

CH 06

Creating a Sustainable Planet

Contribution towards UN SDGs



Reduced **6,467.4** tons

iLove Food reduced food waste by 6,467.4 metric tons in 2021

Reduced **117.06** tons

The amount of plastics used in packaging materials reduced by 1.2% compared to 2020 with a total of 117.06 metric tons



Reduced **1.4%**

Scope 1 and Scope 2 emissions reduced by 1.4% in 2021 compared to 2020

Reduced **3%**

The EUI in the stores was reduced by 3% compared with 2020

Corresponding Material Topics

Climate Change
Packaging Material Management
Food Waste and Waste Management

Corresponding Stakeholders

Suppliers	NGOs
Employees	Government Agencies
Franchisees	Local Communities

Objectives

Policies

Dedicated Units

Action Plans

Grievance Mechanisms

At present, various environmental issues such as climate change, plastic pollution, food waste and scarcity of resources are closely related to sustainable corporate operations. Effectively adopting green operations, optimizing resource efficiency, and realizing environmental sustainability are important parts in PCSC's overall operating value chain. As the leader in convenience stores, we hope to strike a balance between convenience and environmental impact by being committed to reducing the negative impact of plastics, food waste and waste in our operations, as well as actively improving our ability to address climate change issues.

- Environmental Policy
 Energy Policy
- GHG Policy
 Packaging Material Management

- Carbon Reduction Task Force (Energy conservation and carbon reduction actions for stores, headquarters building and affiliated logistics companies)
- Plastic Reduction Task Force (plastic reduction measures for store supplies and fresh food manufacturers)
- Food Waste Management Task Force (food waste reduction and management)
- Operation Planning Department (store waste management), Administration Team (waste management for the headquarters building), Logistics Planning Team (store recycling management through reverse logistics), Engineering Technology Department (refurbishment and reuse of store equipment)

- Inventory and management of environmental information (GHG inventory, packaging material data, waste removal and food waste tracking)
- Energy-saving and carbon reduction actions for own operations and value chain energy
- Planning and execution of plastic reduction actions (single-use plastic reduction, expansion of recycling mechanism, circular economy cooperation)
- Food waste management (reduce the scrap rate of fresh food, improve the management mechanism of the manufacturers, improve the recovery rate of food waste, iLove Food measures)
- 3R's of waste management (setting up a convenient recycling platform in stores, refurbishment and reuse of store equipment)

Hotline (0800-008-711)
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6.1 Environmental Management

Policy and Commitment

To realize the vision of green operations, PCSC has formulated "Environmental Policy", "Energy Policy", and "GHG Policy" as the guiding principles for the Group's actions on environmental issues. Short-, medium- and long-term targets have been set based on this foundation (please refer to 1.5 Process Management of Sustainable Targets for details) to incorporate the concept of environmental sustainability into all aspects of the value chain. 2021 was declared as the "Year One of Sustainability" for PCSC to expand plastic reduction, carbon reduction, and food waste reduction strategies and realize sustainability in our operations and business model, making green consumption a part of daily life.

• Environmental Policy

PCSC is dedicated to becoming the best retailer, providing the most convenient lifestyle services, and fulfilling our responsibilities as a corporate citizen. To this end, four task forces of "Plastic Reduction," "Carbon Reduction," "Food Waste Reduction" and "Sustainable Procurement" under the Environmental Group of the Sustainable Development Committee have been organized to take charge of ESG policies, systems, or management approaches, as well as proposing and formulating concrete action plans regarding various environmental aspects. Our commitments are as follows:

- ✔ We comply with environmental protection laws and regulations and prohibit any behavior that may harm the environment.
- ✔ We continue to improve our environmental performance as well as our surrounding environmental quality.
- ✔ We cherish resources and increase recycling and reuse based on the principle of making the most out of resources.
- ✔ We endeavor to reduce the amount of waste based on the concept of pollution prevention.
- ✔ With consideration to the environmental impact of our products and services in each phase of the life cycle from R&D, design, manufacturing, packaging to delivery, we reduce resource consumption and increase the efficiency of resource use.
- ✔ We gradually build up an eco-friendly value chain, and take environmental aspects into consideration when selecting suppliers, developing new projects, and making merge and acquisition decisions.
- ✔ We care about community development and manage sustainable relationships with local communities.
- ✔ In terms of promoting environmental education, we continue to share environmental protection concepts with employees and customers, as well as taking actions to protect the environment together.

• Energy Policy

As we strive to meet customer needs, we have made energy conservation and carbon reduction actions a core value of our business strategy. We use our stores as a base for energy conservation and carbon reduction by maximizing our retail channel's advantages. We also exert our influence through the benefits of energy conservation.



Our Commitments

- We comply with the government's energy laws and regulations and continue to make energy improvements.**
- We expand stores with energy saving designs and develop and sell energy-efficient products.**
- We optimize our energy use to achieve sustainable corporate development.**

• GHG Policy

As a member of the global village, PCSC lays great emphasis on the use of energy and resources, as well as the environmental impacts. To fulfill our corporate responsibilities, we control and manage GHG emissions. We further promote energy-saving and carbon-reduction plans based on the result of the inventory, with a view to reducing GHG emissions and contributing to the environment.

Communications and Incentives

PCSC shares ideas with store employees by integrating policy with practice through a variety of campaigns, online courses and education and training, helping each employee incorporate environmental management in their daily lives. PCSC launched a digital course on plastic reduction in April 2021, helping employees and franchisees understand PCSC's sustainable action plans with a total of 15,735 participants. In 2021, a total of 34,218 attendance reached for store employees completed the campaigns and courses in environmental protection. The participants include employees of directly operated stores and franchisees with a total of 12,385 hours.

Environmental Protection Campaigns or Courses in 2021



To encourage employees to actively manage energy use in stores, PCSC has formulated an energy conservation incentive scheme for stores, which incorporates the effectiveness of demand charge management of newly opened and renovated stores, power consumption management of existing stores, and energy conservation improvements into individual, store and regional engineering performance appraisal items. Rewards are given to those who spot abnormality in store electricity bills. Since 2020, store energy saving has become a regional engineering evaluation item. The top 3 stores from each quarter received a group bonus of NT\$1,000, with a total of NT\$12,000 handed out in 2021. Additionally, a bonus of NT\$4,400 is given for recovery of abnormal electricity charges in stores. By the end of 2021, we have handed out a total of NT\$24,000 in group bonus for regional engineering evaluation and a total of NT\$9,845 in individual bonus for recovered abnormal electricity charges.

In addition to internal store staff training, PCSC continues to launch various sustainable initiatives to integrate sustainable actions into consumer behaviors. This includes not offering disposable cutlery in the stores, recycling plastic packaging for discount, cash back for trading in waste batteries and electronic appliances, double points for plastic reduction products and so forth. In addition, we integrate the "Good Neighbors O2O Funfest" with raising environmental awareness and teach children about recycling, extending plastic reduction actions from 7-ELEVEN stores to everyone's home. To this end, several online activities have been organized, including the "Super Positive Quotes," "Raise Your Hand if You Love the Earth" social media campaign with the hopes of encouraging consumers of all ages to support eco-friendly actions through various channels such as stores, online and offline, making sustainability a part of everyone's daily life.

Water Resource Management

Water supply and quality have a direct or indirect impact on the business model of chain convenience stores regarding the products and services we provide to consumers. Especially in areas where water resources are scarce, PCSC attaches great importance to mitigating the impact of the operations on the local water resources in its overall operating value chain. All operating sites of PCSC use tap water. Besides freshly prepared beverages, store cleaning consumes the largest share of water. In the future, the stores plan to reuse RO (reverse osmosis) residual water. The residual water wasted in the RO filtration process will be taken out from the drainage pipeline and connected to the water tower, which can be used for the faucet, building cleaning and bathroom flushing.

After analyzing the correlation between operating activities and water consumption of stores, we deducted the water used for beverages as the base for managing store water consumption. Taking 2019 as the base year, PCSC promises to reduce the water consumption of each store by 1% (after deducting the water used to freshly prepared beverages). By 2025, the water consumption should be reduced by 5% compared to the base year. The average water consumption per store in 2021 was 368 (unit/number of stores), a decrease of 18.3% compared with the base year. In addition to PCSC's attempt of reducing in-store water consumption, the amount was drastically reduced as some stores were closed from 7 to 100 days in 2021 due to the pandemic. In the future, we will continue to track the changes in water consumption as a reference for future target setting and water management.

Although the headquarters building accounts for a relatively small amount of water consumption, we set an example by closely monitoring the annual water consumption as an internal management metric, as well as reducing water consumption through water-saving actions. For example, we introduced a device to reduce the amount of water coming out of the taps in restrooms and coffee rooms, as well as installing water-saving devices at the urinals, adjusting the optimal water output of the toilets, reducing the frequency of sprinklers and so on.

6.2 Packaging Material Management

Policy and Commitments

Plastic reduction has become a trend in recent years. Although the global plastic reduction agenda has been delayed due to the global pandemic, the stakeholders remain concerned with the issue. Since plastic is one of the most common choices among packaging materials in retail industry with its durability and low costs of plastic, the society has been closely examined the use of plastics in packaging and packaging materials at supermarkets, convenience stores and hypermarkets that are closely related to everyday lives. To consolidate sustainable operations, we hope to achieve a balance between convenience and environmental impacts by committing to reducing plastic pollution in our own operations. In 2020, PCSC officially set up the Plastic Reduction Task Force, while formulating a series of management policies for the packaging materials of private-label products. This sets up a top-down plastic-reduction and environmental-friendly business model, starting from our private-label and combining various operational strategies for products, services, logistics and e-commerce, in order to achieve the vision of eliminating single-use plastic in its operations by 2050. For detailed plastic reduction schedule and the 2021 progress, please refer to 1.5 Process Management of Sustainable Targets.

The procurement of eco-friendly, certified packaging materials and lightweight packaging should be prioritized in consideration of environmental and ecology protection, while achieving sustainable operations. A target for packaging reduction for private-label products has also been set.

To reduce the amount of single-use plastic at the source, as well as encouraging the consumers to use more reusable packaging materials (or containers), the stores do not voluntarily provide customers with straws. A reward is also given for consumers who use their own cups for freshly prepared drinks.

