



# 中電資料冊

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# 1 ABOUT CLP



## Who We Are

- **CLP Power Hong Kong Limited** is a wholly-owned subsidiary of CLP Holdings Limited. CLP Holdings Limited is a company listed on the Hong Kong Stock Exchange and is one of the largest investor-owned power businesses in Asia.
- CLP Power operates a vertically integrated power supply business in Hong Kong, covering electricity generation, transmission and distribution, and marketing and customer services.
- CLP Power has been serving Hong Kong for nearly 125 years. It supplies highly reliable electricity to over 80% of Hong Kong's population.
- CLP Power entered the Chinese Mainland's energy market in 1979 to provide electricity to Guangdong Province. In 1985, CLP participated in the investment of the first large-scale commercial nuclear power station in the Chinese Mainland—Daya Bay Nuclear Power Station. It was one of the earliest and largest joint venture projects since the reform and opening up of the Chinese Mainland.
- In 2014, CLP Power, in collaboration with China Southern Power Grid International (HK) Co., Limited (CSG HK), a wholly-owned subsidiary of China Southern Power Grid Co., Limited, completed the acquisition of 60% interest in Castle Peak Power Company Limited (CAPCO) held by ExxonMobil Energy Limited. Separately, CLP Power also acquired ExxonMobil's 51% stake in Hong Kong Pumped Storage Development Company, Limited (PSDC). Following the acquisition, CLP Power holds 70% of CAPCO and 100% of PSDC whilst CSG HK owns the remaining 30% of CAPCO.
- To offer better services tailored to customers' needs and in the ongoing digital transformation of our business, we will continue to focus on the development of new smart services for households and businesses, as well as the use of technologies such as robotics solution, digitalisation, and data analytics to enhance our operational performance, and contribute to a greener and smarter Hong Kong. Based on our understanding of various sectors and businesses, CLP Power will continue to act as a bridge and an energy partner to connect them with start-up companies, smart products and service providers, which aim to provide innovative smart technology and energy saving solutions to address their operational needs.

## Facts and Figures (December 2024 figures)

### CLP Power in Hong Kong

Year founded	▪ 1901
Supply area	▪ Kowloon, New Territories and most of the outlying islands
No. of customer accounts	▪ About 2.86 million (as of June 2025)
Population served	▪ Over 6.3 million
Installed capacity	▪ 9,399MW (as of June 2025)
Total electricity sales	▪ 36,125GWh
No. of employees	▪ 4,317
Financial performance	▪ SoC Revenue: HK\$50,804 million
Regulated by	▪ HKSAR Government under the Scheme of Control Agreement

### Generation Facilities

Generation Facilities	Since	Fuel Type	Generation / Purchase Capacity (MW)	Remarks
Castle Peak Power Station	1982	Coal	3,058 <sup>1</sup>	Owned by Castle Peak Power Company Limited (CAPCO), in which CLP Power has 70% stake and China Southern Power Grid International (HK) Co., Limited has 30% stake
Black Point Power Station	1996	Natural Gas	3,850	
Penny's Bay Power Station	1992	Oil	300	
WE Station	2020	Landfill Gas	14	
Daya Bay Nuclear Power Station	1994	Nuclear	1,577 <sup>2</sup>	Owned by Guangdong Nuclear Power Joint Venture Company, Limited, in which CLP has 25% stake
Guangzhou Pumped Storage Power Station	1993	Hydro	600	By holding 100% of the shares in the Hong Kong Pumped Storage Development Company Limited, CLP has the right of use of 600MW, which is 50% of the power generation capacity of Phase 1 of Guangzhou Pumped Storage Power Station



