cleanaway's business model, the customer category is not divided	Quantity	-	-
		IF-WM-000.B	Fleet size	Quantitative analysis	Fleet quantity was not recorded during the reporting period	Quantity	-	-
		IF-WM-000.C	Quantities of the following types of equipment: 1. Landfill sites 2. Waste Transfer Station 3. Recycling centers 4. Composting centers 5. Incinerators 6. Other Facilities	Quantitative analysis	1. There are 4 landfill sites: Da Ning, Chi Wei, Da Tsang, and Cleanaway Enterprise (Da Tsang and Cleanaway Enterprise have been closed) 2. Other facilities include a solidification plant	Quantity	-	-
		IF-WM-000.D	Volume managed by customer category: 1. Municipal 2. Commercial 3. Industrial 4. Residential 5. Others	Quantitative analysis	According to Cleanaway's business model, the customer category is not divided	Metric tons (t)	-	-

- SASB Sector: Pulp Paper Products (RR-PP)

Disclosure Topic	Index Type	SASB Index Number	Disclosure	Nature	Quantity	Unit	Location in This Report	Page
Greenhouse Gas Emissions	Accounting index	RR-PP-110a.1	Total Global Emissions under Scope 1	Quantitative analysis	9,153.394	Metric tons of carbon dioxide equivalent (tCO ₂ -e); Percentage (%)	3.1.1 Carbon Management Policy and Greenhouse Gas Inventory	72
		RR-PP-110a.2	Long-term and short-term strategies or plans for Scope 1 emissions management, description of reduction targets, and analysis of target performance	Description and Analysis	-	-	3.1 Sustainability Strategy and Layout Blueprint 3.1.2 Greenhouse Gas Reduction Strategy	42 76
Air Quality	Accounting index	RR-PP-120a.1	NOx (excluding N ₂ O) emissions	Quantitative analysis	39.072	Metric tons (t)	3.1.3 Other Air Pollutants Emissions	80
			SOx emissions	Quantitative analysis	4.179	Metric tons (t)	3.1.3 Other Air Pollutants Emissions	80
			PM emissions	Quantitative analysis	1.936	Metric tons (t)	3.1.3 Other Air Pollutants Emissions	80
			VOCs emissions	Quantitative analysis	None during reporting period	Metric tons (t)	-	-
			HAPs emissions	Quantitative analysis	None during reporting period	Metric tons (t)	-	-
Energy Management	Accounting index	RR-PP-130a.1	Total Energy Consumption	Quantitative analysis	6,893,957.286	Gigajoules (GJ)	3.2.2 Energy Consumption and Conservation Programs	83
			Percentage of electricity use from grid-supplied sources	Quantitative analysis	100	Percentage (%)	3.2.2 Energy Consumption and Conservation Programs	83
			Percentage of Biomass Energy	Quantitative analysis	0	Percentage (%)	3.2.2 Energy Consumption and Conservation Programs	83
			Percentage of Renewable Energy	Quantitative analysis	0.01	Percentage (%)	3.2.2 Energy Consumption and Conservation Programs	83
Water Resource Management	Accounting index	RR-PP-140a.1	Total Water Withdrawal	Quantitative analysis	657.917	Thousand cubic meters (M ³)	3.2.2 Energy Consumption and Conservation Programs	90
			Total water consumption, percentage in areas with high or very high water pressure	Quantitative analysis	0	Percentage (%)	3.2.2 Energy Consumption and Conservation Programs	90
		RR-PP-140a.2	Water management risks and corresponding strategies and management policies	Description and Analysis	-	-	3.3.1 Water Resource Impact Assessment	86
Supply Chain Management	Accounting index	RR-PP-430a.1	Percentage of wood fiber in third-party certified forest and percentage of each standard	Quantitative analysis	Not counted during reporting period	Percentage (%)	2.6.1 Green Procurement for Raw Material Management	61
			Compliance with other fiber source standards and percentage of each standard	Quantitative analysis	100%	Percentage (%)	2.6.1 Green Procurement for Raw Material Management	61
		RR-PP-430a.2	Amount of recycled and regenerated fiber purchased	Quantitative analysis	0	Air-dried metric tons (t)	2.6.1 Green Procurement for Raw Material Management	61
-	Activity Index	RR-PP-000.A	Pulp Production	Quantitative analysis	Not counted during reporting period	Air-dried metric tons (t)	2.6.1 Green Procurement for Raw Material Management	61
		RR-PP-000.B	Paper Production	Quantitative analysis	Not counted during reporting period	Air-dried metric tons (t)	2.6.1 Green Procurement for Raw Material Management	61
		RR-PP-000.C	Volume of all wood fiber obtained	Quantitative analysis	0	Air-dried metric tons (t)	2.6.1 Green Procurement for Raw Material Management	61

