

## President Chain Store Corp.- A Happy Earth

### 2018 KPI

- Purchase energy-saving products certified with a Green Mark, accounting for 4.5% of annual purchases
- Energy usage intensity (EUI) for retail locations 1% lower than that for 2017, strive to reduce EUI by 2% over 2017 and 8.5% over 2014
- Power reduction, water reduction, and paper reduction targets for the headquarters building:
  - 1.Decrease headquarters (floors 2-11) EUI **0.5%** over the previous year
  - 2.Decrease water usage per person 0.5% over the previous year

3.Decrease paper usage per person **0.5%** over the previous year

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- Incorporate electronic receipts into stores to reduce the use of paper receipts and the number of discarded blank receipts.
- Integrate a cumulative total of more than 223 of the newest environmentally friendly vehicles into the PCSC fleet by 2020, including 48 in 2018.





6.Decrease paper usage per person 1% from the previous year



**Climate Action** 

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# 3.1 Green living through saving energy and reducing carbon

The time has come to take action regarding recent global climate change. With the implementation of the United Nations Framework Convention on Climate Change 21st Conference of the Parties (UNFCCC COP21) Paris Agreement, in order to realize their reduction commitments and to reach their reduction targets, countries around the world employed various methods, including voluntary action, the offering of incentives, and behavior made compulsory through legislation to motivate companies to improve their capabilities to mitigate and adapt to climate change. In order to minimize the impact of energy savings and carbon reductions on their organizations, while simultaneously maximizing the benefits, enterprises need to start the thinking about their own business activities and core capabilities.

Electricity is currently the primary energy source of both our headquarters and retail locations. In 2017, our headquarters and retail locations utilized a cumulative total of 817,000,000 kWh of electricity with retail locations using a total of 815,830,000 kWh, or 99.86% of the total. In 2017, the energy usage intensity of our headquarters and retail locations fell by 7.82% over 2014, far surpassing our target of 2%.

To deal with the impact of climate change, PCSC launched a series of low-carbon living and green recycling measures, offering consumers a quality environment and green products as we do our part for the environment through green operations and low-carbon marketing, while reducing environmental impact on our operations as we strive toward a future characterized by sustainable development.

### • Headquarters

Through the setting of targets and performance indicators, our headquarters was able to continue to reduce its electricity, water, and paper usage, realizing 100% of its reduction targets in these areas for 2017. In addition to target management, PCSC took it upon itself to promote a variety of measures to raise awareness among employees. Energy reduction slogans were strategically posted throughout the building to instill this environmentally-friendly mindset in employees. Equipment on each floor was also monitored to keep track of hardware performance, so that any problems could immediately be solved, thereby greatly reducing energy expenditures.

Item	Measures taken	2017 Performance
Electricity Reduction	<ul> <li>Complete replacement of VFD chillers.</li> <li>Building temperature set at 26 degrees.</li> <li>T8 light bulbs in offices replaced with LED lights.</li> </ul>	Compared to 2016 Electricity saved: -84,623 kWh Cost saved: NT\$767,739 EUI per person: -6.8%
Water Reduction	<ul> <li>Reduced water by adjusting faucet output to 450cc of water for every 10 seconds.</li> <li>Introduced new water saving urinal flushers</li> </ul>	Compared to 2016 Water saved: 149,000 L Cost saved: NT\$14,032 Water usage per person: -2.5%
Paper Reduction	<ul> <li>Controlled amount of paper that could be requisitioned by each floor of building.</li> <li>Encouraged double-sided printing.</li> <li>Instructed employees in use of printers to reduce costs incurred by printing mistakes.</li> <li>Trained employees to use scan to mail functions, scanning, and digital fax/paperless functions.</li> </ul>	Compared to 2016 Cost saved: NT\$8432 Paper usage per person: -4.7%

• Headquarters Electricity, Water, and Paper Reduction in 2017

In order to maintain the high quality of our products and to provide customers a comfortable shopping environment in our retail locations, PCSC emits almost 600,000 tons of greenhouse gasses each year. In order to reduce greenhouse emissions while maintaining the same service quality, we have drawn up energy savings guidelines for new retail locations, requiring new stores all use high energy efficient equipment systems. Existent retail locations are also gradually replacing their older equipment. In 2017, PCSC took part in the Ministry of Economic Affairs'"Energy Savings. Performance Contracts", thereby accelerating the speed by which existent stores were replacing equipment. In addition to upgrading equipment, the headquarters building and designated retail locations incorporated ISO 50001 energy management system to bolster their management methods. Making improvements to both equipment and management enabled PCSC to maximize its energy savings and carbon emissions efforts.