Castle Peak Power Station



Black Point Power Station



Penny's Bay Power Station



WE Station



Daya Bay Nuclear Power Station

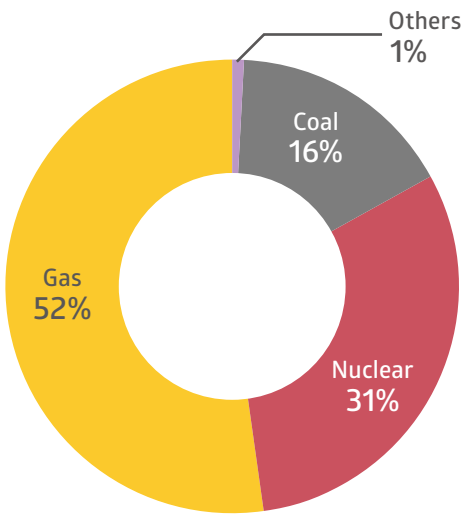


Guangzhou Pumped Storage Power Station

<sup>1</sup> Three coal-fired units at Castle Peak A Power Station (total 1,050MW) were retired by mid-2024.

<sup>2</sup> CLP Power purchases 70% of the output from Daya Bay Nuclear Power Station. Starting from late 2014, CLP Power has increased the purchase of approximately 10% of additional nuclear power from Daya Bay.

Electricity Output by Generation Fuel Type in 2024

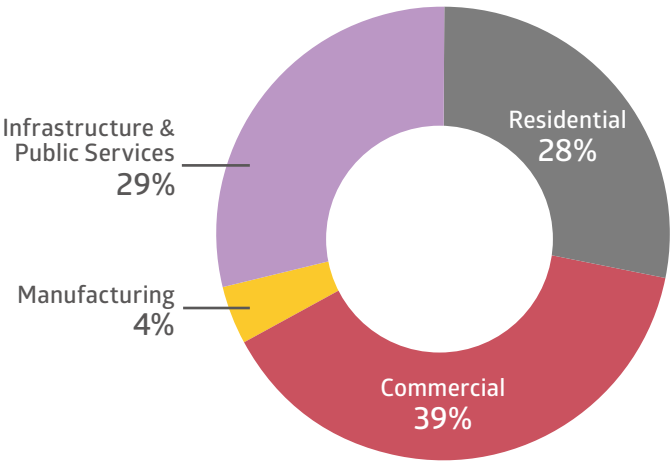


Transmission and Distribution (June 2025 figures)

No. of primary substations	257
No. of secondary substations	Over 15,800
Transmission and high voltage distribution lines	Over 17,300km
Average network loss (2020-2024)	3.36% of total energy consumption
Average unplanned Customers Minutes Lost per year (2022-2024)	6.0 minutes (1.0 minute if excluding cable bridge fire incident in Yuen Long and Super Typhoon Saola)
Electricity supply reliability (as of December 2024)	99.999%

Our Customers

Customer Type as of Percentage in Total Local Sales in 2024



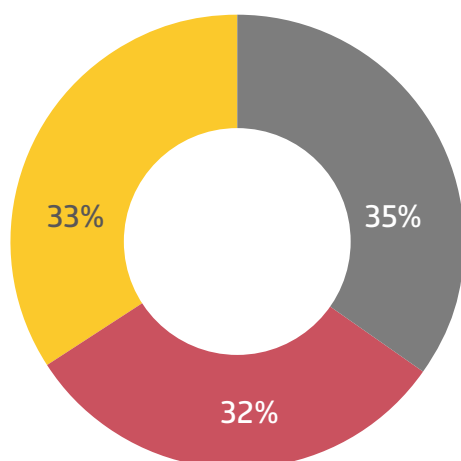




## Our Shareholders

- CLP Holdings Limited had more than 17,000 registered shareholders at the end of 2024. The actual number of investors in CLP shares will be much greater, taking into account those people and organisations who have an indirect interest in our shares through intermediaries such as nominees, investment funds and the Central Clearing and Settlement System of Hong Kong.