Limited Assurance Report of CPAs



會計師有限確信報告

可寧衛股份有限公司 公鑒：

本事務所受可寧衛股份有限公司（以下稱「貴公司」）之委任，就 貴公司選定 2022 年度永續報告書所報導之績效指標執行確信程序。本會計師業已確信竣事，並依據結果出具有限確信報告。

確信標的資訊與適用基準

有關 貴公司選定 2022 年度永續報告書所報導之績效指標（以下稱「確信標的資訊」）及其適用基準詳列於 貴公司 2022 年度永續報告書之「確信項目彙總表」。前述確信標的資訊之報導範圍業於永續報告書之「報告書邊界與範疇」段落述明。

上開適用基準係為全球永續性報告協會（Global Reporting Initiatives，簡稱 GRI）發布之全球永續性報告編製準則（GRI Standards，簡稱 GRI 準則），以及 貴公司依行業特性與其所選定之關鍵績效指標參採其他基準。

管理階層之責任

貴公司管理階層之責任係依照適當基準編製永續報告書所報導之績效指標，且維持與績效指標編製有關之必要內部控制，以確保績效指標未存有導因於舞弊或錯誤之重大不實表達。

會計師之責任

本會計師係依照確信準則 3000 號（TWSAE3000）「非屬歷史性財務資訊查核或核閱之確信案件」，對確信標的資訊執行確信工作，以發現前述資訊是否存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。

本會計師依照上述準則所執行之有限確信工作，包括辨認確信標的資訊可能發生重大不實表達之領域，以及針對前述領域設計及執行程序。因有限確信案件取得之確信程度明顯低於合理確信案件取得者，就有限確信案件所執行程序之性質及時間與適用於合理確信案件者不同，其範圍亦較小。

青山永續聯合會計師事務所
GREEN MOUNTAIN SUSTAINABILITY UNITED ACCOUNTING FIRM



本會計師係依據所評估之風險領域及重大性以決定實際執行確信工作之範圍，並依據本委任案件之特定情況設計及執行下列確信程序：

- 對參與編製確信標的資訊之相關人員進行訪談，以瞭解編製前述資訊之流程、所應用之資訊系統，以及攸關之內部控制，以辨認重大不實表達之領域。
- 自可寧衛或是其主要利害關係人之訊息管理系統或外部來源，以獲取用於編制非財務指標的原始定量或是定性佐證。
- 基於對上述事項之瞭解及所辨認之領域，對確信標的資訊選取樣本進行查詢、觀察、檢查及重新執行測試，以取得有限確信之證據。
- 透過測試的方式驗證可寧衛主要利害關係人所提供之非財務指標的樣本，並檢查是否根據主要利害關係人之來源進行編制。
- 自可寧衛之管理階層獲得客戶聲明書。

此報告不對 2022 年度永續報告書整體及其相關內部控制設計或執行之有效性提供任何確信。

會計師之獨立性及品質管制規範

本會計師及本事務所已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、專業能力及盡專業上應有之注意、保密及專業態度。