- FSC certified packaging materials has been introduced to refrigerated beverages, with the proportion increasing year by year.
- The packaging materials such as cup sleeves and cup holders for freshly prepared drinks partially adopt recycled materials.
- PCSC has set up Plastic Reduction Task Force as an internal cross-functional team to consolidate the company's efforts in plastic reduction. By combining the power of internal employees and external suppliers, Plastic Reduction Task Force promotes packaging plastic reduction strategies, objectives, and action plans, while holding regular meetings to ensure the progress of each objective. The task force consumes about NT\$2.5 million each year in manpower and testing resources, such as task force operations, R&D, testing costs in manpower and raw materials.

Plastic Reduction Task Force	Missions
Coffee Division	Packaging reduction for freshly prepared beverages, introduction of reusable cups
Fresh Food Division	Fresh food packaging
Product Division	Development and positioning of own-brand products, cost management of packaging materials and raw materials
Supply Chain Management Division	Collaboration and communications with own brand suppliers, development of alternative materials
Operations Division	Optimize the in-store recycling mechanism and build store employees' awareness of plastic reduction
Procurement Division	Procurement of store supplies and development of alternative materials
Public Affairs Division	Internal and external communications
Human Resources Division	Plastic reduction education and training

Statistics of Packaging Material Consumption

PCSC divides plastic packaging and packaging materials into reusable plastics, compostable or degradable plastics or recyclable plastics, and single-use plastics, before calculating the amount of plastic used in each stage and aspect from the two dimensions of product life cycle and types of services. The results are used for performance review and goal tracking, as well as formulating the corresponding plastic reduction action plans. The total consumption of plastics for packaging materials in 2021 was 9,921.42 metric tons, a decrease of 1.2% compared with 2020, of which the proportion of single-use plastics was 20.9%. We will continue to reduce the consumption of single-use plastics, moving towards the target of consuming less than 20% of single-use plastic by 2023.

Note 1: The EPA defines recyclable plastics as PET, PVC, PE, PP, PS, unexpandable PS and others. If the material itself is recyclable without having obtained the recycling label from the EPA, or if it cannot be properly recycled in the current waste disposal system, it is not considered as recyclable.

Note 2: Even if the garbage bags in the stores are made of recycled materials, they are still considered as disposable.

Reusable plastics

Packaging that can be refilled or reused for the same purpose without ancillary products

Compostable/ degradable plastics

Compostable and technically recyclable plastic packaging has been developed

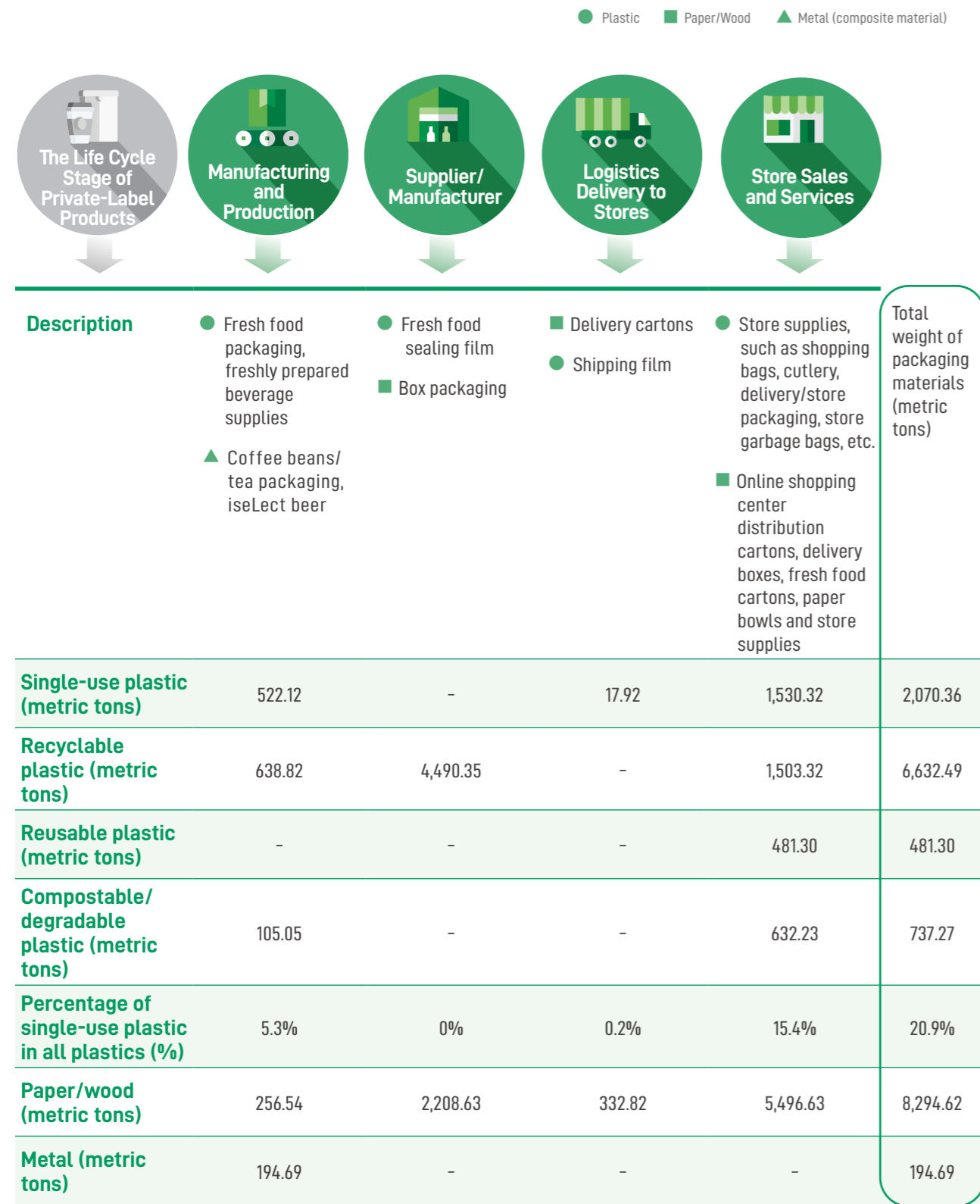
Recyclable plastics

Recyclable plastics as defined by the EPA ^(Note 1)

Single-use plastics

Plastics that cannot be recycled, composted/ decomposed or reused ^(Note 2)

Statistics of Packaging Material Consumption in Each Life Cycle Stage for Private-Label in 2021 ^(Note)



Note 1: The scope of statistics includes the packaging of the private-label products of PCSC, the supplies sold and serviced in the store (in addition to the outer packaging of the supplies, the materials used for the supplies themselves) and the packaging used for logistics and distribution. The statistics of plastic packaging materials cover 96.84% of own-brand products; the statistics of non-plastic packaging materials cover 100% of private-label products.

Note 2: The inventory of paper/wood includes the statistics of general cartons, paper containers with coating, as well as materials for cutlery packaging and content for store supplies.

Plastic Reduction Management Actions

PCSC engages in three aspects to reduce plastic, including "reduction at the source," "innovative packaging" and "encouraging customers to bring their own containers." We actively partner with suppliers to develop innovative packaging materials to reduce the consumption of single-use plastic from private-label products and services, as well as encouraging the reduction of disposable containers by providing with discounts. In 2021, the "cup on loan" model has been introduced through cross-industry collaboration, hoping to create a win-win situation with the environment while providing convenient services.

Weight Reduction for Single-use Plastic

• Plastic Reduction for Product Packaging

We are committed to reducing the burden on the earth from product packaging. To this end, we have introduced the PLA material to coffee cups, changed the lid to PET material, and introduced PP material on microwave fresh food containers in 2019, hoping to reduce environmental impact with recyclable and degradable plastics. In recent years, we have worked with suppliers to conceive how to remove, reduce or replace plastics in packaging materials from the source. To this end, we continue to promote the "Packaging Weight Reduction Program" without affecting packaging safety, quality and convenience. We have been adjusting the packaging design and developed a lightweight packaging material with a reduced packaging thickness while remaining a stable structure to reduce the amount of plastic used in fresh food packaging. For example, the thickness of stewed rice and cold noodle packaging boxes has been redesigned to reduce an average of 3%, and the packaging for hot dog buns has been reduced by 80%. Cartons have also been introduced to light meal packaging. The amount of plastic used in the packaging of fresh food products reduced by 293 metric tons in 2021 compared to 2020. In addition, we also worked with Uni-President Enterprises Corporation to develop the first label-free bottled water in Taiwan, which facilitates the recycling process.

• Plastic Reduction for Store Services

To reduce the use of plastics, we have started replacing the containers for freshly-prepared beverages with paper cups in 2019. Since 2020, the stores stopped voluntarily providing plastic straws. In 2021, we launched lightweight shopping bags and eco-friendly reusable shopping bags, while encouraging consumers to bring their own shopping bags through the Open Point campaign. In addition, we have also implemented plastic reduction measures within our scope of operations. From May 2021, all garbage bags in the stores have been replaced with 100% recyclable materials.

• Packaging Recycling and Reduction for E-commerce Orders

We are also actively promoting the reduction of packaging materials for the pickups and shipping of "MyShip" goods. Not only do we reduce the weight of the packaging materials for shipping bags, but we also developed degradable materials in 2021. Self-adhesive label has been adopted to replace the document holder, reducing unnecessary plastic consumption. In 2021, the number of document holders was reduced by about 79.78%. We started working with the social enterprise PackAge+ in 2021 to launch recyclable packaging for e-commerce orders. The consumers are encouraged to return the recyclable packaging to the 29 designated stores, reducing the consumption of resources. Please refer to the Sustainability Column-Further Actions on Plastic Reduction for details.



Expansion of the Recycling Mechanism

PCSC pioneered in introducing automatic recycling machines to stores and motivates people for recycling PET bottles by providing OPEN POINT points. The pilot program was launched at Chang Chuan and Hsin Yang stores in 2020. The Chang Chuan store recycled over 30,000 bottles in one month, with the average growing by 5,000 bottles each month. As the pilot program saw great success, PCSC installed 10 PET bottle recycling machines in 2021, recycling a total of 704,857 bottles in the year. PCSC will continue to expand the PET bottle recycling machine to different stores, as well as working with the local Department of Environmental Protection to introduce the new-generation recycling machine (ECOCO Smart Recycling Machine) to allow more items to be recycled, upgrading the recycling mechanism and performance.