Shareholding by Category (2024)



As at 31 December 2024

- Interests associated with the Kadoorie Family  
our single largest shareholder group
- Institutional investors  
mainly based in North America, UK, Europe  
and Asia
- Retail investors  
mostly based in Hong Kong



- The Kadoorie Family became a shareholder in 1928 and participated in the Company's policy making. In guiding CLP forward, the Kadoorie Family follows the traditional values of previous generations, which include being forward-looking, financially prudent, showing integrity in business dealings, and having a sense of obligation to society. The Kadoorie Family is also engaged in a host of civic and philanthropic activities which benefit people across the city.
- Shareholder value is delivered through the maintenance of a stable dividend stream.
- CLP attaches great importance to effective communications with shareholders through various channels. Our Annual General Meeting (AGM) is well-attended by high number of shareholders each year. The 2025 AGM of CLP Holdings was held in a hybrid format, with close to 800 shareholders attended in person or online. Shareholders who joined the AGM online were able to view a live webcast of the AGM, pose questions and cast votes in near real-time through the online platform.
- Our Shareholders' Visit Programme, unique amongst Hong Kong companies, welcomed over 43,500 shareholders and their guests to various CLP facilities since the programme was initiated in 2003. In light of the pandemic situation, the tours were suspended in February 2020. The programme re-commenced in a full year format with strong support from shareholders after the relaunch in 2023. The theme for 2024/25 is "Power Brighter Tomorrows". Different types of visits have been arranged including visit to CLP Pulse, CLP Power Low Carbon Energy Education Centre and Black Point Power Station.



## 2 SCHEME OF CONTROL AGREEMENT

### What is the Scheme of Control Agreement (SCA)?

- CLP's electricity business in Hong Kong is regulated by the Hong Kong SAR Government under the [Scheme of Control Agreement](#) (SCA).
- The SCA is an agreement signed between the Hong Kong SAR Government and CLP Power / Castle Peak Power Company Limited (CAPCO). It defines the companies' role as an electricity provider, and provides a regulatory framework for the Government to monitor its operating performance and financial affairs.
- Under the regulatory regime, power companies have obligations to provide sufficient and reliable electricity supply in their service areas. Customers obtain quality electricity supply at a reasonable price and in an environmentally responsible manner, while the power companies earn a return which is reasonable in relation to the risks involved and the capital invested.
- The SCA also provides an effective and stringent regulatory framework for the Government to monitor power companies' operating and financial performance. Operating performance covers supply reliability, operational efficiency, customer services and energy efficiency. Financial performance covers power companies' capital investment, operating expenditure, permitted rate of return and tariff adjustment.
- The first SCA was signed between CLP and the Government in 1964. Since then, a 15-year term has been adopted in all the agreements except the fourth one that came into effect in October 2008. The duration of the agreement was 10 years with an option for the Government to extend the SCA for another five years. In April 2017, CLP signed a new SCA with the Government, effective from 1 October 2018 to 31 December 2033.

## Key Terms in the Current SCA

Key Term	What is it?
<b>Performance Targets</b>	<ul style="list-style-type: none"> <li>Performance targets of power companies are set for supply reliability, operational efficiency, customer services, supply restoration, energy efficiency, demand response and renewable energy (RE) development to enhance the service level.</li> <li>A new penalty scheme for large-scale electricity supply interruption has been introduced.<sup>1</sup></li> </ul>
<b>Basic Tariff</b>	<p>It is set at a level to cover the total costs of electricity supply, including operating cost, standard cost of fuels and SCA return.</p> <p>(See also Chapter 3 on <a href="#">Electricity Tariff</a>)</p>
<b>Fuel Cost Adjustment</b>	<ul style="list-style-type: none"> <li>Fuel Cost Adjustment is either a charge or rebate to cover the difference between the actual cost of fuels spent and the standard cost of fuel collected through the Basic Tariff.</li> <li>An arrangement for Monthly Fuel Cost Adjustment has been introduced, with revisions made more frequently from once a year to once a month to take into account the actual prices of fuels used. The arrangement is more transparent and reacts to fuel price changes in a more timely manner.</li> <li>A new mechanism to provide special tariff relief in the event of energy crisis has been introduced to help targeted residential customers most in need of support.<sup>1</sup></li> </ul>
<b>Fuel Clause Recovery Account</b>	<ul style="list-style-type: none"> <li>The Account through which the difference between the standard cost of fuel and the actual cost of fuel is captured and passed onto the customers by way of rebates or charges.</li> </ul>
<b>Tariff Stabilisation Fund (TSF)</b>	<ul style="list-style-type: none"> <li>If the gross tariff revenues collected exceed or are less than the total revenue required, the amount will be added to, or deducted from, the TSF.</li> <li>The TSF aims to ameliorate tariff increases or stabilise tariff levels.</li> </ul>
<b>Permitted Rate of Return</b>	<ul style="list-style-type: none"> <li>Power companies are permitted to earn a fixed rate of return of the total value of their average net fixed assets. The permitted rate of return under the current SCA is 8%.</li> </ul>