本事務所適用品質管制準則 1 號（TWSQC1）「會計師事務所之品質管制」，因此維持完備之品質管制制度，包含與遵循職業道德規範、專業準則及所適用法令相關之書面政策及程序。

先天限制

本案諸多確信項目涉及非財務資訊，相較於財務資訊之確信受有更多先天性之限制。對於資料之相關性、重大性及正確性等之質性解釋，則更取決於個別之假設與判斷。

有限確信結論

依據所執行之程序與所獲取之證據，本會計師並未發現確信標的資訊在所有重大方面未依適用基準編製而須作修正之情事。

青山永續聯合會計師事務所
GREEN MOUNTAIN SUSTAINABILITY UNITED ACCOUNTING FIRM



其它事項

貴公司網站之維護係 貴公司管理階層之責任，對於確信報告於 貴公司網站公告後任何確信標的資訊或適用基準之變更，本會計師將不負就該等資訊重新執行確信工作之責任。

青山永續聯合會計師事務所

會計師 吳佳鴻



2023 年 7 月 31 日

青山永續聯合會計師事務所
GREEN MOUNTAIN SUSTAINABILITY UNITED ACCOUNTING FIRM



附件一、確信項目彙總表

編號	確信標的資訊	確信基準	頁碼																								
1	引用 (reference) 全球永續性報告協會 (Global Reporting Initiative, 簡稱 GRI) 所頒布之 GRI 準則 (GRI Standards)。	本報告書之架構係依據 GRI 1：基礎 2021 之九項要求、 GRI 2：一般揭露 2021 之揭露要求、 GRI 3：重大主題 (Materiality) 之編制流程要求。	2																								
2	本公司 2022 年共違反 0 件環境法規、0 件社會法規、0 件治理與經濟法規及 0 件產品與服務法規，相較於 2021 年分別減少 3 件、0 件、0 及 0 件。 2022 年違反法規罰鍰統整表 <table border="1"> <thead> <tr> <th colspan="3">罰鍰支付狀況</th> <th>件數</th> <th>金額</th> </tr> </thead> <tbody> <tr> <td>先前年度應支付罰鍰</td> <td>0</td> <td>0</td> <td></td> <td></td> </tr> <tr> <td rowspan="2">2022</td> <td>新增之罰鍰</td> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>支付之罰鍰</td> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td colspan="2">年底應計罰鍰</td> <td>0</td> <td>0</td> <td></td> </tr> </tbody> </table> 註：本表以違規事實遭裁罰處新台幣十萬元以上之裁罰案件進行揭露。 2022 年因再承攬商之過失或故意而受裁罰統整表 違反法規 因施工期間未遵守契約規定且缺失重複累犯，違反「高雄市政府工務局新建工程處興建公共工程工地環境管理及施工安全罰則」及「高雄市政府工務局新建工程處安全衛生自主管理機制要點」，共計裁罰 3 次，罰鍰金額分別為 \$219,000、\$228,000、\$114,000。 後續改善措施 1. 定期辦理教育訓練宣導會，發函通知各承攬商參加，藉此加強各員之職安觀念。 2. 請各級職安主管加強監督及巡察頻率，以有效督促作業人員在作業時遵守相關規定。 3. 各類作業項目需提前提出，先	罰鍰支付狀況			件數	金額	先前年度應支付罰鍰	0	0			2022	新增之罰鍰	0	0		支付之罰鍰	0	0		年底應計罰鍰		0	0		係依據 GRI 2-27 法規遵循之報導要求。因再承攬商違反「高雄市政府工務局新建工程處興建公共工程工地環境管理及施工安全罰則」，及「高雄市政府工務局新建工程處安全衛生自主管理機制要點」，主管機關來函處以罰鍰之件數及金額。	59-60
罰鍰支付狀況			件數	金額																							
先前年度應支付罰鍰	0	0																									
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編號	確信標的資訊	確信基準	頁碼																								
	經職安人員進行風險評估與規劃後，於作業前進行危害告知，確保施工人員的身心安全健康。 註：本表以違規事實遭裁罰處新台幣十萬元以上之裁罰案件進行揭露，且因再承攬商之過失或故意而受裁罰之罰鍰，已代位向再承攬商要求償付，故於財務上並不受影響。																										
