

A Green Leader and Good Neighbor



2019 Highlights



Environmental label and energy saving products accounted for **14.08%** of the annual purchase.

Electricity intensity of stores reduced by **1.45%** than 2018; Electricity intensity of the headquarter reduced by **2.4%** than 2018

Number of refurbishment and reuse machines in 2019 reached **1,525**.

6.1 Environment and Risk Management

Following the growingly apparent impact of climate change, the Paris Agreement in 2015 and UN Sustainable Development Goals (SDGs) in 2016 have made climate change the core of sustainable development that countries cannot overlook. To achieve the nation's GHG reduction commitment and reduction targets, governments around the world are implementing incentive measures, establishing market mechanisms, or enacting regulations. Hence, climate change is also having a growing institutional effect on companies. For companies, whether it may be to adapt to harsh environment in the future, or to meet the requirements of the government and investors, companies must consider how to minimize the impact of climate change, energy conservation, and carbon reduction. on the organization Companies will also utilize their abilities and influence to maximize market opportunities and benefits based on their operations, value chain, and core abilities.

Therefore, companies around the world are focusing on their climate change mitigation and adaptation strategy for achieving sustainable development. Stricter regulations enforced by Taiwan and other countries, the occurrence of large scale natural disasters, and changes in consumer purchasing behavior caused by temperature changes will have different levels of impact on the revenue, cost, asset value, business reputation, and business continuity of companies.

PCSC has changed citizens consumption behavior over the past 40 years. As a leading company in Taiwan, PCSC also attaches great importance to climate change, and leads citizens towards an eco-friendly, low-carbon, sustainable lifestyle. Besides providing high quality and eco-friendly products to consumers, PCSC has proposed response measures for climate disasters, and hopes to share the benefits of environmental resources with all stakeholders, facing the potential impact from the environment together.

6.1.1 Environmental Commitment and Communication

We are actively improving the efficiency of resource use at our stores and for logistics, shouldering the responsibility of being a good citizen. Besides establishing the PCSC Environmental Policy and Energy Policy, we are committed to exerting the influence of our value chain to creating a friendly retail business model. We focused on "energy conservation and carbon reduction" and "effective resource use" in response to the environmental impact of our energy consumption, water consumption, and waste management, and have further committed to optimize our environment.

Community and consumers can report issues with store operations or other environmental issues through the Joint Services Center's hotline (0800-008-711) or email (public@mail.7-11.com.tw). After a case is opened, responsible units will properly handle and respond to the case, and the progress of cases is always tracked.

Environmental Policy

Our goal is to become the best retailer with the aim of providing the most convenient lifestyle services and fulfilling our responsibilities as a corporate citizen, and we have thus made the following commitments:

- We will compliant with environmental protection laws and regulations, and prohibit any behavior that will harm the environment.
- We will continue to improve our environmental performance, and improve our surrounding environment.
- We will cherish resources and increase recycling and reuse based on the principle of making the most out of resources.
- Based on the pollution prevention, we will endeavor to reduce the amount of waste.
- 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 will reduce resource consumption and increase the efficiency of resource use.
- We will 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 community development and manage sustainable relationships with communities.
In the promotion of environmental education, we will continue to promote environmental protection concepts to employees and customers, and take action to protect the environment together.



Energy Policy

As we match customers' 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 utilizing the channel's advantage. We also exert our influence through the benefits of energy conservation.

Our commitment:

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





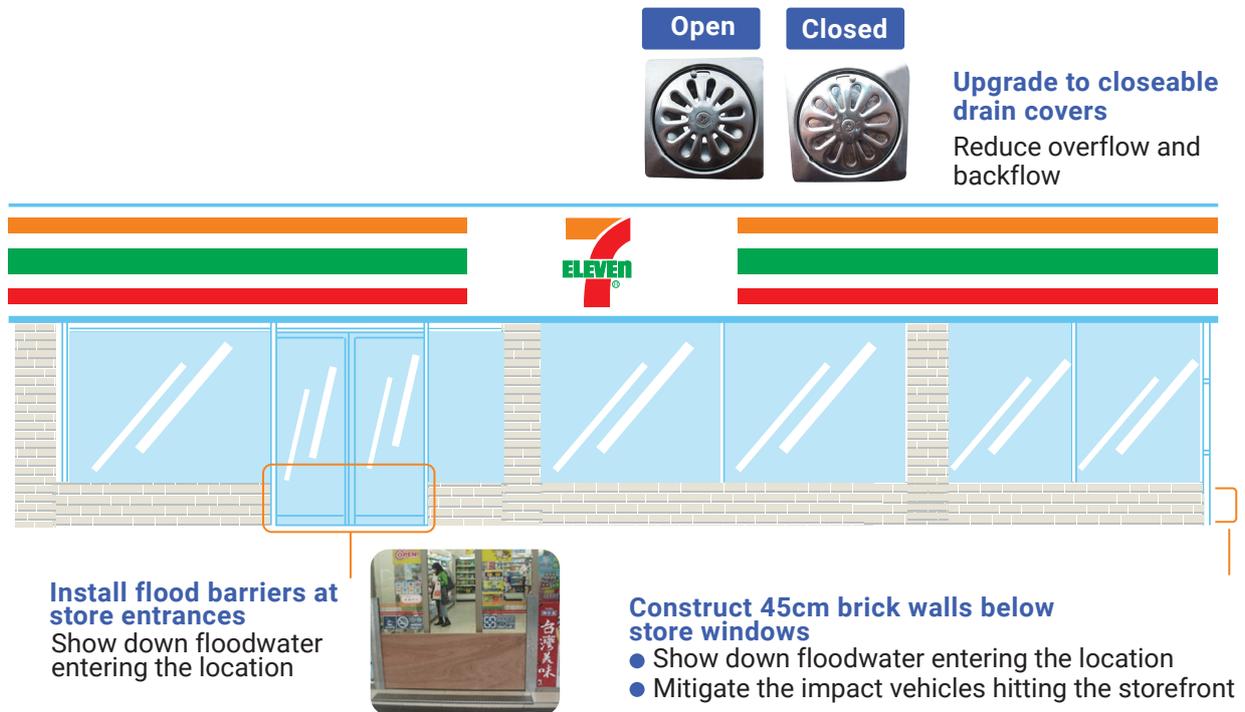
6.1.2 Climate Change Mitigation and Adaptation

With regard to climate change mitigation, PCSC has compiled its GHG inventory each year since 2005, and implements energy management refer to ISO 50001. We have implemented energy conservation measures at our headquarter and stores, and increased the energy efficiency of equipment, which effectively lower emission intensity and mitigate climate change. We also raise employees' awareness through guidance and training.