<sup>1</sup> Results of 2023 Interim Review of SCA.

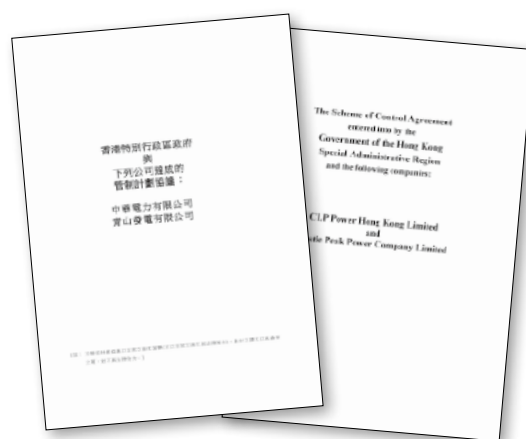
## Regulatory Process

- Government monitoring of the power companies under the SCA covers the following: Development Plan Review, Annual Tariff Review, Annual Auditing Review and Interim Review.

<b>Development Plan Review</b>	<ul style="list-style-type: none"> <li>CLP submits to the Government a detailed five-year plan to meet electricity demand for the development of Hong Kong. The plan, approved by the Executive Council, covers the required capital expenditure, operating and fuel costs, projected electricity sales and basic tariff rate.</li> <li>It is required whenever the current Development Plan is about to expire or major capital expenditure is planned.</li> </ul>
<b>Annual Tariff Review</b>	<ul style="list-style-type: none"> <li>CLP submits to the Government a tariff proposal for the coming year before the end of October each year. The proposal includes: sales forecasts, total capital expenditure, total operating expenditure, cost of fuels and projected basic tariff rate, etc.</li> <li>Any proposal to increase the Basic Tariff by more than 5% above the level approved in the Development Plan will require further approval by the Executive Council.</li> <li>The adjusted tariff will be effective from 1 January of the following year after the Government's review.</li> </ul>
<b>Annual Auditing Review</b>	<ul style="list-style-type: none"> <li>CLP submits detailed information to the Government before the end of March every year for auditing and review purpose.</li> <li>The Government will compare the actual results for the previous year with the corresponding estimates made at the last Development Plan, and monitor the Company's financial, technical and environmental performance.</li> </ul>
<b>Interim Review</b>	<ul style="list-style-type: none"> <li>A review is conducted every five years of the SCA on SCA-related matters. Changes can be made by mutual agreement by the Companies and the Government.</li> </ul>

## Evolution of the SCA

- Over the years, the terms in the SCAs have been evolving to reflect continuous refinements made to the regulatory framework in the areas of enhancing operation efficiency and services quality, promoting energy saving and improving environmental performance, increasing information transparency and economic benefits to customers.
- The Government conducted a **public consultation** on the future development of the electricity market in 2015. The majority of the respondents considered that the power supply in Hong Kong was reliable and safe at reasonable prices. The views collected generally agreed that the SCA had worked well and that improvements need to be made to the SCA but the requisite conditions for introducing competition were not present at that stage.
- After detailed discussion and taking into account of Hong Kong's long-term carbon reduction target for 2030 and results of the public consultation on the future development of the electricity market, the Government and CLP signed the fifth SCA in April 2017. This agreement took effect from 1 October 2018 and runs until 31 December 2033.