### • Retail locations

With the approval of the Equipment Purchasing Committee, old equipment was replaced with high performance equipment at existing retail locations. Inverter water pressure systems, DC motor automatic doors, and windbreak rooms continued to be integrated at existing retail locations throughout 2017, saving 41,346,000 kWh and reduce carbon emissions by 21,872 metric tons per year. All new stores were required to incorporate building insulation, low energy signage, low energy lighting, outdoor energy reduction, systems with inverter technology, LED lighting, windbreak rooms, and indoor lighting management. In addition to replacing equipment with energy-saving models, employees at all retail locations underwent training on regular inspections of the air conditioning, rotary fans, lighting, refrigerators and freezers, and signage and windows following the "Retail Energy Reduction Checklist" in order to ensure optimal equipment performance.







#### o 2017 Integration of Energy Saving Systems

Item	Qty (No. of machines)	Electricity saved (kWh)	Amount of carbon reduced (Tons of CO <sub>2</sub> e per year)	Cost saved (NT\$1000)
Replaced fixed speed air conditioners in retail stores with inverter air conditioners (RC/FC2)	2,698	930.00	11,781	49,884.4
Outdoor inverter central air conditioning units	20	930.00	93	394.0
Replaced 3 rows of lights in 3-foot horizontal signage with 2 rows of lights	1,023	269.50	1,393	5,897.5
Installed DC motor automatic doors	188	269.50	250	1,059.6
Introduced windbreak rooms	325	691.50	1,062	4,497.5
Installed of inverted U T5 lamps	866	129.50	517	2,189.4
Installed constant pressure inverter water pressure systems	1,086	18.75	103	435.8
New combination refrigerators	930	528.60	2,345	9,931.7
Installed inverters to independent combination refrigerator/freezers	2,601	287.00	4,328	18,325.5
Total			21,872	92,615.2

Note: Calculated in accordance with the 2016 grid emission factor of 0.529 (kilograms of CO2e/kWh)

#### • Equipment reuse

PCSC established an Equipment Refurbishing Center. Equipment from renovated and closed retail locations is turned in, refurbished, and reused, reducing resource waste and waste generation. It has also helps decrease the amount of money spent on equipment purchases. In 2017, NT\$99,118,000 was saved through equipment reuse.

Equipment	Number refurbished and reused	Refurbishment costs	Money saved by not purchasing new equipment
25 types of equipment, inkling air conditioning, refrigeration, oden, and microwaves	3,238	NT\$10,379,000	NT\$99,118,000

Note: Refurbishing costs have been subtracted from "money saved by not purchasing new equipment" above.



#### • Retail location electricity usage and EUI



Note: In 2017, the method for calculating EUI was amended as follows. Electricity consumption information from Taipower for each month is calculated by the average amount of electricity used per ping (1 square meter = 0.3025 ping) per month in each district, then the area of stores in each district that do not receive Taipower electricity bills is multiplied by the number of kWh used per ping to estimate electricity usage. The two figures are then added together to calculate the total kWh used in a given month. The EUI value is then determined by dividing that number by total floor area.

Energy usage intensity (EUI) is used as the performance index to continuously track the efficiency of electricity usage at retail locations; the EUI for 2017 was 1,008 kWh/m<sup>2</sup>, down 7.82% over 2014.

### Logistics companies

Retail Support International, Uni-President Cold-Chain Corp., and Wisdom Distribution Service Corporation are responsible for centralized intake and inventory, shipping of room temperature, Fresh food, refrigerated, and frozen goods, publications, and electronic platforms. Retail Support International is in charge of the overall management of logistics vehicles, including monitoring gasoline usage, procurement of eco-friendly vehicles and labor-saving device (e.g., electric transportation carts), and logistics specialist training. A total of 11,684 kL of gasoline (diesel) was used for shipments in 2017. Gasoline consumption increased by 5.49%, but the average carbon emissions per logistics vehicle was 2,191.54 kilograms, 0.1% less than 2016.