Reducing Disposable Containers – Bring Your Own Cups and Cups on Loan

Reuse is the fundamental measure of reducing the amount at the source. PCSC encourages consumers to contribute to environmental protection by providing cups on loan, cups for on-the-spot consumption, and a discount for consumers who bring their own cups. To track the performance of bring-your-own-cups, we further set a target for cups brought by consumers reaching 10% in 2021. In 2021, the actual percentage of cups brought by consumers was 6.5%. Although there was a 27% growth compared with 5.1% in 2020, the target was not met as the stores halted the program due to the pandemic for the first half of the year. After the soft lockdown ended, more people brought their own cups. We also continued to offer an NT\$5 discount on the first of each month in comparison to NT\$3. The larger discount increased the percentage of cups consumers brought to 28%. We will continue to promote the program to encourage the consumption behavior of reuse through offering consumer incentives.

In addition to bring-your-own-cup, we also provide the option of cups on loan and cups for on-the-spot consumption to allow consumers to practice green actions without sacrificing convenience. Since 2020, PCSC has been working with the social enterprise Good to Go to launch the Cup on Loan program. For the moment, the program is available at 9 stores located in Taipei, Taoyuan and Tainan, and we expect to expand it to 500 stores in 2022. Customers can rent eco-friendly cups from the machine next to the counter with a simple and fast procedure. The same discount for bringing your own cup is offered to this program as well. The cups are returned to the machine for Good to Go to be collected, cleaned, delivered, and reused afterwards to reduce the consumption of disposable cups. In 2021, cups on loan accounted for 15% of the cups brought by consumers, reducing a total of 1,657 disposable beverage cups. In the future, we plan to expand the reusable business model to motivate the consumers to use eco-friendly cups, as well as accelerating our target of plastic reduction.

Public Welfare Combined with Circular Economy for a Win-Win Situation

PCSC not only fights plastic reduction on its own, but also aims at combining public welfare to expand its influence and drive circular economy. In 2021, we launched a series of recycled products with non-profit organizations and social enterprises by entrusting the PET bottles and milk bottles recycled by PCSC to Story Wear for designing and manufacturing. We further partnered with the Cerebral Palsy Association of R.O.C. for mothers of children with cerebral palsy and seamstresses returning to the workplace to handcraft into denim drink carrier and newsboy bags, realizing the ideal of "cradle to cradle." When this product needs to be recycled at the end, it is 100% recyclable and can be remade into a brand-new product. We look forward to creating a win-win situation that allows consumers to contribute to environmental protection and public welfare. Not only does the initiative assist local disadvantaged groups, but it also reduces waste.



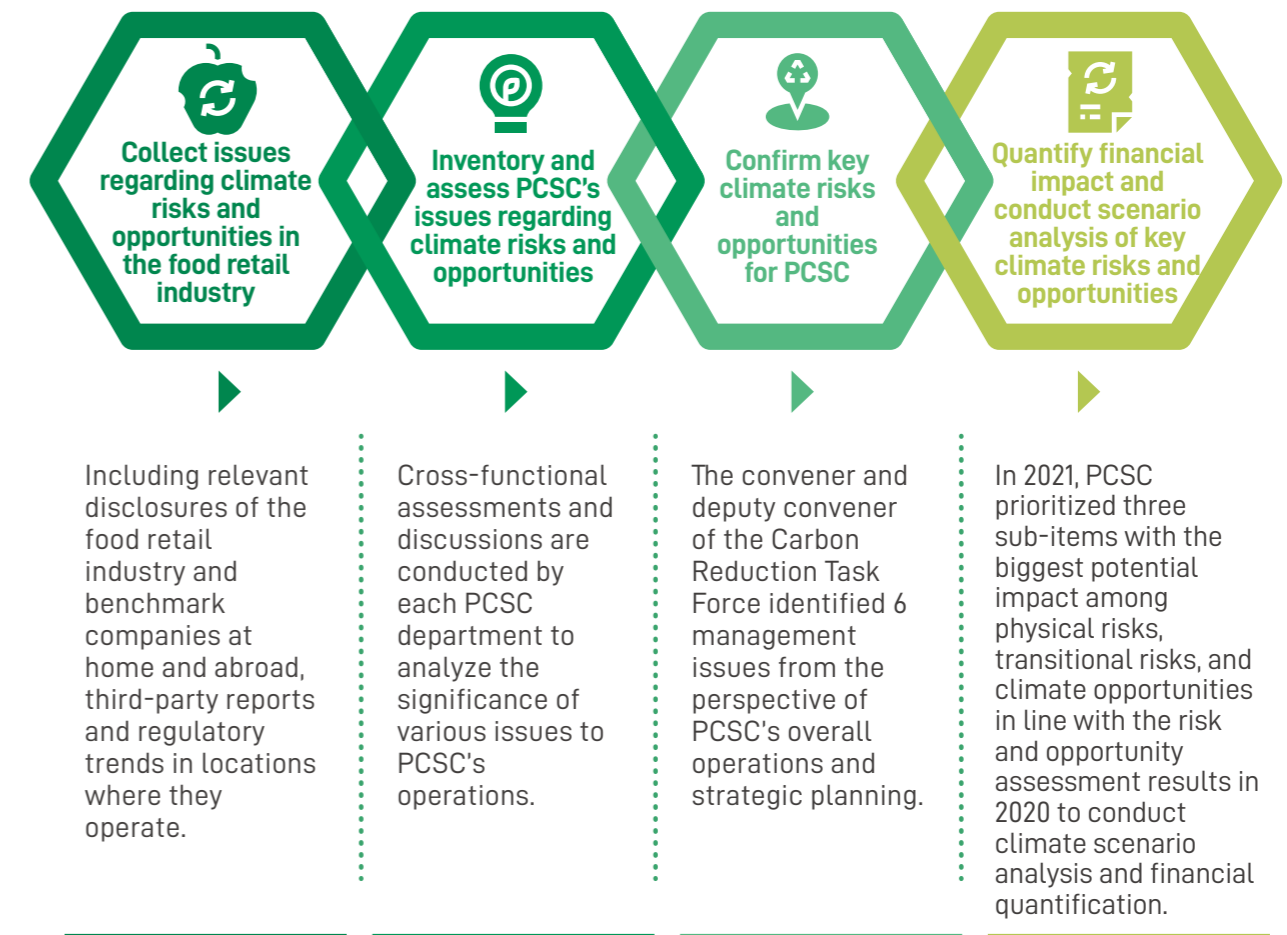
6.3 Mitigation and Adaptation for Climate Change

Climate Governance

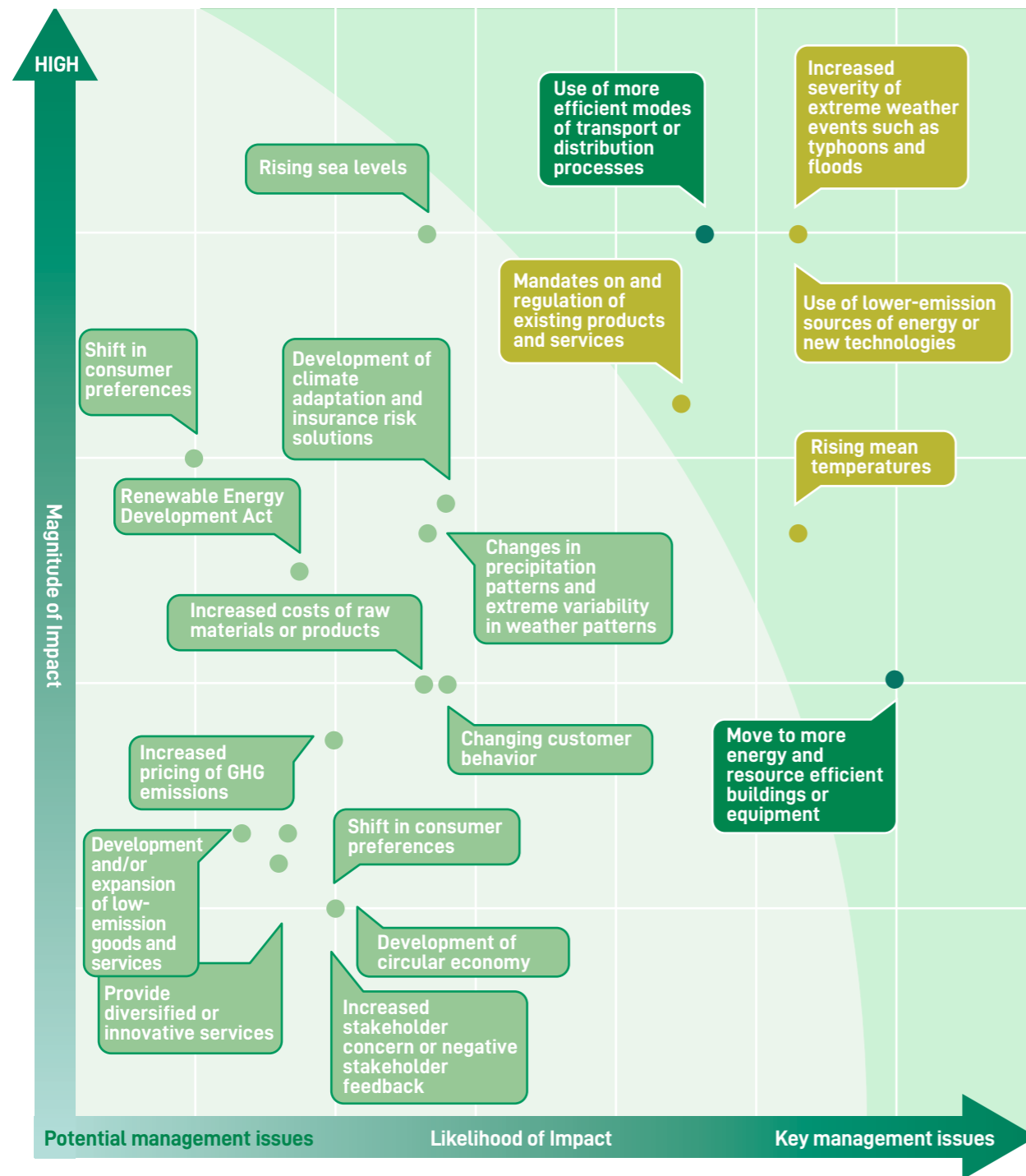
PCSC's governance structure of climate change issues has the Board of Directors as the highest governing body. The management and control mechanism of relevant issues is built under the Sustainable Development Committee, with the working group in charge of issue management and risk assessment, and the Committee reporting the management and implementation of the issues to the Board of Directors on a regular basis. PCSC set up the Carbon Reduction Task Force in 2021 as the organization dedicated to assessing and managing climate change risks and issues. This group is convened by the Secretary-General of the Sustainable Development Committee, with task forces specific to each department's functions. Please refer to the Sustainability Column – "Transition to Low-Carbon Operations" and "1.2 Sustainable Development Committee" for more details.