## Current SCA (2018–2033)

- The current SCA, which balances the needs of different stakeholders, is an agreement achieved through the joint efforts of both the Government and power companies. Taking into consideration of the Government's long-term carbon reduction target for 2030 which requires gradual transition to a generation fuel mix composed mainly of natural gas, the 15-year agreement provides a clear and certain regulatory framework for the future development of the electricity industry in Hong Kong. It also enables power companies to plan ahead and make appropriate investments to meet the Government's energy policy objectives.
  - The incentive and penalty mechanism of the previous agreement continues to apply, but with more stringent performance targets on supply reliability and customer services. Performance targets on supply restoration are introduced to enhance service levels. Besides, a new penalty scheme for large-scale electricity supply interruption<sup>1</sup> is introduced to complement the existing mechanism and encourage power companies to further improve their reliability performance.
  - In support of the Government's environmental policy to address climate change, a series of initiatives have been introduced from the fourth quarter of 2018. These include the Feed-in Tariff (FiT) scheme and Renewable Energy Certificates to encourage participation from various sectors of the community to support local renewable energy development. Other initiatives also include CLP Eco Building Fund, Community Energy Saving Fund and energy audits to help our customers achieve demand side management, energy saving, and enhance public education.
  - The Fuel Cost Adjustment (FCA) in the total tariff is revised more frequently from once a year to once a month under the SCA to reflect changes in fuel prices in a more timely way and with enhanced transparency.
  - A new mechanism is introduced to provide special tariff relief in the event of energy crisis<sup>1</sup> to help targeted customers mitigate the impact of the sharp rise in fuel costs.
- Link to reference information:  
[Scheme of Control Agreement \(2018–2033\)](#)

<sup>1</sup> Results of 2023 Interim Review of SCA.

- The table below shows a list of key refinements made to the current SCA (2018–2033) compared with the previous one (2008–2018).

Areas of Refinement	Current SCA (2018–2033)	Previous SCA (2008–2018)
<b>Duration</b>	<ul style="list-style-type: none"> <li>▪ 15-year term</li> </ul>	<ul style="list-style-type: none"> <li>▪ 10-year term, with an option to extend for five years by the Government</li> </ul>
<b>Permitted Rate of Return</b>	<ul style="list-style-type: none"> <li>▪ 8% on Average Net Fixed Assets</li> <li>▪ The same return rate applies to assets of both renewable and non-renewable energies</li> </ul>	<ul style="list-style-type: none"> <li>▪ 9.99% on Average Net Fixed Assets</li> <li>▪ Investments on RE facilities can earn a rate of return of 11%</li> </ul>
<b>Tariff Adjustment</b>	<ul style="list-style-type: none"> <li>▪ The annual tariff adjustment mechanism is maintained. The Fuel Cost Adjustment (FCA) in the total tariff is revised more frequently from once a year to once a month</li> </ul>	<ul style="list-style-type: none"> <li>▪ FCA in the total tariff is revised once a year</li> </ul>
<b>Incentives / Penalties on a number of performance categories</b>	<p><b>Operational Performances</b></p> <ul style="list-style-type: none"> <li>▪ More stringent performance targets for the incentive and penalty mechanism, including introducing performance targets on supply restoration and a new penalty scheme for large-scale electricity supply interruption<sup>1</sup></li> </ul> <p><b>Energy Saving and Demand Side Management</b></p> <ul style="list-style-type: none"> <li>▪ Performance targets for Energy Audit and energy saved from the initiatives under the current SCA are set at about four times the previous targets</li> <li>▪ Peak Demand Management programmes are offered to commercial and industrial customers in order to lower the overall system demand, resulting in a lower requirement for investments in new generation units in the long-term. The target for this initiative is to achieve a reduction of up to 60MW from the demand peak</li> <li>▪ A new five-year energy saving target has been set. CLP must achieve at least 4% of energy saving on the basis of the average annual sales within a five-year period in order to earn the incentive. More incentives will be given if the said energy saving reaches 5%</li> </ul> <p><b>RE incentives will be given if:</b></p> <ul style="list-style-type: none"> <li>▪ the ratio of RE in the local generation fuel mix achieves the target set (RE generated from projects directly owned by the Government is excluded)</li> <li>▪ the annual target of new RE connections to the grid is met</li> <li>▪ CLP sells RE Certificates</li> </ul>	<ul style="list-style-type: none"> <li>▪ The rate of return is linked to various performance targets under the incentive and penalty mechanism: <ul style="list-style-type: none"> <li>◆ Emissions (2008–2013)</li> <li>◆ Energy efficiency</li> <li>◆ Supply reliability</li> <li>◆ Operational efficiency</li> <li>◆ Customer services</li> <li>◆ Renewables</li> </ul> </li> </ul>

<sup>1</sup> Results of 2023 Interim Review of SCA.