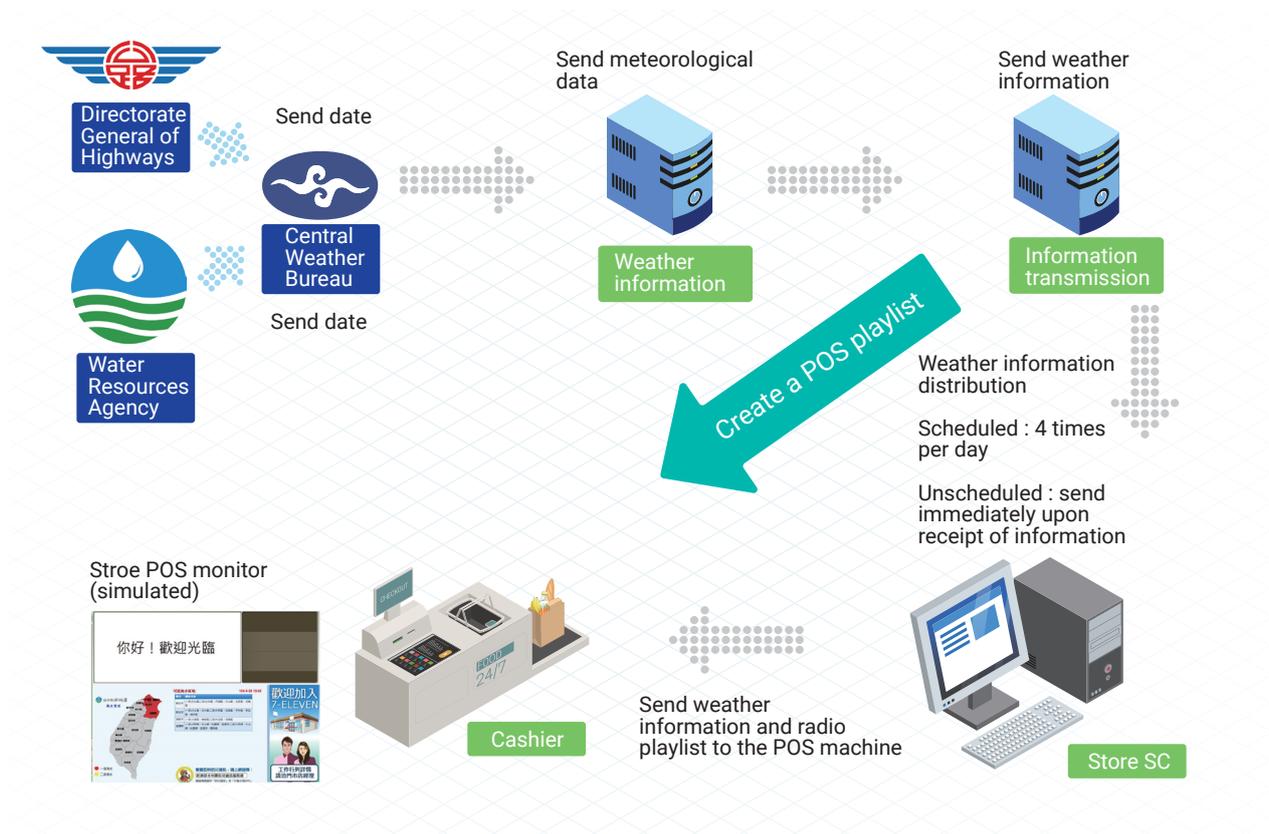
The operation of PCSC's stores is closely related to people's daily life. Hence, we utilized the wide distribution of our stores that are open 24/7 in our climate change adaptation strategy, and assist in reporting the disaster situation and providing warning information. Due to the growingly severe disasters caused by climate change, facing the physical impact brought by major disasters such as needing to repair buildings and facilities, PCSC also established the "Standards for Construction of Floodgates and Low Walls of Stores in Low-lying Areas" and stepped up training of store personnel, so that we will have better response and disaster relief abilities for typhoon and flood. This will allow stores to successfully maintain operations and improve their climate change adaptation ability and that of neighboring communities. We also provide online reminders to all stores before the torrential rain and typhoon season each year.

Climate risks		Risk description	PCSC's response
Transition risks	Fuel/Energy taxes or related laws	PCSC is considered a major energy user due to its contract power consumption exceeding 800 kW, and therefore must reduce power consumption by 1% each year.	<ul style="list-style-type: none"> ■ Set energy conservation and GHG reduction targets ■ ISO 14064 inventory and verification is carried out each year ■ Energy conservation and carbon reduction measures at the headquarter and stores
Physical risks - Acute	Increased severity of extreme weather events, such as typhoon, and flood.	<ul style="list-style-type: none"> ■ The torrential rain in May 2019 flooded 68 stores. ■ Typhoon Mitag in September 2019 damaged 9 stores. 	<ul style="list-style-type: none"> ■ We installed the weather information system to immediately issue weather and flood warnings to stores. ■ Strengthened training of store personnel for response and disaster relief when a typhoon or flood occurs ■ Established the Standards for Construction of Floodgates and Low Walls of Stores in Low-lying Areas ■ Installed water tanks (500 L) in the storage room of stores ■ Commissioned a vendor to check the completeness of disaster prevention/relief supplies in stores (power generator, pump, high pressure washer, searchlights, floodgate, sandbags, etc.) ■ Natural disaster insurance covers losses and repair expenses of stores

Adaptation measures of stores in low-lying areas



Schematic diagram of the weather information system





6.2 Implementation of Energy Conservation and Carbon Reduction

PCSC established energy policy to reduce the impact of energy consumption. While satisfying customers' needs, we use our stores as a base for energy conservation and carbon reduction utilizing the channel's advantage. We also exert our influence through the benefits of energy conservation.

6.2.1 Energy and Greenhouse Gas Management

PCSC's main business locations include stores (including retail stores and lifestyle centers) and offices (including the headquarter, regional offices, and training centers) around Taiwan and on offshore islands. Since 2017, we conducted GHG inventory according to ISO 14064-1:2006, and determined our overall GHG emissions, and also passed third party certification.

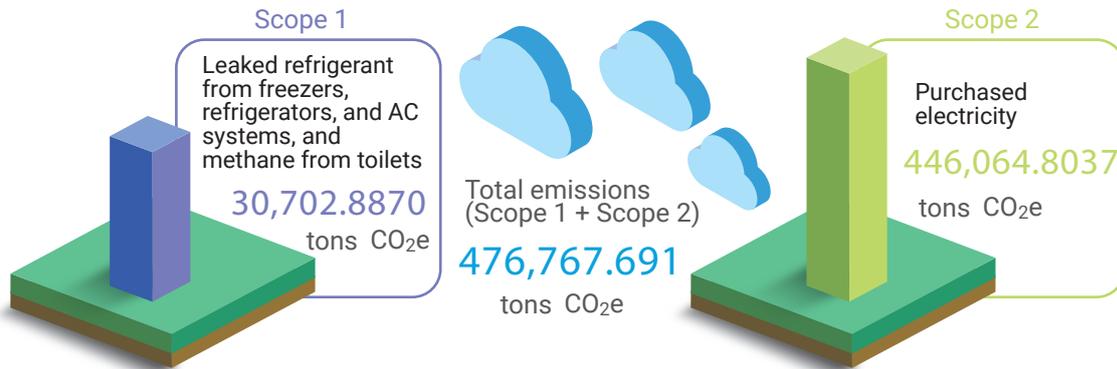
Environmental or Energy Management Certifications Obtained by PCSC	Business locations included in 2019	
	Stores (retail stores and lifestyle centers)	Offices & Training Centers
ISO14064-1:2006 GHG Inventory	5,761 stores ^{Note} , 22 lifestyle centers (excluding rented counters)	Headquarter, 8 regional offices, training centers

Note: The 5,761 stores in the 2019 inventory include 115 stores that were relocated or closed in 2019.