Assessment for Climate Risks and Opportunities

To understand the impact of climate change issues on the operations of PCSC, we have sorted out and assessed 6 major climate risks and opportunities according to the following procedures in 2020. In 2021, we further conducted scenario analysis and the financial impact quantification on three key climate risk and opportunity issues.



PCSC Climate Risks and Opportunities



(For a detailed description of the assessment of the 6 key climate risks and opportunities, please refer to PCSC's 2020 CSR Report - Response and Management of Key Climate Risks and Opportunities)

Key Issue I: Physical Risks

In view of the physical risks of "increased severity of extreme weather events such as typhoons, floods and snowfall," the probability of flooding, equipment damage, power and water outages in PCSC stores may increase with an impact on store operations. We evaluate the risk of flooding in the middle of this century (2050) for all stores in Taiwan under different climatic scenarios.

Selected Scenarios, Parameters and Assumptions

- 1 Below 2°C scenario: According to the level of flood risks of the National Science and Technology Center for Disaster Reduction (NCDR) during the base period (1976-2005), assuming that the temperature increase does not exceed 2°C by the end of this century, the climate and environment will remain the same as the current situation, we assess the risk level of flooding in stores in the middle of the century, and evaluate the financial impact of flooding of such stores.
- 2 RCP 8.5 Scenario: According NCDR's future projection of the level of flood risks (2036-2065) in the RCP 8.5 scenario, the level of flood risks and the financial impact of flooding in such stores are evaluated in the middle of the century (2050) under the high warming trend.

Methods and Results

- 1 Comparing the locations of all stores in Taiwan in 2021 with the NCDR risk classification, the number of stores with high flood risks (level 5):
 - Below 2°C: 26.7% of total stores in 2021
 - RCP 8.5: 63.9% of total stores in 2021
- 2 Based on past experiences and assuming that when a store in a high-risk area encounters flooding, the store will not be able to operate and with damage to store equipment, the estimated cost from a drop in revenue and increase in equipment repair costs in the middle of the century is approximately:
 - Below 2°C: The financial impact of potential flooding in the middle of the century will affect the revenue by about 0.04%
 - RCP 8.5: The financial impact of potential flooding in the middle of the century will affect the revenue by about 0.1%

Flood risk map of all PCSC stores in Taiwan

Below 2 °C

Flood risk in the base period

RCP 8.5

Flood risk in the future

Legend Levels of Risk

1

2

3

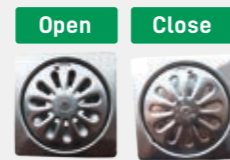
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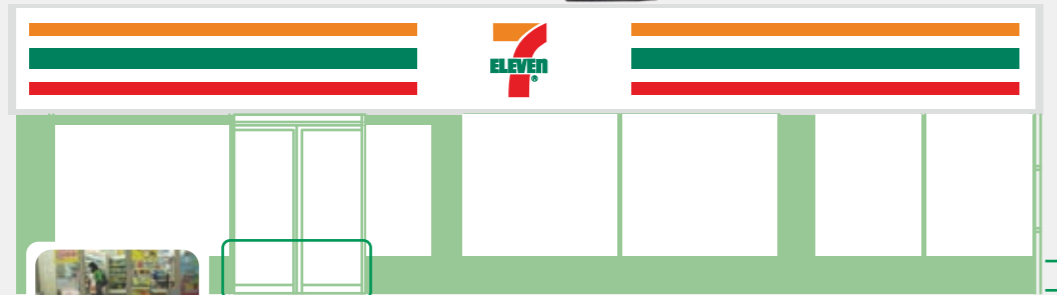
Adaptation/ Management Strategies:

To reduce the impact of flood risks on stores, PCSC has formulated the "Construction Specifications for Flood Control Gates and Dwarf Walls in the Stores Located in Low-lying Areas" and the "Weather Information Distribution System" to immediately notify the stores of the weather and issue flood warnings, so as to reduce the risks caused by flooding. In addition, to reduce the losses caused by flooding in the stores, PCSC has formulated emergency response procedures for risks, standardized the logistics and distribution contingency mechanism, and purchased property insurance against natural disasters for the stores to reduce the financial impact of losses.

Adaptation Actions for Stores Located in Low-lying Areas



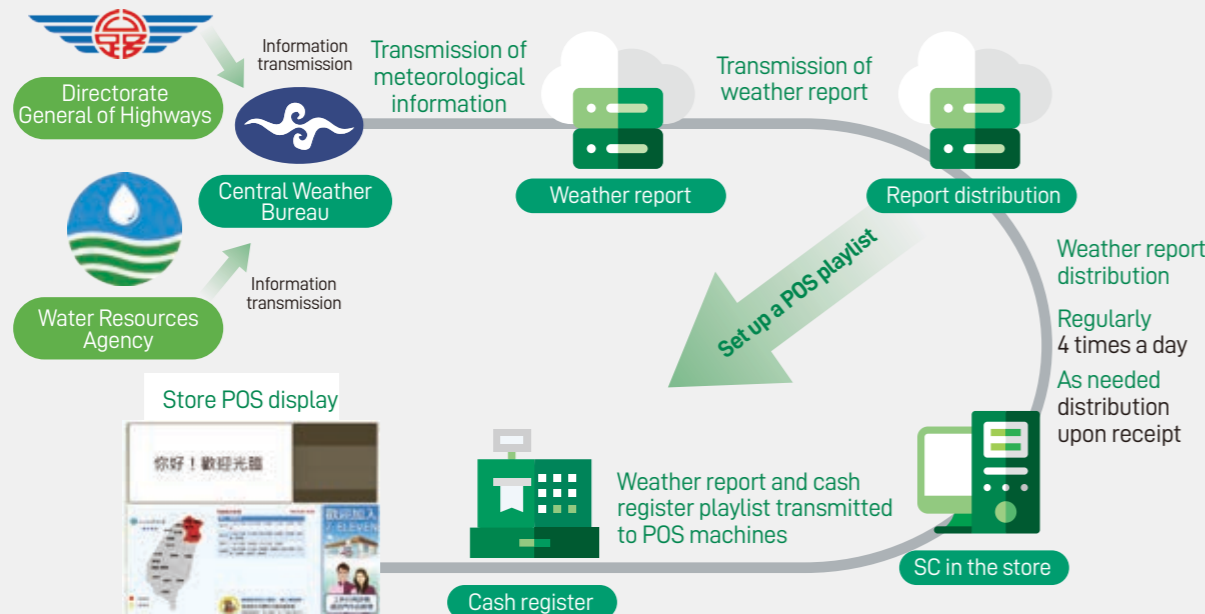
Adjustable drain covers
Alleviate the issues with dirty water overflow and flow-back



Install flood control gate by the automatic door at the entrance
Delay flooding in the store

Install 45-centimeter brick dwarf walls by the window
Delay flooding in the store and cushion the impact of cars crashing into the stores

Schematic Diagram of Weather Information Distribution System



Key Issue II: Transitional Risks

Considering that the Environmental Protection Administration amended the Climate Change Adaptation Act, it is expected that carbon fees will be charged for large carbon emitters in 2024. Although the act has not been extended to the residential and commercial sectors at this stage, with the government's net zero emission policy, PCSC has a high probability of being included in the carbon fee regulations in the future. To understand the potential impact in advance, PCSC assesses the potential financial impact under different scenarios in 2025 if PCSC is charged the carbon fee in the future.

Selected Scenarios, Parameters and Assumptions

- 1 Net-Zero scenario:** According to *Carbon Pricing Options for Taiwan (2020)*, an outsourced research report by Taiwan's Environmental Protection Administration, it is recommended that the carbon fee of US\$52 is charged per metric ton of CO₂e in 2025 to achieve net zero emissions in 2050.
- 2 Nationally Determined Contributions (NDC):** According to *Carbon Pricing Options for Taiwan (2020)*, an outsourced research report by the Taiwan Environmental Protection Administration, it is recommended that the carbon fee of US\$10 is charged per metric ton of CO₂e starting in 2021 with a 10% increase each year. By 2025, the carbon fee will reach US\$14.6 per metric ton of CO₂e in 2025.

Methods and Results

- 1** Based on the GHG emissions of PCSC in 2021 and potential future growth, the emissions in 2025 is estimated without imposing control measures in the BAU scenario.
- 2** The GHG emissions in 2025 is estimated in the BAU scenario with the carbon fees under different scenarios applied. The additional costs that may be charged are approximately as follows:
 - Net-Zero scenario: the increased costs in 2025 will account for about 0.41% of the annual revenue
 - NDC scenario: the increased costs in 2025 will account for about 0.12% of the annual revenue

Adaptation/ Management Strategies:

- 1 Introduction of renewable energy:** In response to international carbon reduction requirements and to reduce the dependence on traditional electricity, we plan to introduce renewable energy in our stores in 2022 and gradually transition to low-carbon energy.

Although the carbon fee has not been applied to PCSC, PCSC will continue to adopt a variety of energy-saving and carbon-reduction measures by gradually improving energy efficiency and reducing GHG emissions in the stores all over Taiwan to reduce the potential financial impact in the future.

Adaptation/ Management Strategies

2 Introduction of energy management system: To promote energy conservation and energy efficiency improvement in the headquarters and stores, the headquarters building and two stores maintained the ISO 50001 energy management system certification in 2021. Other bases also engage in energy management in the spirit and structure of the energy management system to continuously improve energy use.

3 Store energy conservation measures and achievements: In order to effectively improve the energy efficiency of stores, PCSC has formulated basic requirements for equipment and store environment management for new stores, including heat insulation, energy-saving signboards, lamp reduction, reduction of window area, frequency conversion system and LED lamps, and indoor lighting management, as well as introducing the energy-saving windbreak room depending on the stores. Existing stores actively evaluate the feasibility of introducing various energy-saving measures and gradually replace high-efficiency equipment. In 2021, PCSC stores successfully saved 68,968,976 kWh of electricity and NT\$161,387,405 in electricity bills through seven projects (as below), as well as reducing indirect emissions of 346.22 million metric tons of CO₂e. In addition to the replacement of energy-saving equipment, all store employees have been trained to conduct regular inspections on air-conditioning, circulation fans, lighting, refrigerators and freezers, signboard windows and other equipment in accordance with the "Self-Inspections on Store Energy-Saving" to ensure that the equipment can maintain the efficiency. We also cooperate with the government and relevant academic institutions to improve the energy efficiency of our stores.