Areas of Refinement	Current SCA (2018–2033)	Previous SCA (2008–2018)
<b>Environmental Initiatives</b>	<ul style="list-style-type: none"> <li>An Eco Building Fund to promote energy saving for buildings has been set up. Incentive target set for this initiative is to provide subsidies to 400 residential blocks and commercial and industrial buildings per year to carry out improvement work to enhance the energy efficiency of the communal areas of the buildings. The energy saving target is set at 48GWh per year</li> <li>CLP is entitled to 35% of the incentives in relation to Energy Audit, energy saved from these audits and promoting energy saving for buildings, while the remaining 65% will be allocated to the CLP Community Energy Saving Fund to enhance energy efficiency</li> <li>The CLP Public Education Fund has been increased from HK\$5 million to HK\$10 million a year</li> </ul>	<ul style="list-style-type: none"> <li>Set up Loan Fund for non-Government customers to implement energy saving initiatives</li> <li>Set up Education Fund for energy efficiency education and promotion activities</li> <li>Set up Eco Building Fund to subsidise building owners to carry out improvement works to enhance energy efficiency of non-commercial buildings</li> </ul>
<b>Support RE Development</b>	<ul style="list-style-type: none"> <li>Introduce FiT Scheme to encourage the development in the community. By connecting the systems to CLP's power grid, CLP will pay for electricity generated by these systems at a rate offered through the scheme</li> <li>Introduce RE Certificates Scheme to allow customers who prefer clean energy and offer different platforms for the community to participate in RE development</li> </ul>	<ul style="list-style-type: none"> <li>Investments on RE facilities can earn a rate of return of 11%</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>If there is excessive capacity when an additional generation unit is commissioned, 100% of the net asset value of the mechanical and electrical equipment of the said unit will be deducted from the fixed assets and the permitted return calculation</li> <li>Introduce a new Special Tariff Relief Mechanism in the event of energy crisis<sup>2</sup></li> <li>More information such as information related to fuel costs and fuel procurement, operating expenses and borrowing arrangements will be published to improve information transparency</li> </ul>	<ul style="list-style-type: none"> <li>If there is excessive capacity when an additional generation unit is commissioned, 50% of the net asset value of the mechanical and electrical equipment of the said unit will be deducted from the fixed assets and the permitted return calculation</li> </ul>

- In 2023, the Government, CLP Power and CAPCO conducted the Interim Review of the SCA and reached agreement on the incentive and penalty mechanism, special tariff relief in the event of energy crisis and improvements to information transparency.

<sup>2</sup> Results of 2023 Interim Review of SCA.

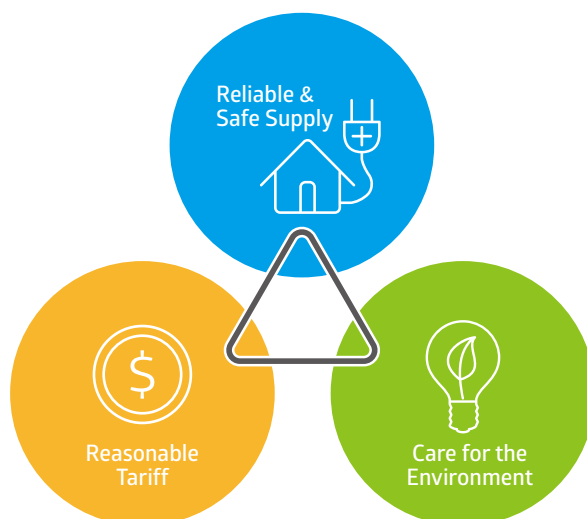
## CLP's Current Five-year Development Plan (2024-2028)