Total power consumption of PCSC business locations (including 22 lifestyle centers) covered in the inventory was 836,895,000 kWh in 2019, in which power consumption of convenience stores was 830,639,800 kWh, accounting for 99.25%. Scope 1 and Scope 2 GHG emissions of PCSC in 2019 was 476,767.691 tons/CO₂e, in which 93.56% was Scope 2 emissions from purchased electricity. Scope 1 emissions accounted for 6.44% and was mainly due to leaked refrigerant from freezers, refrigerators, and AC systems at our stores. The scope of inventory was expanded to 5,761 stores in 2019, including 115 stores that were relocated or closed in 2019.

GHG emissions in 2019 decreased 20.79% compared with the previous year. The carbon emission factor in 2019 was 0.533 kg/kWh, down 3.79% from 0.554 kg/kWh in 2018. Furthermore, when calculating the amount of leaked refrigerant for Scope 1 this year, instead of using a fixed emission factor, we used the amount of refrigerant refilled during maintenance and repair of equipment that uses refrigerant, these are the reasons why GHG emissions decreased 77.68% from 137,580.0151 tons/CO₂e in 2018 to 30,702.887 tons/CO₂e in 2019.

Scope of GHG inventory



Note 1: The boundaries of the inventory include 5,761 stores (including 115 stores that were relocated or closed), the headquarter, 8 regional offices, training centers, and 22 lifestyle centers.

Note 2: The calculation of Scope 2 emissions is location based. The electricity emission factor for 2019 has not been announced, so the factor of 0.533 kg CO₂e/kWh in 2018 was used for calculation.

Note 3: Scope 1 and Scope 2 emissions were determined using the methodology of ISO 14064-1:2006; The national emission factor on the GHG inventory form was used as the emission factor; GWP uses values in the IPCC's Fourth Assessment Report in 2007. The scope of verification only includes Scope 1 + Scope 2.

6.2.2 GHG Emission Intensity per Unit Revenue and Reduction Targets

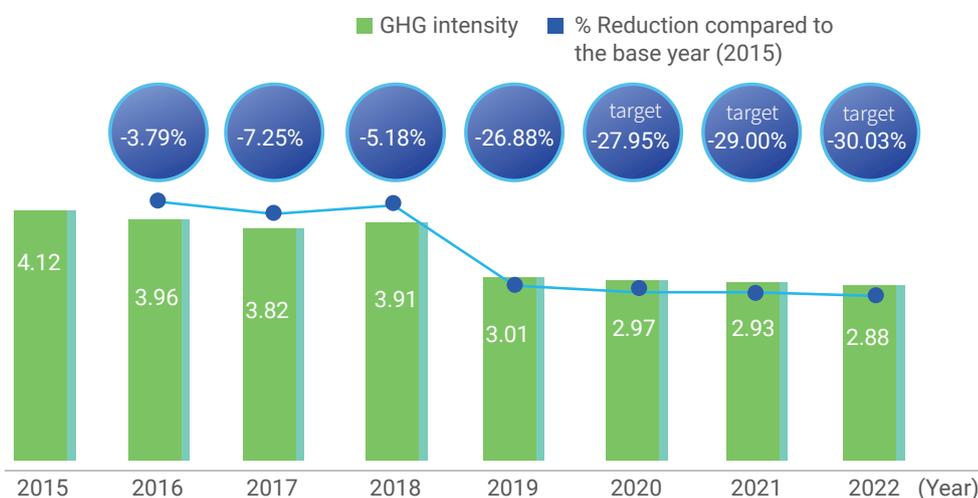
The main source of GHG emissions at PCSC is electricity consumption of stores. Considering that electricity consumption is related to the scale, equipment, and business type of stores, which will be reflected on operating revenue. We calculated the emission intensity per NT\$1 million and used it to set overall GHG reduction targets.

We use the 2015 GHG inventory results as the baseline for reduction targets. Considering future revenue growth and business expansion, we are committed to reducing GHG emission intensity (emission per NT\$1 million in revenue) by 9.26% before 2021. We achieved 92.67% of our reduction target in 2019. In the future, we will continue to review our progress in achieving targets, and update mid-term and long-term reduction targets after considering economic growth and advancements in energy-saving technologies.

Larger stores have higher refrigerant leakage due to the higher number of air conditioners in the store and storage room. Hence, we will evaluate the use of eco-friendly refrigerants, such as R448, to reduce Scope 1 GHG emissions. As for Scope 2 GHG emissions, excluded the electricity emission factor growing each year,

PCSC will implement energy conservation measures in stores and offices to gradually achieve reduction targets. We expect GHG emission intensity in 2022 to be 30.03% lower than the emission intensity in 2015 (baseline). PCSC's emission intensity per NT\$1 million in revenue was 3.01 tons/NT\$1 million in 2019, which was already 26.88% lower than 2015 (baseline).

GHG Intensity Reduction Roadmap





6.2.3 Store and Office Energy Conservation

Electricity use by stores is the main source of PCSC's GHG emissions. Hence, we implemented energy conservation plans for existing and new stores, utilizing the channel's characteristics to achieve energy conservation and carbon reduction, while providing consumers with a convenient consumption experience. Departments of PCSC that are responsible for energy management include: Engineering and Technologies Department (store decoration), Operations Planning Department (assists store personnel in implementing energy management and energy conservation), and Administrative Management Team (monitors energy consumption by the headquarter and implements energy conservation actions). With each department carrying out different measures, PCSC's headquarter and stores all comply with principles for energy conservation and carbon reduction.

Considering the different patterns of electricity use by stores and the headquarter, PCSC has set annual performance indicators separately, so that reduction performance can be quantified based on the electricity intensity of stores and the headquarter.

► Office Energy Conservation Actions

- Office rooms in the headquarter have different energy use patterns than stores. Besides updating the headquarters' electricity and paper reduction targets and performance indicators, we implemented the ESCO (Energy Service Company) energy conservation service system in 2019 to track electricity consumption and identify and reduce abnormal electricity use.
- The building has a full heat exchanger, which brings fresh cold air during the winter, lowers the operating frequency of air conditioners, while maintaining office space at a suitable temperature, thereby achieving energy conservation.
- We have stepped up efforts to promote the importance of energy conservation at our headquarter to raise the energy conservation awareness of all employees. We implement management by walking around, examine the operation of equipment on each floor, and immediately make improvements whenever any problems are found, ensuring the stable operation of equipment and achieving energy conservation.

► Store Energy Conservation Actions

- We implemented the energy management system and compiled our GHG inventory each year. This allowed us to determine energy use characteristics of our stores and offices and identify GHG emission hotspots.
- PCSC established energy conservation rules for new stores in 2017, requiring new stores to use energy efficient equipment and systems, and gradually replacing old equipment of existing stores.
- PCSC began complying with energy conservation regulations of the Bureau of Energy for designated energy users in 2018. Actions include windbreak rooms to keep cool air inside, no longer using incandescent light bulbs, not setting air conditioner temperature lower than 26° C, reasonable lighting distribution, lighting reduction (increasing the distance between tubes) and lower brightness (lighting up a smaller area at night), shortening the time indoor lights are turned on, upgrading cold room and refrigerators, and installing constant-voltage variable-frequency hydraulic presses. These measures gradually improved the efficiency of energy use at our stores while maintaining service quality.
- We installed 2,794 sets of smart heating wire power savers on the doors of refrigerators in 2019, which will save 36,361,846 kWh.
- We focus on stores with electricity consumption higher than the average for their area and age, and assisted a total of 668 stores with making energy conservation improvements in 2019.
- Besides replacing energy-efficient equipment, all store personnel take training and are required to conduct regular checks on air-conditioning units, ventilation fans, lights, refrigerators, freezers, signs, and display windows in accordance with the "Store Energy-Saving Checklist" to ensure the efficient operation of all equipment.