### Greenhouse gas inventory

PCSC has continued to manage its carbon emissions. In 2017, it implemented the ISO 14064-1 thirdparty verification, increasing the credibility of its emissions data, while keeping tabs of its internal greenhouse emissions information, processes, and data management methods. A total of 552,099.111 tons equivalent carbon dioxide (CO<sub>2</sub>e) of greenhouse gases were calculated in the 2017 investigation; 73.38% of emissions were Scope 2 emissions caused by electricity use. Scope 1 emissions accounted for 21.62% of emissions caused mainly by refrigerant gas leaks from refrigeration, freezer, and air conditioning equipment at retail locations.

In addition, PCSC carried out Scope 3 inventory and disclosure and according to the total fuel consumption of logistics distribution and transport, emissions stood at 30,966.515 tons of CO<sub>2</sub>e.



Note 1: Organizational boundaries include headquarters, regional offices, the training center, retail locations, and shopping centers.

Note 2: The grid emission factors for 2017 had not been released yet, so the above data was calculated in accordance with the 2016 grid emission factor of 0.529 (kilograms of CO<sub>2</sub>e/kWh).

Note 3: The scope of verification includes only Scopes 1 and 2.

### Other measures for reducing logistics energy use and emissions

With the ever-increasing number of retail locations across Taiwan and variety of services provided in 2017, logistics activity has also increased. In order to safely and securely ship products to each retail store as quickly as possible, companies that provide transportation services for us have bolstered their information management systems and standard procedures, aiming to ensure that logistics personnel and vehicles operate at maximum efficiency. For instance, the incorporation of mobile management apps, audiovisual logistics SOP files, President Tokyo Corporation maintenance systems, and operations management systems have helped standardize all aspects of shipping and ensure safe vehicle operation.

President Chain Store Corporation boasts long-term cooperation with affiliated logistics companies and has used various ways to significantly increase logistics efficiency while saving energy and reducing carbon dioxide emissions. President Logistics International, the affiliated company in charge of managing logistics vehicles, began integrating eco-friendly vehicles in 2015 and aims to replace older models (those that met 3rd Stage and 4th Stage Emission Standards) with the newest 5th Stage vehicles by 2020. With the ultimate goal of replacing 223 vehicles and the 2017 goal of introducing 40 vehicles that meet the latest emission standards, this year, a total of 54 3rd Stage vehicles and 41 4th Stage vehicles have been replaced. Target achievement rate was 238%. Exchanging these 95 older models reduced carbon monoxide emissions by 3.77 tons (59.4 kg per 3rd Stage vehicle and 13.71 kg per 4th Stage vehicle) for a fixed asset cost of NT\$254,600,000.



#### Vehicle systems

President Logistics International established the Digital Mobile Surveillance Center in 2012 and codeveloped an exclusive vehicle system with Chunghwa Telecom. This system performs dynamic management of logistics vehicles by utilizing GPS/GPRS technology to determine the real-time position of all vehicles as well as road and cargo conditions. The data from each vehicle was used to reduce traffic risk and ensure pedestrian safety. The successful application of safety data regarding speeding and rapid deceleration this year effectively controlled various risk factors and generated improvements, ensuring each logistics specialist maintains safe and healthy driving habits. Using breathalyzer tests and attendance records, PCSC was able to monitor whether logistics personnel turned up for work. In addition to eradicating driving while under the influence of alcohol, we were able to keep tabs of the number of hours that logistics personnel worked and the number of days that they turned up for work, thereby creating a good work environment and satisfying social expectations.

#### • Testing hybrid vehicles

Faced with increasing fuel costs, PCSC tested hybrid vehicles. We currently have two hybrid logistics vehicles in Taiwan. They can save a maximum of 10-20% in fuel over similar model diesel vehicles, but hybrids have higher costs than typical diesel vehicles and fuel prices are currently not extremely high, so we will continue to test hybrids and observe the results.





 Replacing cardboard boxes with pallets and plastic containers

Long-term use of pallets and plastic containers can replace the use of cardboard boxes and help the environment. In 2017, 1,627,531 pallets were used, a 1% decrease from 2016, and 10,230,367 plastic containers were used, a decrease of 8% compared to 2016.