- Approved by the Executive Council, the second five-year Development Plan under the current SCA covers the period from January 2024 to December 2028. The projected capital investment for the period is HK\$52.9 billion, HK\$3.2 billion less than the investment of \$56.1 billion in the previous five years and three months of the 2018 Development Plan.
- In 2023, Hong Kong emerged from the pandemic and the business and social life of the city returned to normal. In the next few years, the Government will be focusing on developing new areas of economic growth in line with our nation's development and reinforcing Hong Kong's distinctive advantages as a global city. CLP's Development Plan aims to fully support Government policy priorities and covers a wide range of investments, with the majority on network development, to underpin Hong Kong's accelerating economic and infrastructural development, continued delivery of a world-class reliable electricity system, the transition to a smart and resilient city, and continuation of the decarbonisation journey.
- Whilst maintaining a world class electricity supply reliability, CLP's supply networks will also be expanded and reinforced to ensure adequate and reliable electricity supply to meet our customers' demand in a timely manner. As extreme weather poses threats to supply reliability, the Development Plan will also allocate resources to strengthen the resilience of our power supply facilities.
- Supporting Hong Kong to reach carbon neutrality is a long-term energy transition process. In the coming few years, the Development Plan will continue the objectives of phasing out of coal-fired generation units at Castle Peak A Power Station, switching to more local gas-fired generation, increasing the supply of zero-carbon energy and the transformation of Hong Kong into a smart city.
- Along this long decarbonisation journey, CLP has commissioned the second gas-fired generation unit at the Black Point Power Station in 2024. CLP will continue the Clean Energy Transmission System (CETS) enhancement works and the smart meters project. In addition, CLP will also take forward the hydrogen co-firing pilots at gas-fired generation units, develop a grid-scale battery system, and enable more charging facilities for an increasing number of electric vehicles.

## CLP's Performance under the SCA

- A **stable and long-term regulatory regime** can provide an effective mechanism to address the electricity industry's requirements for long-term and capital-intensive infrastructural investments.
- The SCA is recognised as a balanced and effective regulatory regime that has served Hong Kong well. Such a regime has supported CLP in delivering an electricity service that meets all four energy policy objectives — supply is safe and very reliable, environmental performance is improving and tariffs are reasonable. The SCA enables CLP to contribute to Hong Kong's long-term development and to play a role in enhancing Hong Kong's competitiveness and sustainable growth.
- The challenge for the electricity industry comes from the tensions that are apparent in the **Energy Trilemma** — how to deliver a safe and reliable supply to acceptable environmental standards whilst containing tariff adjustment at reasonable levels. With the SCA, the electricity industry of Hong Kong has been able to strike a balance in managing the energy trilemma.