- PCSC also renovate stores that have reached a certain age each year, in order to improve their energy efficiency. A total of 241 stores were renovated in 2019, and reduced electricity consumption by 6,272,442 kWh compared to 2018.

► Energy Conservation Performance

- Total electricity consumption by the headquarter of PCSC in 2019 was 27,607 kWh lower than the previous year, saving NT\$126,781 in electricity expenses.
- We provided guidance to 668 stores with high electricity expenses in 2019, and the average electricity savings per store was 3,267 kWh in 2019, saving approximately NT\$8,162,215 for the entire year.
- PCSC implemented 12 energy conservation action plans in 2019 and replaced/added 55,279 equipment and facilities, saving a total of 103,506,644 kWh, which is the equivalent of reducing GHG emissions by 55,169 tons CO₂e. This reduced the electricity expenses of stores by a total of NT\$242.2 million. The amount of electricity saved is equal to the annual electricity consumption of 10,725.88 households.

2019 Store Energy Conservation Action Plan		Quantity replaced	Energy saved in 2019		GHG reduction (tonCO ₂ e)
			kWh	GJ	
Equipment performance upgrade	Installation or replacement of inverter ACs in stores	1,536	31,406,786	112,577.0	16,739.8
	Energy savings from new third-generation combination refrigerator	641	7,814,026	28,009.2	4,164.9
	Installation of new energy efficient freezer	716	2,677,756	9,598.4	1,427.2
	The arcades of new stores are installed with LED lights (RC/FC2/FC1), each saves 10.08 kWh	5,535	3,793,951	13,599.3	2,022.2
	The arcades of existing stores are installed with LED lights (RC/FC2), each saves 5.04 kWh	1,593	1,143,748	4,099.7	609.6
	The signs of new stores use LED lights (RC/FC2/FC1), each saves 5.04 kWh	24,279	7,575,558	27,154.4	4,037.8
	Constant-voltage variable-frequency hydraulic presses	625	273,951	982.0	146.0
	Installation of LED lights inside stores	16,541	8,811,139	31,583.4	4,696.3
Improvement of the heat exchange environment	Introduction of windbreak room	171	1,141,135	4,090.4	608.2
	New stores are installed with DC fans (RC/FC2/FC1)	384	201,436	722.0	107.4
	DC variable frequency circulation fans in scores	464	2,305,311	8,263.3	1,228.7
Improvement heating time of heating wire	Electricity savings from heating wires of combination refrigerators in existing stores	2,794	36,361,846	130,338.3	19,380.9
Total		55,279	103,506,644	371,017.50	55,169.0

Note 1: The total energy savings from various plans is estimated by multiplying the difference between values measured before and after improvement by the total number of equipment replaced. The estimation method is as follows: 1. Compare the electricity consumption of constant frequency air conditioners; 2. Install an electricity meter and calculate the number of kWh used before and after improvement; 3. Calculate the difference in electricity consumption based on the average number of T5 lights and LED lights used in stores; 4. Calculate the difference in electricity consumption based on the average number of T6 lights and LED lights used in stores; 5. Compare electricity consumption with signs that use T5 lights; 6. Compare electricity consumption with constant-frequency hydraulic presses; 7. Compare the average electricity consumption after introducing the windbreak room.

Note 2: In 2019, regional managers and engineers of PCSC provided more active energy conservation guidance measures to 668 stores with monthly electricity expenses that are higher than the average for their group, which is divided by floor area. Measures include replacing energy-consuming and old equipment, improving the equipment cooling environment, lighting planning, replacing lights with LED lights, and strengthening energy conservation education to raise the awareness of store personnel. The 668 stores that received guidance reduced electricity consumption by 103,506,644 kWh in 2019, saving NT\$242.2 million in electricity expenses.



Energy-saving designs at PCSC stores

Signage lighting reduction and dimming

- Reduce from the original three rows of light tubes to two.
- Reduce the lighted sectors at night.
- Plan to replace signage T5 light tubes to LED tubes, introduce intelligent lighting systems and adjust lighting brightness at different time periods.

Smart outdoor lighting configuration

- Adjust the originally crowded configuration to interval spacing to reduce the number of lighting tubes required
- Sidewalk lighting fixtures upgraded to LED from T5 tubes

Building insulation measures

- Install roof insulation and roof ventilators
- Utilize insulating building materials, replace steel panels with 1/2B brick walls to prevent heat conduction
- No glass design for east-west side windows
- Plant trees to block the sun in western facing areas

Inverter air conditioners with circulation fans

Use high-efficiency inverter air conditioner units combined with circular fans to achieve highly efficient cooling.

Second-generation combination refrigerators

- Utilize DC exhaust fans, LED lighting
- Defroster coils upgraded to smart control, improve the 24 hour continued energy consumption model

Energy-saving windbreak rooms

- Where feasible and allowed by law, windbreak rooms installed outside automatic doors to keep cold indoor air in and bugs out.

Reduce indoor lighting usage hours

- For stores without building overhangs, window light fixtures and lighted signage are linked
- Customer seating areas managed by time intervals

Store lighting tube configuration

- Adjust the originally crowded configuration to interval spacing to reduce the number of lighting tubes required

Projection lights, lighted coffee signage, and refrigerator lighting changed to LED light fixtures

► Energy Efficiency Indicator

Since most stores are open around the clock, their electricity consumption pattern is different from the headquarter, regional offices, and training centers. To effectively monitor the electricity consumption of stores and gradually improve their electricity efficiency, we established an EUI based on electricity intensity and reduction targets for stores, and tracked the progress each month.

The electricity intensity reduction target for stores in 2019 was to lower electricity intensity by 12% compared to 2014, or lower 1.5% compared to 2018. The actual electricity intensity of our stores was 947 kWh/m² in 2019, and is 1.45% lower than 2018 and 13.4% lower than 2014. Compared with 2014, we have already achieved the electricity intensity reduction target this year; Compared with 2018, we did not reach the target because the number of stores that carried out renovation and improvement in 2019 fell short of expectations, and stores added relatively more equipment this year. We will continue to improve the electricity consumption by stores in the future.