Store Energy-saving Action Plans	Number	Energy Saved		GHG Emission Reduction (metric ton CO ₂ e)	Contribution to Energy-Saving Project Results	
		kWh	GJ			
Air-conditioning and refrigeration equipment upgrade	Inverter air-conditioning	2,407	37,880,744	136,371	19,016	55%
	Third-generation combination refrigerator	637	6,221,528	22,398	3,123	9%
	New energy-saving freezer	1,126	4,086,761	14,712	2,052	6%
Energy-saving optimization of store lighting system	Arcade lighting energy-saving upgrade	8,571	3,227,395	11,619	1,620	5%
	Store lamp configuration	22,372	6,479,737	23,327	3,253	9%
	Energy-saving improvement of horizontal signboard	20,682	10,128,129	36,461	5,084	15%
Improve heat exchange environment	Energy-saving windbreak room	154	944,684	3,401	474	1%
Total		55,949	68,968,976	248,288	34,622	100%

Note 1: As the grid emission coefficient for 2021 has not yet been announced, a coefficient of 0.502 kg CO₂e/kWh in 2020 was adopted as the GHG emission parameter to calculate the GHG emission reduction.

Note 2: The annual energy saving of each program is estimated by multiplying the measured value before and after the improvement of a single equipment by the total number of equipment replacements.

PCSC Store Energy-Saving Design

Capacitive auto controller

- Automatically control the input and cut-out of capacitors according to the actual needs of various equipment in the store to reduce the abnormal failure of system power supply and store equipment, as well as reducing the failure rate of capacitors

Store lamp configuration

- Change the lamp configuration to reduce the total number of lamps needed
- Introduce LED lamps which save 43% of energy compared to T5 ones



Arcade lighting energy-saving upgrade

- Lamps are changed from the original adjacent layout to a spaced one to reduce the total number of lamps, as well as choosing LED lamps that saves 1/3 of the energy compared to T5 ones



Third-generation combination refrigerator

- DC exhaust fans, LED lighting and smart refrigerators are used for defrosting to improve the refrigerator's 24-hour energy consumption performance
- Install sensor glass doors to reduce air-conditioning leakage. In 2021, electric heater saver and non-electric freezer glass were added, as well as optimizing the combination of refrigerator door frames to achieve further energy-saving benefits



Energy-saving windbreak room

- Considering space and legal feasibility, a buffer space is installed outside the automatic door to prevent the indoor air-conditioning from leaking and the mosquitoes and flies getting in



Optimizing the store's architectural design and reducing the window opening area

- Reduce sun exposure and open window area based on the store's geographical environment and architectural design to maintain the efficiency of the store's cold storage
- Taking the Hsinchu Tang store for example, the electricity bill before and after the energy-saving renovation saved NT\$6,209 on average compared with the same period of the previous year, with the daily consumption reduced by 125 kWh



4 Office Energy-saving Measures and Results: The office energy consumption pattern of the headquarters building is different from retail stores. In addition to continuously updating energy-saving targets and metrics of the headquarters building, we continued to adopt the ESCO (Energy Service Company) energy-saving service system as a concrete measure to track electricity consumption and identify and reduce abnormal electricity consumption. By adopting strategies such as system efficiency improvement, equipment use timing improvement, employee energy conservation awareness and energy use monitoring, we aim to improve the energy efficiency of the headquarters building. In 2021, the electricity consumption of the headquarters building dropped by 76,280 kWh compared with 2020, showing a significant decrease. The reasons mainly include the adjustment of the temperature of the water chiller, air-conditioning indoor air blower timer setting, turning off lights during lunch breaks and so on.



Note 1: Stores with high electricity bills are selected for those ones whose kWh of electricity consumption in the same period in 2021 exceeded the average of stores with the same floor area, and the kWh of electricity consumption increased compared with the same period in 2020 with a decline in operational performance.

5 Office Energy-saving Measures and Results: The office energy consumption pattern of the headquarters building is different from retail stores. In addition to continuously updating energy-saving targets and metrics of the headquarters building, we continued to adopt the ESCO (Energy Service Company) energy-saving service system as a concrete measure to track electricity consumption and identify and reduce abnormal electricity consumption. By adopting strategies such as system efficiency improvement, equipment use timing improvement, employee energy conservation awareness and energy use monitoring, we aim to improve the energy efficiency of the headquarters building. In 2021, the electricity consumption of the headquarters building dropped by 76,280 kWh compared with 2020, showing a significant decrease. The reasons mainly include the adjustment of the temperature of the water chiller, air-conditioning indoor air blower timer setting, turning off lights during lunch breaks and so on.

Improvement Action	Air-conditioning System	Lighting System	Use of Electronic Appliances
System power improvement	<ul style="list-style-type: none"> Adjust air-conditioning system parameters Update self-contained energy-saving inverter air conditioners 	<ul style="list-style-type: none"> Gradual replacement with LED lamps 	-
Timing improvement	<ul style="list-style-type: none"> Use full heat exchanger to bring in fresh cool air in winter The indoor air conditioner is equipped with timer settings. 	<ul style="list-style-type: none"> Automatic lighting switch sensor Reduce indirect lighting in the hallway Reduce lighting during lunch breaks 	<ul style="list-style-type: none"> Elevators, photocopiers, food heaters, water dispensers, refrigerators, etc. are turned off out of office hours
Employee awareness raising	<ul style="list-style-type: none"> Awareness-raising for energy-saving 		
Energy use monitoring	<ul style="list-style-type: none"> Security inspection 		

Key Issue III: Opportunities

In response to the increasing severity of climate change, the world is turning its attention to carbon reduction and low-carbon transition. Taiwan's relevant regulations and policies are also developing net-zero emission pathways. With PCSC having many stores all over Taiwan, logistics is an important element in PCSC's operations. If we can transition towards low-carbon transportation in advance, it will contribute to the development of the national net-zero policy.



Scenario for Analysis

Under the development of national net-zero policies such as the first phase of the Greenhouse Gas Reduction and Management Act and the Climate Change Response Act, PCSC assessed the strategic impacts in 2026 based on PCSC's low-carbon transportation transition plan and the energy efficiency improvement plan in the transportation system and transportation vehicles.

Transition Plan and Potential Opportunities and Benefits

To take advantage of climate and low carbon opportunities, PCSC not only commits to the stores and office areas' energy conservation and carbon reduction, but also actively influences long-term logistics partners and gradually invests in corresponding management plans or actions. By adopting various energy-saving and carbon-reduction methods, we improve energy efficiency, reduce environmental impact, as well as increasing the benefits brought about by addressing climate change issues. We will continuously adapt our operational strategies and respond to low-carbon operational needs in a timely manner.

We are currently working on three aspects of our low-carbon transition plan:

1 Introduction of logistics vehicles with the latest environmentally-friendly standards: To reduce the carbon emissions caused by logistics, PCSC expects to replace 267 phase III and phase IV environmentally-friendly vehicles by 2026, and purchase a total of 267 phase V environmentally-friendly vehicles, including low-temperature and room temperature ones, as well as different sizes to meet the logistics and transportation needs of PCSC stores throughout Taiwan. In addition to actively introducing new environmentally-friendly logistics vehicles, we also keep in contact with our logistics partners and regularly arrange domestic and foreign logistics and transportation exchanges, in order to make in-time adjustments in response to trends and regulations in Taiwan.

The introduction of logistics vehicles with the latest environmentally-friendly standards:

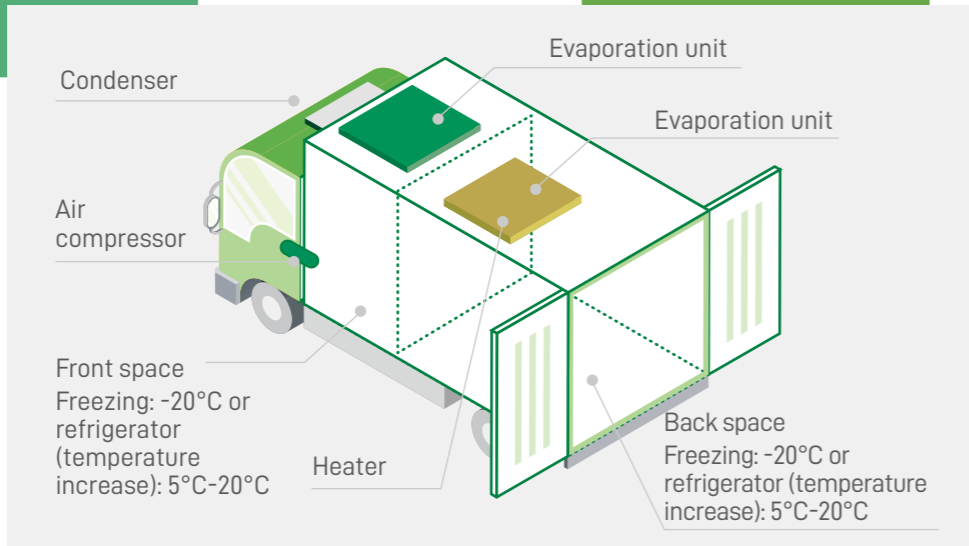
- By 2026, it is estimated that **267** phase III and phase IV environmentally-friendly vehicles will be replaced with **267** phase V environmentally-friendly vehicles.
- **357,087** liters of fuel are estimated to be saved by 2026

Integrate logistics routes and adjust logistics vehicle equipment:

Average annual savings of:

- **1,460** trips
- **239,797** liters of fuel used
- **664.7** metric tons of carbon emissions

2 Promote dual-temperature common delivery and integrated logistics routes: To improve transportation efficiency, we adjusted the refrigerated and frozen common delivery routes, as well as replacing the original logistics vehicles with only one temperature layer to dual-temperature layers (refrigerator and freezer). This allows goods of different temperatures to be delivered together, which not only improves the loading efficiency but also achieves the energy-saving benefits of the affiliated logistics companies.



3 Optimizing the internal operation procedure and equipment: We plan to introduce distribution automation to the internal operational environment and equipment in the logistics centers to reduce the picking load of personnel, walking distance, etc., saving the operating time of human distribution. In the meantime, the initial transshipment logistics routes are integrated and lighting in the logistics centers have been upgraded to improve the energy-saving benefits of the overall internal operations.