Year	Shipping pallets	Plastic logistics containers
2017	1,627,531	10,230,367
2016	1,641,429	11,064,696
Percentage increase	-1.00%	-8.00%

#### • The results of office and DC power saving measures

- 1.Additional circulating fans were installed in office and air conditioning timers are used to automatically turn off air conditioning at the end of the work day.
- 2.Window curtains were installed in conference rooms to block direct sunlight in order to reduce air conditioning workloads.
- 3.Lighting devices that turn on and off automatically were installed in headquarters restrooms and refreshment areas. Energy-wasting light bulbs in the cafeteria, classrooms, and stairwells were replaced with energy saving light bulbs and expired fluorescent light bulbs are regularly replaced to maintain optimal brightness while saving energy.
- 4.Digitalization of documents (purchase orders, business travel applications) and payroll sheets, management of work-related paper usage, encouraging doubled-sided printing.
- 5.In 2017, PCSC's total DC power consumption was 5,199,997 kWh, 459,726 kWh less than 2016's 5,659,723 kWh, down 8.1%, reducing approximately 293 tons of carbon emissions [0.638 (kilograms of CO<sub>2</sub>/kWh) × -459,726].
- 6.In 2017, PCSC's total DC water usage was 24,555,000 liters, 872,000 liters more than 2016's 23,683,000 liters, an increase of 3.7%. This represents an approximate increase of 136 kilograms of carbon emissions [0.156 ×(kilograms of CO<sub>2</sub>/1,000 liters) +872].









Uni-President Cold-Chain Corp.

#### • Replacing cardboard boxes with plastic shipping containers

All products are moved from supplier to DC warehouse and to their final retail location in plastic containers, eliminating the need for cardboard boxes, reducing the amount of waste generated from packaging. A total of 59,045,725 plastic containers were used in 2017—a 0.99% increase from 2016.

UPCC	Refrigerated containers	Freezer containers	Fresh food containers	Bread containers	Total plastic logistics containers
2017	39,165,406	3,691,074	7,153,347	9,035,898	59,045,725
2016	37,623,179	3,930,814	6,853,257	10,058,737	58,465,987
Percentage increase	4.10%	-6.10%	4.38%	-10.17%	0.99%

#### • Initial shipment consolidation

With shipment consolidation, the transportation process is extended to receiving shipments from suppliers in order to control quality and to ensure the safety of perishable foods. In 2017, PCSC integrated the transfer operations of UPCC (Yingge) DC, UPCC (Nuannuan) DC, and UPCC (Chiayi) DC. By integrating operations and product shipments, reassigning transportation companies, and combining regional deliveries, PCSC reduced delivery vehicle mileage by 201 kilometers per day or 76,650 kilometers per year.

#### • Money-saving logistics container cleaning equipment

UPCC Beidou refrigerated delivery operations were incorporated into the Taichung Distributions Center's refrigerated operations. PCSC took this opportunity to upgrade to more power saving container cleaning equipment. The hot air generated from the steam was originally used to dry containers after they were washed. The new equipment removes water using centrifugal force. This new method reduces the amount of steam produced and it is no longer necessary to produce cold to reduce the temperature of empty containers. After upgrading the equipment in March of 2017, natural gas usage was reduced by 17,163 cubic meters over the same period in 2016. It is expected that the new method can reduce natural gas usage by approximately 20,000 cubic meters annually.





#### • Replacing cardboard boxes with pallets and plastic containers

Wooden pallets are used to bring shipments from suppliers into the Wisdom Distribution Service warehouse. Plastic pallets are used and reused for all transportation within the warehouse, product storage, and shipments. Shipments to retail locations replace cardboard boxes with plastic containers; a total of 21,677,232 plastic containers were used in 2017, 44% more than used in 2016.

All shipments mainly utilize plastic logistics containers with the exception of terminals and retail locations on outlaying islands due to their volume restrictions and excessive number of packages.

#### • Warehouse energy-saving measures

The Wisdom Distribution Service Corporation Shulin Distribution Center integrated an energy service system (ESCO), installing an inverter for the cold water pump and water tower fan and installing a flow meter detector on the cold water pipes. A total of 14,800 kWh was saved in 2017.