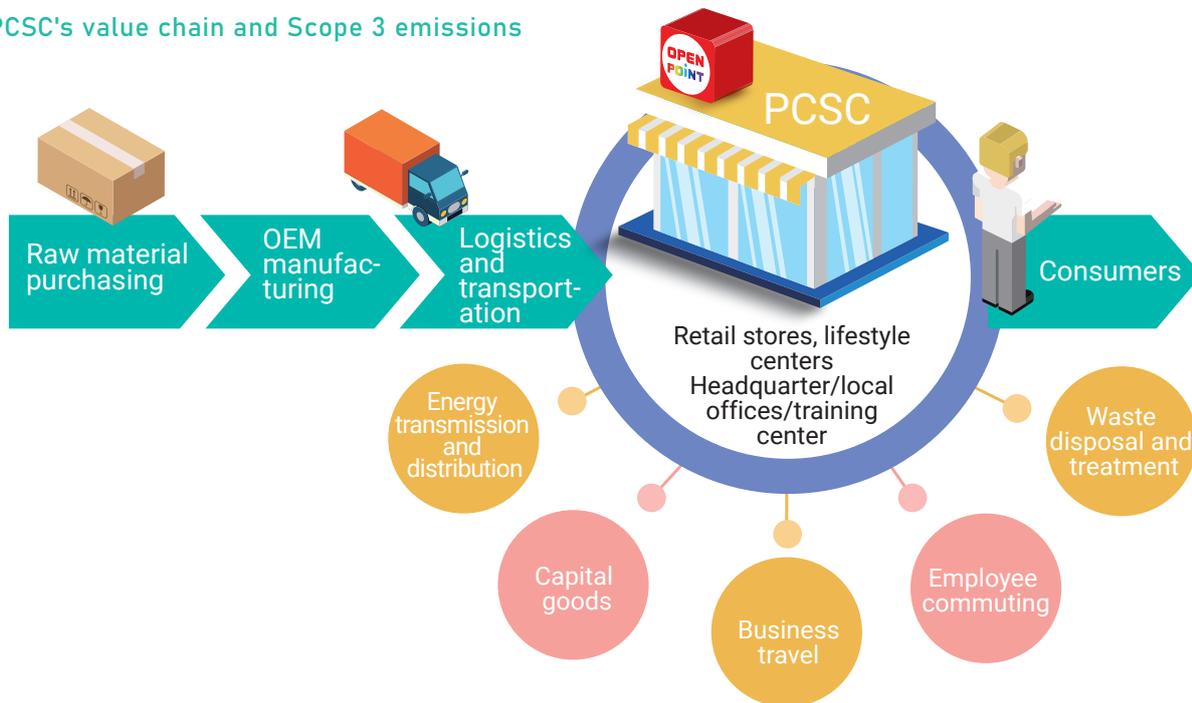
Furthermore, PCSC's electricity consumption per unit revenue was 5.39 (kWh/NT\$1,000) in 2019. For office staff to also implement energy conservation in daily operations, the headquarter implements target management and sets annual energy conservation targets based on EUI. We also implemented numerous energy conservation measures and promotion plans to raise the awareness of all employees. The headquarters' EUI was 159.1 kWh/m² in 2019, down 2.4% compared with the previous year, and surpassed the original reduction goal (reduction of 0.5% compared with the previous year) by a large margin.

EUI ^{Note} (kWh/m ²)*						
Year	2014	2015	2016	2017	2018	2019
Store	1,094	1,046	1,012	1,008	962	947

Note: The EUI of stores is calculated as the electricity consumption per ping (approximately 35.58 square feet) 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 this basis. The two are added to find the total electricity consumption that month, which is then divided by total floor area.

6.2.4 Scope 3 GHG Emissions

PCSC's value chain and Scope 3 emissions



To step up management of GHG emissions, we not only compiled a GHG inventory of Scope 1 and Scope 2 emissions in accordance with ISO14064-1:2006, but also identified GHG emissions from other indirect activities from the perspective of our value chain. These are known as Scope 3 GHG Emissions. We expect to gradually control the emission sources in our value chain through quantitative data, so as to understand the carbon footprint of stores' value creation process. With consideration to the feasibility of information collection and quantification, the main Scope 3 emissions of PCSC in 2019 include:

1. Upstream distribution (C4)
2. Fuel and energy related activities (C3)
3. Capital goods (C2)

► Upstream distribution

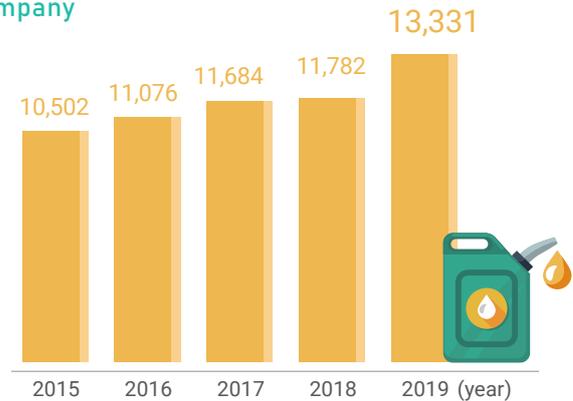
Upstream distribution refers to distribution by the logistics company, which is an important link in maintaining the smooth operation of PCSC's value chain, and is the most relevant source of Scope 3 GHG emissions. Retail Support International, UPCC, and Wisdom Distribution Service Corp. are responsible for centralized ordering and sorting, and split the responsibility for delivering products sold in stores based on their preservation conditions, product properties, and items. Furthermore, President Logistics International Corp. is responsible for the overall management of the logistics fleet including fuel consumption monitoring, introduction of green vehicles, electric carriers, and training logisticians.



We compiled statistics on the energy (diesel fuel) consumption necessary for logistics companies to provide logistics services in an entire year, and use it to estimate Scope 3 emissions. We further encourage logistics companies to implement energy conservation measures.

Total diesel fuel consumption of logistics companies for distribution was 13,331 kL in 2019, and approximately 9.51% more than previous year. Based on the fuel consumption, we estimated Scope 3 emissions at 35,331.61 tons CO₂e.

Diesel fuel consumption statistics of logistics company



► Fuel and energy related activities

Purchased electricity is the main energy used by PCSC. When electricity is transmitted from generators to users, the resistance in transformers and switches will cause a portion of the electricity to be converted into heat, resulting in loss. Taiwan Power Company's electricity loss rate from transmission line was 3.86% in 2019, and we estimated GHG emissions from electricity loss in the transmission and distribution process at 17,218.11 tons CO₂e in 2019.

► Capital goods

PCSC reviewed the IT related capital goods that were used in 2019, and selected the top 10 goods in terms of quantity. Scope 3 GHG emissions were then estimated from the perspective of product life cycle. With consideration to the availability of data on the top 10 goods, we were only able to obtain information on carbon emissions from LCD monitors in stores. Hence, the calculation of Scope 3 emissions in 2019 only includes LCD monitors in stores and the number of laser printers in the back office that was included in calculations in 2018. GHG emissions from IT-related capital goods was approximately 1,218.76 tons CO₂e in 2019, which was about 3.5 times that of 2018, and was mainly due to 4.7 times the number of LCD monitors replaced in stores in 2019 compared to 2018; the number of laser printers that was replaced in the back office also increased by 1.4 times.

Of the Scope 3 emissions we were able to collect information on, energy-related emissions, such as diesel fuel consumption by logistics companies and electricity loss during transmission and distribution, are still the main source of emissions. PCSC will continue to compile an inventory of Scope 3 emissions to understand the environmental impact of its value chain, and fulfill our responsibility to lead retail channels.