3	2022 年可穿衛總取水量為 657.917 百萬公升。 <table border="1"> <thead> <tr> <th rowspan="2">取水來源類別</th> <th rowspan="2">水質指標</th> <th colspan="2">2022</th> </tr> <tr> <th>所有地區</th> <th>具水資源壓力地區</th> </tr> </thead> <tbody> <tr> <td rowspan="2">地表水</td> <td>淡水</td> <td>0</td> <td>0</td> </tr> <tr> <td>其他的水</td> <td>37.011</td> <td>0</td> </tr> <tr> <td rowspan="2">第三方的水</td> <td>淡水</td> <td>620.906</td> <td>0</td> </tr> <tr> <td>其他的水</td> <td>0</td> <td>0</td> </tr> <tr> <td colspan="2">總取水量</td> <td>657.917</td> <td>0</td> </tr> </tbody> </table>	取水來源類別	水質指標	2022		所有地區	具水資源壓力地區	地表水	淡水	0	0	其他的水	37.011	0	第三方的水	淡水	620.906	0	其他的水	0	0	總取水量		657.917	0	第三方的水之淡水取水量係依據 GRI 303-3 取水量之報導要求，並依據外部供應商水費通知單之實用水量，及行政院環境保護署環境保護許可管理資訊系統 (EMS) 申報書之自來水申報量。 地表水之其他的水取水量係依據內部每日蓄洪池暨自來水用水量紀錄表，及雨水用於綠帶澆灌之估算方式推算得出。 (註) 估算方法係依據經濟部「用水計畫書審查作業要點」所規定之每公頃澆灌用水量，乘上大專與吉衛之綠地面積，再乘上可穿衛氣象站統計未下雨天數，推算得出取水量。	90
取水來源類別	水質指標			2022																							
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項目	2022																										
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編號	確信標的資訊	確信基準	頁碼																															
5	總排水量為 497.569 百萬公升。 <table border="1"> <thead> <tr> <th rowspan="2">排水終點類別</th> <th rowspan="2">水質指標</th> <th colspan="2">2022</th> </tr> <tr> <th>所有地區</th> <th>具水資源壓力地區</th> </tr> </thead> <tbody> <tr> <td rowspan="2">地表水</td> <td>淡水</td> <td>486.603</td> <td>0</td> </tr> <tr> <td>其他的水</td> <td>0</td> <td>0</td> </tr> <tr> <td rowspan="2">海水</td> <td>淡水</td> <td>0</td> <td>0</td> </tr> <tr> <td>其他的水</td> <td>0</td> <td>0</td> </tr> <tr> <td rowspan="2">第三方的水</td> <td>淡水</td> <td>0</td> <td>0</td> </tr> <tr> <td>其他的水</td> <td>10.966</td> <td>0</td> </tr> <tr> <td colspan="2">總排水量</td> <td>497.569</td> <td>0</td> </tr> </tbody> </table>	排水終點類別	水質指標	2022		所有地區	具水資源壓力地區	地表水	淡水	486.603	0	其他的水	0	0	海水	淡水	0	0	其他的水	0	0	第三方的水	淡水	0	0	其他的水	10.966	0	總排水量		497.569	0	總排放量係依據 GRI 303-4 排水量之報導要求，並依據「水污染防治措施及檢測申報管理辦法」之規定處理污水。 地表水之淡水排放量係依據行政院環境保護署(污)水排放地面水體申報表之申報水量。 第三方水之其他的水排放量係依據總部用水量之一定比例進行估算。	90-91
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