Distribution automation, energy saving and carbon reduction measures:

Average annual savings:

- **NT\$83.19** million in labor costs
- **102,441** kWh of electricity and **82,773** liters of diesel

Logistics Company	Energy-saving Action	Amount of Energy/Resource Saved	Amount of Energy Saved (GJ)	GHG Emission Reduction (metric tons of CO ₂ e) ^(Note 2)
Uni-President Cold-Chain Corp	<ul style="list-style-type: none"> • Replacement of 170 LED lamps • Inverter air conditioner upgrade 	47,071 kWh of electricity saved each year ^(Note 1)	169.5	23.6
Uni-President Cold-Chain Corp	Integrate 10 routes of initial transportation and transshipment trips	Annual reduction of 322,816 kilometers, saving a total of 82,773 liters of diesel	2911.2	215.7
Wisdom Distribution Service Corp	Installed 50 LED microwave induction lights, and 800 microwave induction boxes in the storage space	55,370 kWh of electricity saved each year	199.3	27.8

Note 1: Each replaced lamp is estimated to save 26 kWh of electricity, which is calculated based on the daily use time of the location and 365 days a year.
 Note 2: Uni-President Cold-Chain Corp uses 1 liter of diesel fuel for logistics vehicles to run 3.9 kilometers. The diesel GHG coefficient is calculated based on the 2.606 kg of CO₂e/liter of the GHG emission coefficient management table of version 6.04 announced by the Environmental Protection Administration. The calorific value of diesel is calculated with reference to the calorific value of diesel in the energy product's unit calorific value table published by the Bureau of Energy, Ministry of Economic Affairs.
 Note 3: As the carbon emission coefficient of electricity in 2021 has yet to be published, the 0.502 kg CO₂e/kWh in 2020 is used as the calculation parameter for GHG emissions.

Key Performance Metrics and Targets

Energy Use and GHG Emissions

PCSC's main business locations include stores (including retail stores and shopping centers) and offices (including the headquarters, regional offices and training centers) around Taiwan and on outlying islands. We have conducted GHG inventory in line with ISO 14064-1:2006 since 2017 to stay updated with the overall GHG emissions. In 2020, we adopted the updated ISO 14064-1:2018 as reference for GHG inventory as well as passing third-party certification. We have also continued to expand the scope of sites on inspection. The scope of the GHG inspections in 2021 covered 6,522 bases, with the coverage rate of 99.41% for the GHG inspection boundary.

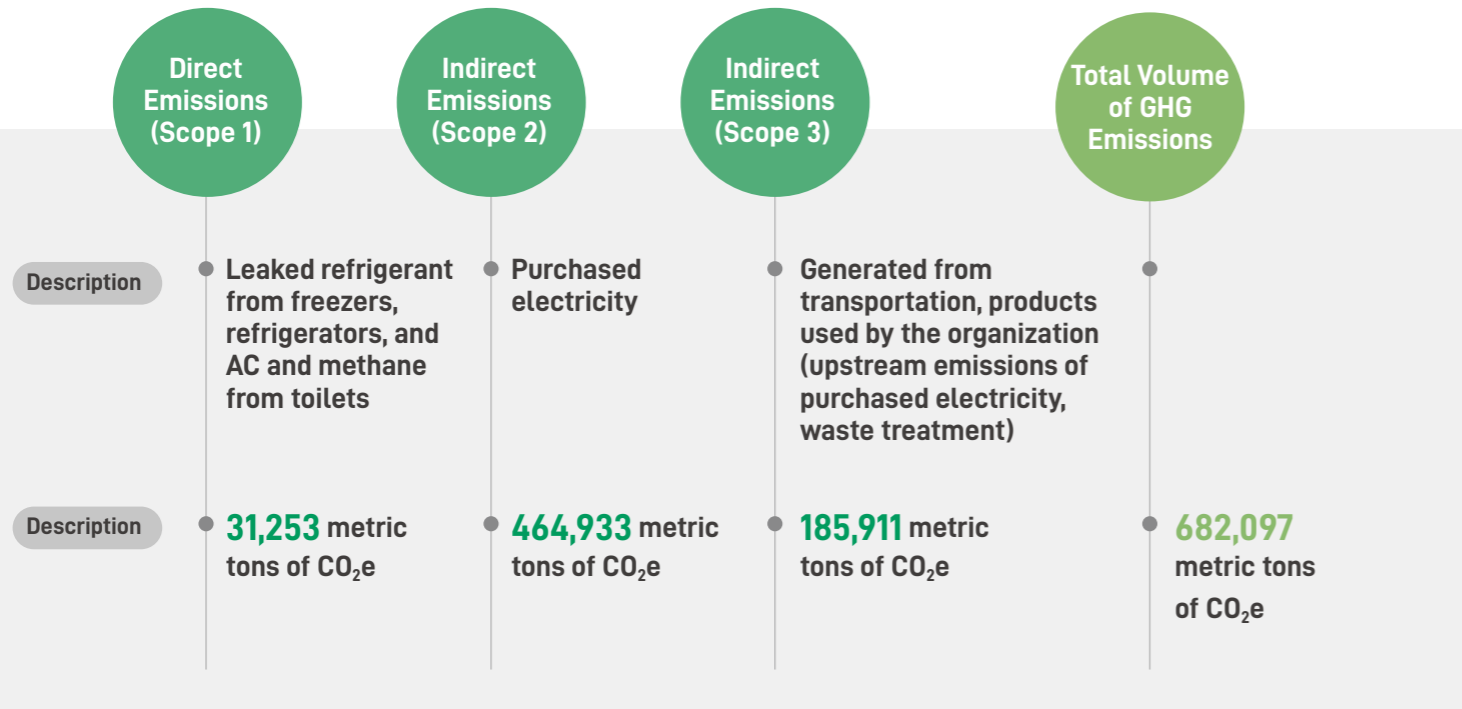
Operating Bases with ISO 14064-1:2018 Certification in 2021

Stores (convenience stores and shopping centers) **6,494 stores** ^(Note) **and 17 shopping centers**

Offices and training center **Headquarters, 9 regional back offices and 1 training center**

A total of **6,522** sites

Note: The 6,494 stores inventoried in 2021 include the 115 stores that have moved or closed in 2021



Note 1: GHG inventory adopts the ISO 14064-1:2018 methodology. The organization boundary is set using operational control. The GHG emission coefficient refers to the Electricity Emission Coefficient set by the Bureau of Energy, Ministry of Economic Affairs, the Environmental Protection Administration's Emission Coefficient Management Table 6.0.4 and the Environmental Protection Administration's Product Carbon Footprint Information Network. GWP adopted the values of the fourth assessment report of the IPCC in 2007. If there is no reference value in the IPCC 2007 Fourth Assessment Report, the IPCC 2013 warming potential value is quoted.

Note 2: The calculation for indirect emissions from purchased electricity is based on location. Since the grid emission coefficient for 2021 has not been announced, the coefficient of 0.502 kg CO₂e/kWh in 2020 is adopted as the calculation parameter.

Note 3: The types of GHG covered by the inventory include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).

Note 4: The carbon dioxide emissions from biological sources are zero.

Direct Emissions

The main source of direct emissions from PCSC is the refrigerant leaked from store freezing, refrigeration and air-conditioning equipment. The emissions in 2021 are calculated based on the refrigerant refill of the equipment warranty system for the refrigerant equipment failure maintenance. The result accounted for 86% of the direct emissions, with the proportion of refrigerant not containing ozone-depleting refrigerant as 100%.

Emission Equipment	Emission Source	Direct Emissions (metric tons of CO ₂ e)	Percentage of Direct Emissions (%)
Septic tank	Night soil	4,344	14%
Slurpee and beer machines	CO ₂	3	0%
Commercial freezers	Refrigerant (R134a, R404a, R410a)	26,906	86%

Indirect Emissions

The 2021 indirect emissions survey was evaluated in accordance with the principle of materiality. Significant indirect greenhouse gas emission sources include indirect GHG emissions from purchased electricity, upstream emissions, cargo distribution and waste treatment. Among them, the emission of purchased electricity is the main source of indirect greenhouse gas emissions.

In 2021, the power consumption of all the inspected sites reached 926.16 million kWh, with the energy consumption of 3,334,180 GJ. The indirect GHG emissions were 464,933 metric tons of CO₂e, showing a decrease of 1.57% compared with the emissions in 2020. The main reason is that stores have invested in energy-saving improvement design and equipment performance improvement for many years. In 2021, a total of 498 stores participated in the energy-saving renovation plan, saving a total of 10.52 million kWh of electricity. In addition, the pandemic had an impact on the number of customers that visited a particular store, indirectly saving the electricity consumption in the stores. PCSC will continue to promote carbon reduction actions for energy saving in stores, offices, logistics and transportation, so as to gradually achieve the target set for 2025.

Emission Source	Volume	Energy Consumption (GJ)	Indirect Emissions (metric tons of CO ₂ e)	Percentage of Indirect Emissions (%)	
Electricity	Emissions from purchased electricity	3,334,180	464,933	71%	
	Upstream emissions from purchased electricity	926,160,000 kWh	-	85,485	13%
Emissions from upstream transportation and cargo distribution	Diesel fuel from distribution and transportation from logistics centers to stores	24,804,451 liters	872,392	83,839	13%
Discharges from solid and liquid waste treatment	Store waste disposal	46,075 metric tons	-	16,587	3%

Note: 100% of the electricity comes from the grid with no renewable energy.

● **Targets for Energy and GHG Emissions reduction**

Energy Efficiency Metrics and Targets

Since most stores are open around the clock, their electricity consumption pattern is different from that of the headquarters, regional offices and training center. To effectively monitor the electricity consumption of stores and gradually improve their energy efficiency, we set up an EUI and reduction targets for stores as well as tracking the progress each month.

The electricity intensity reduction target for stores in 2021 was 914.7 kWh/m², a decrease of 0.5% compared to 2020. The actual energy intensity of our stores was 891 kWh/m² in 2021, showing a 3% decrease from 2020. We have reached our energy intensity reduction target this year.

EUI ^(Note)								
Year	2014	2015	2016	2017	2018	2019	2020	2021
EUI	1,094	1,046	1,012	1,008	962	947	919	891
Percentage of Decrease		-4%	-3%	-0.4%	-5%	-2%	-3%	-3%

Note: The EUI of stores is calculated as the electricity consumption per ping (approximately 3.3 square meters) based on the data provided by Taiwan Power Company each month. The EUI for stores in areas without any data from Taiwan Power Company is estimated on the same basis. The two are added to produce the total electricity consumption that month, which is then divided by total floor area.