Scope 3 emissions	Source of emissions	Quantity used in 2019	Scope 3 emission in 2019 (tons of CO ₂ e)	Scope 3 energy consumption in 2019 (GJ)
Upstream distribution (C4)	Diesel fuel consumption by logistics company	13,331(kL)	35,331.61	466,734.06
Capital goods (C2)	IT product purchases (store LCD monitors and laser printers in the back office)	3,095 LCD monitors 230 laser printers	1,218.76	-
Fuel and energy related activities (C3)	Electricity loss from transmission and distribution during electricity use	Lost 32,304,147 kWh	17,218.11	116,294.93
Total Scope 3 emissions		-	53,768.48	583,028.99

6.2.5 Energy Conservation Actions of Logistics Companies

PCSC's commitment to energy conservation and carbon reduction is not only implemented in stores and offices, but also in influencing logistics affiliates in improving their logistics efficiency:

- Reducing GHG emissions from logistics by replacing old vehicles with more eco-friendly vehicles
- Optimizing the distribution process of logistics affiliates, including merging delivery routes to reduce the number of trips, and integrating primary logistics to reduce the number of trips.
- Simplifying operating procedures to shorten the wait time of refrigerated vehicles at stores and increase the energy use efficiency of vehicles.

President Logistics International Corp. is committed to replacing old logistic vehicles (emission control phases 3 and 4) with the latest emission control phase 5 vehicles, and aims to replace 267 vehicles before the end of 2020. Its 2019 goal was to purchase 56 of the latest vehicles, and has replaced 105 old vehicles with total cost of fixed assets at NT\$223,835,000. As of the end of 2019, it replaced 264 emission control phase 3 vehicles and 155 emission control phase 4 vehicles. Actions of logistics affiliates for reducing energy consumption and GHG emissions in 2019 are summarized below.

Logistics-related Energy Conservation Action Plans in 2019		Quantity	Benefits from Individual Energy Conservation Action	GHG reduction (Tons of CO ₂ e)
President Logistics International Corp.	Replacement of old logistics vehicles	60 emission control phase 3 vehicles	Each vehicle reduces CO ₂ emission by approximately 59.4 kg	4.18
		45 emission control phase 4 vehicles	Each vehicle reduces CO ₂ emission by approximately 13.71kg	
	The headquarter replaced all lights with energy efficient LED lights and installed air conditioners with monitoring functions	107 lights (428 lamps)	Each lamp that is replaced is 56W lower. Assuming that lamps are used 9H a day and 250 days a year, this is expected to reduce power consumption by 13,482 kWh in 2019.	7.2
Retail Support International (RSI)	Replaced all lights at Zhongli Plant, Starbucks, and low temperature DC with LED lights	2072 lights (4,287 lamps)	Assuming the lights are used 22 days a month, this is expected to reduce power consumption by 12,050 kWh each month, and by 144,598 kWh in 2019.	77.1
UPCC	Replaced lights at Badu DC and Zhongli Fresh Food DC with LED light bulbs.	292 lights (292 light bulbs)	Assuming the light bulbs are on 16H a day and approximately 5840H a year, this replacement will reduce power consumption by approximately 27,284 kWh a year.	14.5
	Cold storage box with dry ice was originally used for sorting, but was changed to third generation frozen cooler bag and cool storage preservation plate in June 2018	The use of dry ice was reduced by approximately 188 tons after this change		188
Wisdom Distribution Service Corp.	Water chiller efficiency improved through software – Benefits from setting timer to turn on and off	The replacement will reduce overall power consumption by 65.2kW. Assuming that lamps are used 10H a day and 30 days a month, this is expected to reduce power consumption by 234,720 kWh in 2019.		125.1
Total Emission Reduction from Logistics-related Energy Conservation Action Plans				420.3

Note: The electricity emission factor for 2019 has not been announced, so the factor of 0.533 kg CO₂e/kWh in 2018 was used for calculation.

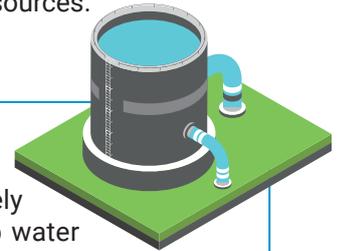


6.3 Resource Efficiency

Extreme weather events as well as natural resource consumption and shortage caused by climate change have made water and waste management an extremely important part of PCSC's value chain. In the stores business model, providing consumers with products and services is directly or indirectly affected by the stability of water supply and water quality, especially in areas that experience water shortages. Analyzing the water consumption patterns of stores, we identified water consumption hotspots and installed water-saving equipment to lower the impact of operations on local water resources.

“ Water Conservation and Waste Management ”

- We made adjustments to facilities for water conservation, including using water-saving faucets, adjusting the water flow of the sink and toilet, immediately calling the plumber when there is a leak in the faucet or toilet, and putting up water conservation reminders in a clearly visible place.
- Recyclables are gathered in the recycling area and sorted into paper, glass, plastic, etc. for a professional recycling company to recycle and reuse. General waste is cleared by local environmental protection department and incinerated.



As more and more people call for plastic reduction, countries in Europe and America have made it a policy to restrict the use of single-use plastic products starting in 2019. Taiwan government began enforcing the policy to prohibit the use of plastic straws in schools, department stores, fast food restaurants, and government agencies starting on July 1. Even though PCSC is not on the list of controlled sites, we voluntarily participated in this plastic reduction action. PCSC no longer provide customers with plastic straws at 800 stores starting in August, and expanded the action to all stores in September. According to PCSC's Operations Planning Department, it's estimated that plastic straw used reduced by 229 million in the six months after the reduction action was implemented in 2019, reducing plastic straw used by an average of 38.16 million a month. This is expected to reduce plastic straw use by 458 million straws in a year. Changing consumers' habits is a challenge that we faced when the policy to prohibit plastic straw use was first implemented. PCSC began by making adjustments to the cup lid of beverages starting on July 1. Besides using sippy cup lids at stores in the four types of places where straws are banned, all beverages sold in other stores in Northern Taiwan also began providing sippy cup lids mid-July, and we gradually expanded to all stores.



Besides supporting government policy to restrict the use of plastic straws, PCSC also began to use eco-friendly packaging materials for private label products, such as: bio-based PLA materials, PSC certified packaging, recycled cup sleeves and stands, and used recyclable product packaging. We give priority to eco-friendly materials and certified packaging materials during purchases, and also proposed designs of lighter packaging materials, in hopes of gradually reducing plastic use. Logistics companies that we have worked with for a long period of time use reusable boxes and pallets instead of disposable paper boxes, which reduces the waste generated from packaging in the distribution process.

To fulfill the social responsibility of retailers and increase waste reduction and recycling rate, PCSC utilized the extensive distribution of its stores to support the Environmental Protection Administration's policy to recycle batteries and IT waste in exchange for vouchers. This will prevent such waste from entering the general waste disposal system and having a negative impact on soil and water. PCSC established an Equipment Center and internal recycling system to show the spirit of cherishing and not wasting things. The center collects old equipment released by stores that were renovated or closed, and then repairs, refurbishes, and reuses the equipment to reduce expenses and effectively prevent resource waste, which also achieves waste reduction.

6.3.1 Water Resource Management

All business locations of PCSC use tap water, and stores account for the majority of water consumption. The Engineering and Technology Department examined areas where stores use more water, and determined the following water consumption hotspots: restrooms for customers, sprinklers, and the sink at the counter. We installed water-saving facilities to adjust water flow to 500 cc per second, which reduced the water consumption at stores.