#### • Paper recycling equipment

The Wisdom Distribution Service Corporation now has two-phase automated paper compacting equipment. Cardboard boxes can be discarded from any floor using the chute. The addition of paper recycling equipment greatly improved work efficiency and reduced the number of manhours by approximately 10 hours (600 minutes) per day, saving NT\$1,321,000 each year.



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#### • Outstanding Logistics Specialist Ceremony

Over 600 logistics personnel have received commendations in the 10 Outstanding Logistics Specialist Ceremonies that PCSC has held over the years. During the ceremony held last year, 72 outstanding logistics specialists were recognized, including four who were recognized as Exemplary Logistics Specialists, i.e., logistics specialists who have been awarded three times.

Outstanding logistics personnel are selected from among the 1,933 logistics personnel employed at 40 distribution centers under four different companies, including President Logistics International, Retail Support International, UPCC, and Wisdom Distribution Service Corporation. Selection criteria are very rigorous. Successful candidates must have at least one year's experience on the job and have to be recommended by their units. They and their vehicles have to meet logistics management standards. They must meet vehicle safety and delivery punctuality standards. Other criteria include accumulated annual assessments of a certain level and no customer complaints or serious infractions for the entire year. Only 4% qualify for awards.

It is hoped that logistics specialists who have been recognized will produce a virtuous cycle by bringing their good attitude back to their place of work and influencing those around them, thereby further improving service quality.



### 3.2 Recycling together

To make it convenient for the public to recycle discarded information technology items, in 2010, PCSC began accepting old dry cell batteries, laptop computers, CDs, cell phones, and portable/dock chargers at 7-ELEVEN locations for recycling and gave out vouchers to encourage customers to recycle unused and unwanted electronics. The ICT products and peripherals recycling program has had great success since its inception. PCSC also began recycling empty commercial-use milk bottles, recycling a total of 4,321,050 bottles in 2017.



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#### • Recycling performance at retail locations

Total	2017	2016	2015	2014
Empty bottles used at retail locations recycled	4,321,050	4,217,445	4,131,855	4,069,455
Dry cell batteries recycled	14,759,587	14,599,781	13,853,167	12,870,280
CDs recycled	3,200,934	3,334,670	3,398,014	3,474,964
Portable/dock chargers recycled	74,132	79,294	89,874	103,957
Cell phone recycled	92,682	83,789	81,462	79,624
Laptop computers recycled	7,766	6,249	4,944	4,530







### • Logistics companies recycling performance

Item	Retail Support International	UPCC	Wisdom Distribution Service Corporation
Plastic (kilograms)	487,241	44,154	32,838
Dry batteries (kilograms)	264,202	0	0
Paper and paper containers (kilograms)	4,425,596	2,709,605	1,251,624
IT products (units)	227,918	0	0
Metal (kilograms)	4,911	42,256	3,195
Glass (kilograms)	10,544	0	0
Other (rubbish, kitchen waste, etc.) (kilograms)	22,760	0	0

Note: IT items include CDs, mobile phones and batteries, and notebook computers.

## 3.3 Green accounting and green procurement

### • Green accounting

PCSC upholds its corporate social responsibility by providing consumers with safe products and innovative services and striving to save energy and reduce carbon in order to create environmentally friendly lifestyles. PCSC uses its green accounting system to track overall investment performance. Overall environmental expenditures for 2017 are shown below.

In 2017, PCSC spent a total of NT\$900 million in various asset investments and other expenditures aimed at protecting the environment, including:

- (1) NT\$200 million on environmentally friendly packaging and inspections.
- (2) NT\$77 million on expenditures aimed at saving energy and reducing carbon emissions at branch stores and buying and installing inverters.
- (3) NT\$360 million on cleaning and greening the environment and disposing of discarded items.
- (4) NT\$200 million on equipment to protect the environment and green procurement at retail locations .
- (5) NT\$81 million on promoting environmental protection aimed both at personnel in the company and the general public as well as on charity activities. Other ongoing initiatives include more advanced food safety management, plasticizers and pesticide testing, reduced paper use, recycling at stores, and organizing Good Neighbor Club activities.