GHG Emission Intensity Metrics and Targets

Considering that the largest GHG emission source of PCSC comes from electricity consumption of the stores, and that the electricity consumption is intertwined with the store size, equipment and business model, which will eventually be reflected by the revenue, we calculated the emission intensity per NT\$ million in revenue as reference for the reduction target for overall GHG emissions. To effectively manage GHG emissions of PCSC's own operations and its value chain, we re-examined the goal setting method in 2021 and separated the GHG emissions of our own operations and value chain management in target setting. In our own operations, the GHG emission intensity of Scope 1 and Scope 2 is set to be reduced by 7% in 2025 and 14% in 2030, using the 2020 GHG inventory, 2.99 metric tons CO₂e/NT\$ million turnovers, as the benchmark to set the GHG emission intensity target. In 2021, the pandemic indirectly affected the electricity consumption in the stores. The GHG emission intensity was 2.95 metric tons CO₂e/NT\$ million turnovers, a decrease of 1.33% compared with the base year. In addition, in terms of value chain management, we are actively optimizing the inventory items and methods of Scope 3 emissions. In the future, we expect to introduce Science-Based Targets (SBT) to strengthen the carbon management of the entire value chain with updated medium- and long-term targets. It is hoped that PCSC can be the pioneer in the industry as well as an important partner for Taiwan in achieving its net-zero emission goal.

6.4 Food Waste and Waste Management

Food Waste and Waste Management Strategy

The busy pace of modern life gave rise to the services of compound retail stores such as convenience stores. The introduction of new products and services has made convenience stores an indispensable part of a convenient modern life. However, convenience also gives rise to the use of more disposable commodities and packaging consumables. As the leader with the largest number of stores and the most widely distributed stores in Taiwan, PCSC has unshirkable responsibilities for the issues of food waste and waste.

The waste produced by PCSC is mainly domestic waste, which belongs to the general waste and general industrial waste as categorized by the Environmental Protection Administration with no hazardous industrial waste. The generation of bulk waste is closely related to store operations, including operational waste from upstream fresh food manufacturers, general waste (food waste, general household waste, etc.) generated by store services, and recyclables generated from the stores' reverse logistics mechanism, etc. In 2021, the non-recyclable waste generated by the stores and headquarters activities reached 56,156.01 metric tons, accounting for 1.6% of the national waste for incineration. If PCSC fails to properly handle and reduce waste, not only will it put a heavy burden on the incineration plants all over Taiwan, but it will also exacerbate the subsequent environmental impact caused by waste incineration. PCSC follows the 3R principles in the overall waste management strategy to reduce, recycle, reuse, as well as minimizing non-recyclable waste. In addition to controlling the amount of waste generated and ensuring proper disposal, PCSC effectively combines "convenience" and "recycling" through its many bases to help people recycle electronic waste. Although the packaging waste generated by products and services is not included in the scope of our own operations and belongs to the downstream waste of the value chain, we are still concerned with the environmental impact of plastics. To this end, we work on the three aspects of "reduction at the source," "innovative packaging" and "encouraging people to bring their own containers" to fulfill our social responsibility, as well as further promoting the recycling mechanism in stores to gradually reduce the society's dependence on single-use plastics (for detailed packaging management measures, please refer to 6.2 Packaging Material Management).

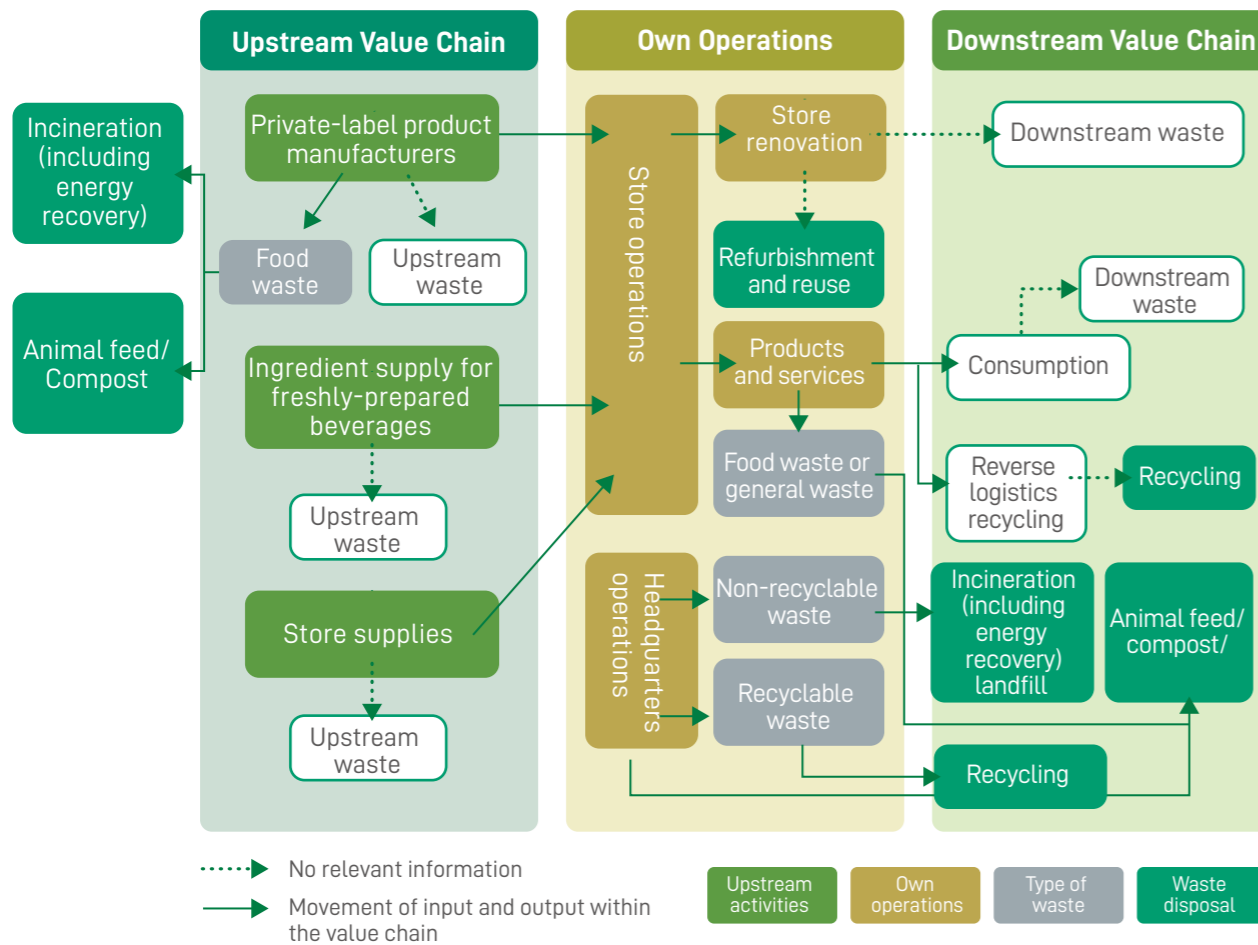
The food waste generated by convenience stores is another important issue that PCSC cannot shy away from. The types of food waste generated by store operations can be divided into four categories according to the supply chain process, including food waste produced by upstream manufacturers, losses in logistics and transportation operations, scrapped fresh food, and food waste from store operations. Food waste that cannot be properly disposed of is not only a waste in food ingredients but will also lead to food security problems. Furthermore, it will also emit GHG while decomposing in landfills, aggravating the greenhouse effect. After announcing the target of halving food waste by 2030 in 2020, PCSC took a detailed inventory to find out where food waste went and started implementing four policies in 2021, including reducing the amount of scrapped fresh food year by year, reducing production loss at the manufacturers, reducing loss during logistics operations, and increasing the recovery of food waste in the stores. PCSC regularly tracks performance through these four metrics and continues to reduce food waste and loss to ultimately reduce food waste at the source (please refer to the Sustainability Column – Food Waste Management for further details).

Note: Excluding the weight of food waste that cannot be given to pig farms but had to be incinerated due to the African Swine Fever in 2021.

Waste Generation and Process Flow Management

To understand the amount and process flow of waste, PCSC collects and calculates the amount of waste at each operating site on a yearly basis. The headquarters building signs an agreement with a waste management company, which calculates the amount of waste generated and treats various types of waste in a manner that complies with the laws. Regarding the retail stores, only Taipei, New Taipei City and Taoyuan City at present require convenience stores to dispose of waste separately from other entities, while waste from stores located in other counties and cities is disposed of with household waste. Besides the stores that are obliged to dispose of waste separately, PCSC has formulated a plan to encourage stores from other cities and counties to also outsource waste management with the aim to better control the amount of waste generated by retail stores. In addition to its own operational waste, PCSC also attaches great importance to the waste management of fresh food manufacturers in the upstream value chain. We regularly calculate the amount of food waste generated by the manufacturers and track the food waste disposal methods to better understand the situation of food waste. The recyclable waste from the stores mostly comes from packaging cartons and the electronic waste people bring in. Please refer to the "Convenient Recycling Platform" for further details.

Diagram of PCSC's Waste Generation Process



• Waste Management Performance

In 2021, a total of 1,010 stores and the headquarters building have entrusted waste management to dedicated companies, which reported the amount of waste diverted and disposed as well as removal and treatment methods for different kinds of waste, including food waste and general household waste, whereas waste produced by other stores and offices (general household waste) is harder to measure. Therefore, the amount of waste produced by a single store or per capita is used for estimation. Scrap items are estimated based on the date, and the disposal method of waste that was not outsourced to cleaning companies is speculated based on national waste disposal announced by the Environmental Protection Administration for the current year.

In 2021, the total amount of non-recyclable waste (excluding the weight of food waste that was incinerated due to the impact of African Swine Fever in 2021) from store operations and headquarters activities is 56,156.01 metric tons. To effectively manage non-recyclable waste (excluding food waste) in stores, PCSC takes 2019 as the base year and sets the average waste generated by a single store as the indicator to reduce 1% in 2021 compared with the base year. A 15% reduction from the base year is targeted for 2025. In 2021, the amount of waste generated by a single store is 7.4 metric tons, a decrease of 12.2% compared with the base year. In addition to introducing various waste reduction measures, store waste was significantly reduced in 2021 as some stores closed for 7-100 days due to the pandemic. In the future, we will continue to track waste data and actively promote recycling, reuse and plastic reduction to strengthen the management of non-recyclable waste in our stores.