The headquarter is also actively participating in water conservation actions. We reduced the water flow of faucets in restrooms and pantries and installed water savers in urinals in 2019. The headquarter set the following annual water conservation goal: Reduce average water consumption per person by 0.5% compared to the previous year, and implement water conservation measures via target management. Total water consumption of the headquarter was 5,318 m³ in 2019, average water consumption per person was 6.7 m³, down 6.9% compared with the previous year, surpassing the water conservation goal for the headquarter (reduce water consumption by 0.5% compared with the previous year).

Water consumption of PCSC business locations in 2019

Category	Scope	Amount in 2019
Actual water consumption	Headquarter	5,318(m ³)
	3,763 stores	1,758,809(m ³)
Estimated water consumption ^{Note}	8 regional offices	11,221(m ³)
	1,892 stores	884,312(m ³)
Total water consumption		2,659,660(m³)

Note: The water consumption of regional offices is estimated based on the average water consumption per person at the headquarter and the number of employees in regional offices. The water consumption of stores is estimated based on the average water consumption of stores for which actual statistics are available and the total number of stores. The water consumption patterns of training centers and lifestyle centers is different from the headquarter and stores, and were therefore excluded from estimates.

After analyzing the correlation between operating activities and water consumption of stores, we considered the effect of future PSD growth and store growth, and have made a commitment to maintain the intensity between average water consumption of stores and PSD at the 0.5% level of 2018 between 2019 and 2021. We will continue to track the relationship strength between water consumption and PSD, and use it as the basis for setting future goals. The relationship strength of water consumption by stores was 0.6% in 2019. The slight difference from the target value was due to the increase in beverage sales of stores in 2019 compared with 2018, resulting in the relationship strength of water consumption exceeding the target value. PCSC stepped up the promotion of water conservation measures that have room for further improvement in 2019, including reminders to turn off the faucet in the restroom of stores, immediately finding and repairing leaks when leaks occur or the water bill suddenly increases, in order to reduce the waste of water resources.

6.3.2 Waste Management

PCSC stores are separately responsible for waste clearance method and costs. Hence, it is relatively hard to gather data on overall waste generation and clearance. Starting in 2018, we surveyed stores that commissioned a waste clearance company, and found that this included a total of 645 stores located in Taipei City and New Taipei City in 2019. According to the waste clearance company, an average of 453,318 kg of waste is cleared each month, and we estimated the total weight of waste cleared each year on this basis. Furthermore, we analyzed the correlation between the number of seats in stores and weight of waste cleared, and found that stores with more seats had to clear far more waste than stores without seats due to consumers dining in.

Amount of non-recyclable waste cleared in 2019

Category	Scope	Amount in 2019
Actual statistics	Headquarter	24.09 Tons
	645 stores	5,262.49 Tons ^{Note 2}
Estimate ^{Note 1}	8 regional offices	50.85 Tons
	The remaining 5,010 stores	42,253.45 Tons
Total amount of waste cleared		47,768.22 Tons

Note 1: The total amount of waste cleared in regional offices is estimated based on the average amount of waste generated per person at the headquarter and the number of employees in the headquarter/regional offices in 2018. The total amount of waste cleared in stores is estimated based on the average amount of waste cleared per store provided by the waste clearance company and the total number of stores. The waste generation patterns of training centers and lifestyle centers are different from the headquarter and stores, and were therefore excluded from estimates.

Note 2: Data on the amount of kitchen waste cleared from stores by the waste clearance company is available starting in 2019. Hence, the weight of kitchen waste was deducted from the total weight of waste cleared from stores in 2019.



The total weight of non-recyclable waste cleared from the headquarter of PCSC in 2019 reached 24,099 kg. After analyzing the correlation between operating activities and waste generation of stores, we considered the effect of future PSD growth and store growth, and have made a commitment to maintain the relationship strength between waste generation of stores and PSD at 0.9% between 2019 and 2021. We will continue to track the intensity between waste clearance and PSD, and use it as the basis for setting future targets. The intensity of waste clearance by stores reached the goal of 0.9% in 2019. We will continue to track waste clearance by stores, and will maintain the relationship strength of waste clearance at the target value.

6.3.3 Convenient Recycling Platform

PCSC effectively combined "convenience" with "recycling" as early as 1995, starting from recycling batteries to encourage people to recycle. PCSC began to cooperate with the Environmental Protection Administration's policy in 2010, and allowed people to recycle IT-related waste at stores, including batteries, laptops, CDs, mobile phones, and chargers, utilizing the large number of stores to make recycling more convenient. PCSC provides vouchers in the amount of NT\$3 to NT\$120 based on the type and quantity of IT-related waste that is recycled, encouraging people to use stores service for recycling. This initiative has produced excellent results over the years. As revenue from CITY CAFE continued to grow, PCSC also began recycling the empty milk bottles. Utilizing the distribution process of logistics companies, recycled goods are gathered from stores through the reverse logistics system and then further sorted and handled.

Reverse logistics recycling performance of logistics companies in 2019

Category	Retail Support International (RSI)	UPCC	Wisdom Distribution Service Corp.	Total
Plastics (kg)	503,392	127,264	45,654	676,310
Paper and paper containers (kg)	4,721,561	2,897,864	1,297,387	8,916,812
Metals (kg)	0	10,239	2,587	12,826
Batteries (kg)	327,155	0	0	327,155
CDs (kg)	65,889	0	0	65,889
Mobile phones (units)	124,301	0	0	124,301
Chargers (units)	69,534	0	0	69,534
Notebooks (units)	9,722	0	0	9,722

Note: IT-related goods include mobile phones, chargers, and laptops.

PCSC has spared no effort in the promotion of recycling. We set the goal to reduce average paper consumption per person by 0.5% in 2019, in order to encourage employees in headquarter to conserve resources. We also promoted the use of electronic files instead of printing, scanning, and photocopying, so as to reduce paper consumption in the office and for administrative procedures. Average paper consumption per person in 2019 decreased 0.6% compared to the previous year, exceeding the original goal. Recycling is implemented at our headquarter, and 15,272.2 kg of waste was recycled in 2019, up approximately 31% compared with the previous year.

Recycling at the headquarter in 2019		
Paper	Paper	6,859 kg
	Carton	6,462 kg
Plastic bottles		1,503 kg
Tin cans		374 kg
Aluminum cans		74.2 kg
Total		15,272.2 kg

6.3.4 Store Equipment Reuse

PCSC established the Equipment Center to show the spirit of cherishing things, and recycles and refurbishes air conditioners, refrigerators, oden machines, and microwaves from stores that were renovated or closed, thereby preventing waste of resources and reducing waste generation. This also reduces expenses from equipment purchase. Number of machines refurbished and reused in 2019 reached 1,525, saving equipment purchase expenses reaching NT\$50,266,866.