#### • Green accounting items

Category	Item	Description	Environmental impact	Investment (NT\$1,000)	Cost (NT\$1,000)	Total (NT\$1,000)
Products	Products for sale use environmentally- friendly packaging; inspection of food products	Purchased environmentally- friendly packaging: PLA and coffee cup rack. No preservatives or additives in food products; testing for traces of agriculture chemicals.	Recognized impact on health and the environment and helping to protect consumer health.		196,607	196,607
	Energy saving measures	Purchased energy saving equipment: 369 power saving units, 302 a/c circulating fans, 915 inverter a/c units, 8,234 LED energy saving lights, 3,913 LED lighting fixtures, and 931 Slurpee machines that turn off/sleep during off seasons.	Saved energy and reduce carbon emissions.	75,098	1,604	76,702
	Cleaning and trash removal	Cleaned retail locations, introduced green technologies, and removed/ recycled trash.	Maintained a clean environment.		361,671	361,671
Retail locations	Extend lifespan of equipment and building materials	Installed 539 steel countertops, equipment was recycled and prepared for reuse.	Reduced the amount of trees cut down and the amount of wasted resources	87,015	23,841	110,856
	Green procurement	Purchased energy saving equipment and environmentally- friendly paper and building materials. Promoted e-receipts.	Met European standards, FCS certification, save electricity, and reduce carbon emissions		82,543	82,543
Shipping	President Logistics International Corp., Retail Support International, and Wisdom Distribution Service Corporation combined to create a reverse logistics system, improve shipping efficiency, and recycle resources	Investment in reverse logistics recycling work force and equipment.	Recycled at retail locations: 263 tons of dry cell batteries, 57 tons of CDs, 7,000 laptop computers, 90,000 cell phones, 70,000 phone chargers.		3,035	3,035
Internal environmental education	Promotion of environmental education and office recycling	Promoted paper reduction in the office, cleaning and greening the environment, and recycling.	Recycled at offices: 2,064 kg plastic bottles, 10,586 kg paper, and 496 kg aluminum cans.		31,281	31,281
Social contributions	Organize or attend events beneficial to the environment and society	Promoted saving energy, not wasting, and corporate social responsibility, sponsored environment related organizations.	PCSC placed "Bring Back the Love" donation boxes in stores to help more charity organizations. This year, PCSC set up encouragement walls, ingenious interactive walls that encourage the public to donate to worthy causes. They have stimulated a great deal of conversation.		50,132	50,132
Total				162,113	750,714	912,827

### Green procurement

President Chain Store Corporation continues to engage in green procurement, purchasing an everincreasing variety of products, with green purchases making up 12% of overall procurement in 2017. In 2017, NT\$580,245,000 was spent on lighting and energy-saving air conditioners for retail locations and NT\$40,788,000 was spent on FSC certified office paper.

#### o 2017 Green procurement items and costs

Item no.	Purchased item	Qty	Cost (NT\$1,000)	Green Mark/Green certification
1	Inverter air conditioner	915	38,112	Energy Label
2	LCD screen	171	3,857	Energy Star
3	Computer	14	247	Green Mark
4	Uninterruptible power supplies	139	1,487	RoHS
5	Coffee and teapresso machines	1278	355,908	RoHS
6	Scanners	9	32	RoHS
7	Energy saving devices	369	30,996	Declaration of Conformity
8	Laser printers	160	619	Green Mark
9	Thermal printers	6	40	Green Mark
10	Environmentally friendly packaging for retail locations, including PLA coffee cups, soft serve/Slurpee cups, and shopping bags	113,751,651	62,346	Green Mark
11	OURS Magazine	12	261	FSC certification
12	LED light fixtures	3,913	3,390	Energy Label
13	Green building material	12,14	36,888	Green Building Material
14	Circulation fan	302	756	Energy Label
15	LED tubes/bulbs	8,234	1,844	Energy Label
16	Copy paper	58,165 reams	2,935	PAPER STAR Certificate for the Use of Product Carbon- Footprint Label
17	Stir sticks	467,416 packages	7,410	FSC certification
18	Disposable chopsticks	911,784 bags (100 ct)	33,117	FSC certification
	Total		580,245	

### 3.4 Legal compliance

No actions that violated environmental law and resulted in fines from competent authorities were recorded in 2017.

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