PCSC Waste Generation and Disposal in 2021

Waste Disposal ^(Note 1)	Waste Composition	Location of Waste Generation ^(Note 2)	
		Upstream (Metric Ton)	Own Operations (Metric Ton)
Off-site	Animal feed/compost	1,222.24	258.59
Off-site	Incineration (including energy recovery)	76.63	8,527.28 ^(Note 3)
Off-site	Landfill	-	607.08
Off-site	Recycling	-	647.31
Off-site	Recycling	-	10,632.65
Off-site	Recycling	-	39.12
Off-site	Recycling	-	341.06
Off-site	Recycling	-	71.39
Off-site	Recycling	-	57.39
Off-site	Landfill	-	3,134.79
Off-site	Incineration (including energy recovery)	-	43,910.46

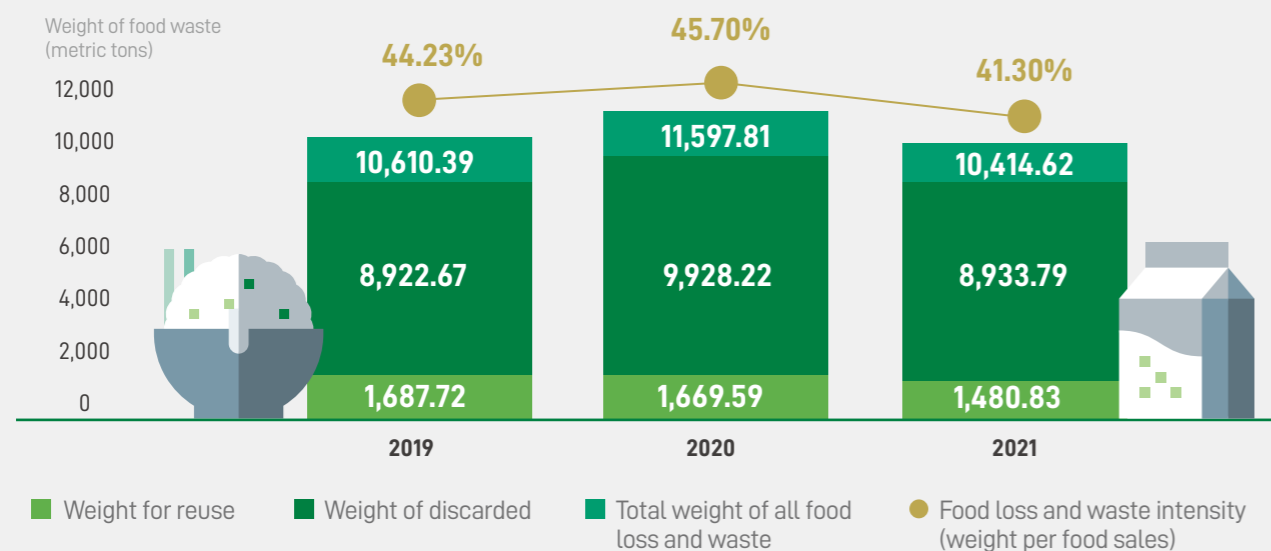
Note 1: Waste disposal data at the headquarters building and the stores that outsource waste management was collected from the outsourced cleaning companies. The proportion of waste incineration and landfill at other stores and operating bases was considered as 93.34% based on 2021's national general waste disposal published by the Environmental Protection Administration.

Note 2: The scope of data for our own operations includes the headquarters, regional offices and stores. The scope of data from the upstream covers four Uni-President Superior Commissary Corp. manufacturers in Taipei, Hualien, Tainan and Kaohsiung.

Note 3: Due to the impact of African Swine Fever in Taiwan in 2021, food waste in September 2021 could not be used as animal feed. Therefore, food waste of the month could only be incinerated. The food waste from our own operations that could only be incinerated due to African Swine Fever was 23.6 metric tons.

Food Waste Management Performance

In addition, PCSC also inventories the production and sales of own brand products from manufacturing to retail to understand the amount of food loss and waste at each stage, in order to better organize more appropriate measures for reducing food waste. The total amount of food waste in 2021 was 10,414.62 metric tons, down 10% from 2020. Due to the waste removal management mechanism in stores, the food reuse ratio was 14.22% (mainly for animal feed/compost). To effectively reduce food loss and waste, we have incorporated store food waste recycling into our management strategy to optimize our collaboration with outsourced cleaning companies, as well as encouraging all stores to follow our lead in making an effort towards food waste management.



Food Waste and Waste Reduction Actions

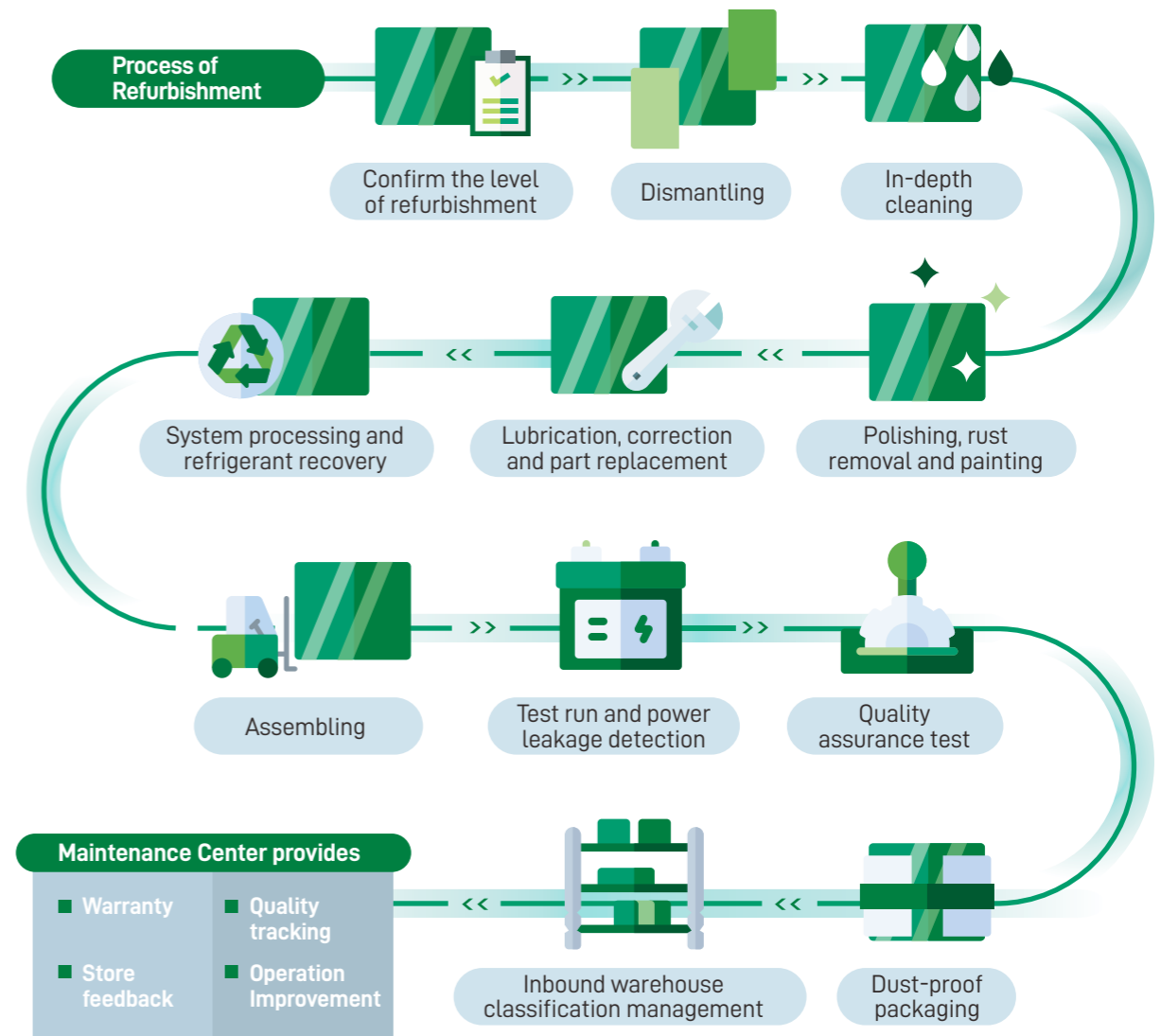
• Convenient Recycling Platform

By taking advantage of the multiple bases, PCSC effectively combines "convenience" with "recycling" in helping people recycle electronic waste, including batteries, laptops, optical discs, mobile phones and chargers. To encourage people to recycle through convenience stores, PCSC provides NT\$3 to NT\$120 of store credit. The recyclable waste collected is shipped and distributed through the intensive and comprehensive logistics network, then classified and processed after being collected by the reverse logistics system.

• Store Equipment Reuse

PCSC has over 6,000 stores in Taiwan. In order to provide the most convenient products and services, it relies on a large number and variety of machines. As the wear and tear as well as out-of-service machines cause a great burden on the environment, we have made good use of our flexible dispatch system and a great number of stores to set up the Equipment Refurbishment Center. The recycling system works on existing equipment from renovated and shut down stores, such as air conditioners, refrigerators, oden cooking machines, microwave ovens and so on. It is returned and put to use after inspecting, cleaning and repairing to reduce waste of resources and waste generation, while also saving on equipment procurement costs. In 2021, 25 types of equipment were refurbished and put to use, with the total number of 1,958 machines and saving a total amount of equipment procurement costs of NT\$57,078,521.

• Equipment Refurbishment Process



• Upgraded iLove Food Program and Reducing Food Waste with Technology

As the leader in the retail industry, PCSC is committed to reducing food waste. Continuing the 2020 iLove Food Program, we launched the iLove Food Map in the app in 2021 to make it easy for consumers to find out about the iLove Food availability in each store, allowing them to take advantage of the convenient program. In 2021, iLove Food reduced food waste by 6,467.4 metric tons. Please refer to the Sustainability Column-Food Waste Management for more details. In addition to working together with consumers to reduce food waste, we plan to extend the shelf life of food in 2022 by taking advantage of new technologies, such as the high-temperature sterilization equipment and special sealing film to reduce food waste from overstock.

• Waste Reduction in Headquarters

In order to encourage employees to save resources, the PCSC headquarters set "paper-saving" as an internal management metric. Employees are encouraged to replace printing, scanning and photocopying with electronic files and double-sided printing, etc., in order to reduce the amount of paper used in office and administrative processes. The paper consumption per capita in 2021 decreased by approximately 3% compared with the previous year. In addition, the headquarters building has also continued the recycling program. In 2021, the weight of recycling reached a total 20,624 kilograms, an increase of about 8% over the previous year.