Equipment	Number of machines refurbished and reused	Refurbishment expense (NTD)	Savings from equipment purchase (NTD)
34 types of equipment, including air conditioners, refrigerators, oden machines, and microwaves	1,525	6,460,526	50,266,866

6.4 Green Accounting & Green Procurement

6.4.1 Green Accounting

(1) Environmental accounting (green accounting):

PCSC provides consumers with safe, convenient products and innovative services in the spirit of corporate social responsibility. At the same time, we promote an eco-friendly lifestyle based around energy conservation, carbon reduction, and caring for the planet. PCSC continues to make additional contributions to society and charity through our founding ideal of "Friendly 24-hour Service, Happiness is Always Near." We convert tangible actions into financial data through the green accounting system, and compiled statistics on our environmental expenses (as shown in the table below). PCSC invested approximately NT\$1 billion on environmental protection assets and expenses in 2019, which mainly includes:

- Approximately NT\$140 million on eco-friendly packaging materials and testing
- Approximately NT\$170 million on variable-frequency equipment installed in stores for energy conservation and carbon reduction
- Approximately NT\$320 million on environment cleaning and greening and waste disposal
- Approximately NT\$120 million on eco-friendly equipment and green procurements by stores
- Approximately NT\$40 million on internal and external environmental protection promotion events and participation in social welfare events. Other policies that were implemented include: Better food safety management, plasticizer and pesticide testing, paper reduction, resource recycling, and promotion of Good Neighbor Funfest.

(2) Overview of environmental expenditures:

Statistics on environmental expenditures:

Category	Item	Content	Effects and effective resource utilization (quantity)/GHG reduction	Investment (NT\$1,000)	Expense (NT\$1,000)	Total
Merchandise	Switched to environment friendly packaging for products; Fresh food product inspections.	Purchased eco-friendly PLA packaging and coffee stands; Not using preservatives in fresh foods. Testing for agricultural chemical residue and other issues.	Protect people's health by taking safety and environmental impact into account.	—	144,798	144,798
Store	Implemented energy conservation measures	Purchase of energy-saving equipment - Installed 494 energy-saving devices, purchased 516 in-store AC circulating fans, installed 1,861 inverter AC units, installed 3,899 sets of LED lights, installed 1,036 sets of T5 lights, and implemented off-peak power off/standby function for 177 slurpee machines.	Conserve energy to reduce carbon emissions	157,503	17,153	174,656



Category	Item	Content	Effects and effective resource utilization (quantity)/GHG reduction	Investment (NT\$1,000)	Expense (NT\$1,000)	Total
Store	Cleaning and waste disposal	Cleaning and greening store environments, and the management of waste disposal.	Maintaining a clean environment	—	316,890	316,890
	Extended the service life of equipment and building materials	Introduction of steel counters at 1042 stores. Recovery and refurbishing of equipment for reuse.	Reduced the logging of trees and wasting resources	127,524	33,987	161,511
	Sustainable procurement	Purchased energy-saving equipment and eco-friendly paper/building materials; promoted the use of e-invoices.	Compliance with EU standards and FSC certification to cut energy consumption and reduce carbon emissions	—	124,141	124,141
Distribution	The President Logistics fleet, as well as the RSI and Wisdom logistics centers worked together to provide a reverse logistics system offering improved distribution efficiency and resource recycling	Investment in manpower and equipment for store reverse logistics.	Store recycling: 327 tons of used batteries, 66 tons of discarded CDs, 9,000 discarded laptops, 124,000 discarded mobile phones, and 69,000 discarded travel chargers/docks.	—	3,110	3,110
Internal environmental education	Environmental education and office recycling	Promotion of a paper-saving office environment, environment clean-up and greening, waste recycling.	Support Office: 1,503 kg of plastic bottles, 13,321 kg of paper products, and 448.2 kg of aluminum cans.	—	28,354	28,354
Contribution to society	Hosted or participated in environmental protection or charity events	Advocated conservation, cherishing all things, and CSR; sponsored environmental protection organizations.	7-Eleven the Love Charity Donation Program cares for the elderly and disadvantaged, and continues to find new interesting ways to interact with people and provide a unique donation experience, which will improve fundraising results! We took action to show our love by releasing the film What Time Is It? Café in 2019!	—	43,897	43,897
Total				285,027	712,331	997,358

(3) Benefits from main investments in environmental protection (energy-saving benefits from main eco-friendly equipment):

- Installation of circulation fans in stores: Invested NT\$1,448,000 to install 516 circulation fans, which will save 69,000 kWh/month and approximately 830,000 kWh/year.
- Installation of energy saving devices: Invested NT\$41,103,000 to install 494 devices, which will save 619,000 kWh/month and approximately 7.43 million kWh/year.

- Installation of inverter ACs: Invested NT\$112,930,000 to install 1,861 inverter ACs, which will save 672,000 kWh/month and approximately 8.06 million kWh/year.
- Installation of LED T5 lights in stores: Invested 2,023,000 to install 4,935 sets, which will save 254,000 kWh/month and approximately 2.16 million kWh/year.
- Slurpee machine suspension/hibernation mode during off season: 177 slurpee machines are suspended for repairs for four months or in hibernation mode for 6 hours a day during the off season, which will save approximately 133,000 kWh a year.
- Installation of steel counters: Invested NT\$127,524,000 to install 1,042 sets, and prevented 5,210 trees from being cut down. If counters are made from wood, not only will it require trees to be cut down, but also result in a shorter service life, and the counter cannot be recycled and reused. Counters made from steel have a longer service life and can be recycled and reused.

(4) Information on the EU RoHS: Products of the Company and its subsidiaries are not directly or indirectly exported to Europe and do not involve the EU RoHS.

6.4.2 Sustainable Procurement

Green procurement items include equipment that have obtained the Green Mark or Energy-Saving Mark, such as lights, air conditioners, IT-related products, coffee machines, and energy-saving devices, printing paper with the PAPER STAR Carbon Footprint Label, FSC certified stirrers and disposable chopsticks, and green construction materials used to renovate stores. PCSC purchases products and equipment that meet environmental standards, so that we can reduce the consumption of natural resources and mitigate the impact on the environment, while maintaining smooth operations and providing high quality services. The total amount of green procurements reached NT\$1.403 billion in 2019, which accounted for 14.08% of PCSC's annual procurement amount, achieving the goal of accounting for 5.5% of the annual procurement amount.

Item	Number	Purchase Amount (NT\$1,000)	Environmental protection mark/ Green certification
Inverter AC	1,861 units	112,930	Energy-saving mark
LCD monitor	3,744 units	23,051	Energy Star
Computer	23 units	399	Energy Star
UPS	690 units	8,783	RoHS
Coffee machine	4030 units	1,065,834	RoHS
Electricity saving device	494 units	41,103	Self-declared
Laser printer	289 units	964	Environmental protection mark
Eco-friendly packaging materials PLA - Coffee cups, ice cream cups/slurpee cups	31,168,303	48,664	Energy-saving mark
Desktop scanner	1,500 units	5,520	RoHS
OURS internal publication	11	225	FSC Certification
T5 lights	1,036	828	Energy-saving mark
T5 lights	1,666	83	Energy-saving mark
Green construction materials	14,675	37,986	Green construction material label
Circulation fan	516	1,448	Energy-saving mark
LED lights	3,899	1,110	Energy-saving mark
Printing paper	53,913 packs	3,626	PAPER STAR printing paper carbon footprint certificate
Stirrer	594,768 packs	14,901	FSC Certification
PLA straws	154,465 packs	6,652	Energy-saving mark
Disposable chopsticks (100 per pack)	869,475 packs	29,138	FSC Certification
Total purchase amount		NT\$1,403,245,000	