### Managing the Energy Trilemma

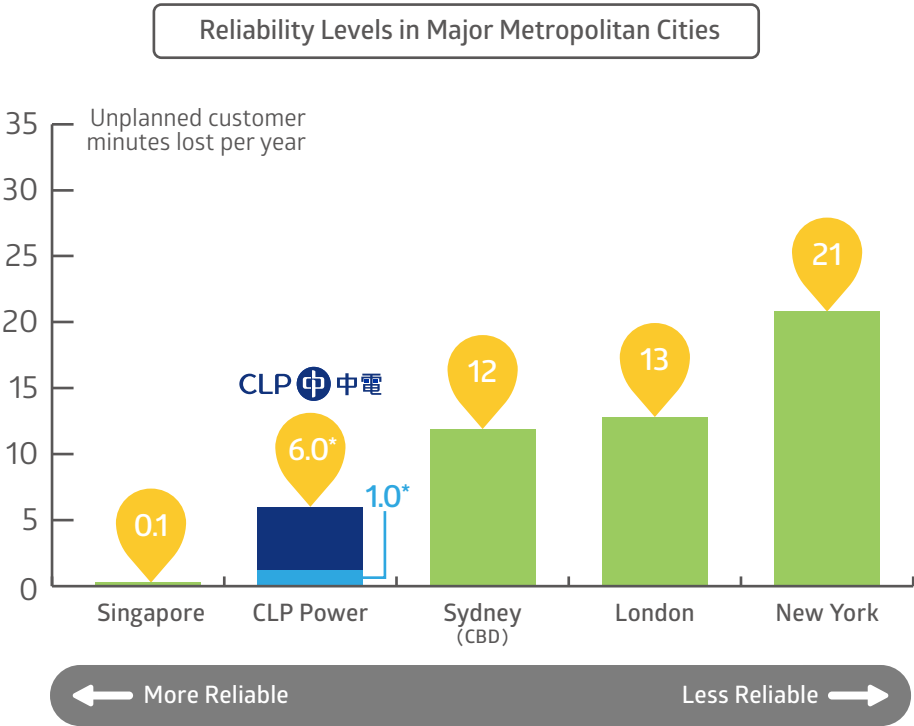


The **Energy Trilemma** is initiated by the World Energy Council, which advocates that different economies should strike a balance among the three objectives for energy development.

## Reliable and Safe Supply

- A reliable and safe power supply is an important pre-requisite for Hong Kong to maintain its competitiveness and attractiveness for organisations to set up their businesses. Maintaining high reliability is critical for our customers in an economy which is built around service industries that depend on a reliable electricity supply.
- Under the SCA, **CLP provides a world-class supply reliability of 99.999%.**

- Between 2022 and 2024, on average a CLP customer experienced 6.0 minutes of unplanned power interruptions per year (1.0 minute if excluding cable bridge fire incident in Yuen Long and Super Typhoon Saola). This compares to the 2021 to 2023 average of 0.1 minutes for Singapore, 12 minutes for Sydney CBD, 13 minutes for London, and 21 minutes for New York.
- Highly reliable electricity supply has been instrumental in maintaining Hong Kong's status as a world-class city, and in powering the long-term social and economic development of Hong Kong.

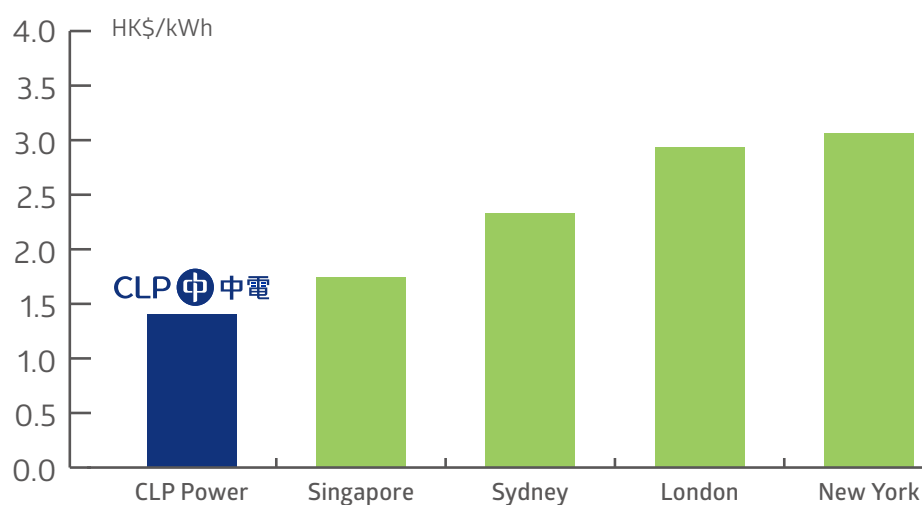


- Notes:
- \*2022-2024 average for CLP Power was 6.0 minutes; Taking out the impact due to Major Event Day (such as cable bridge fire incident in Yuen Long in 2022, Typhoon Saola in 2023), the three-year average was 1.0 minute.
  - 2021-2023 average for all other cities.
  - There are no overhead lines in Singapore.

- See also Chapter 4 on [Reliable Electricity Supply](#).

## Reasonable Tariff

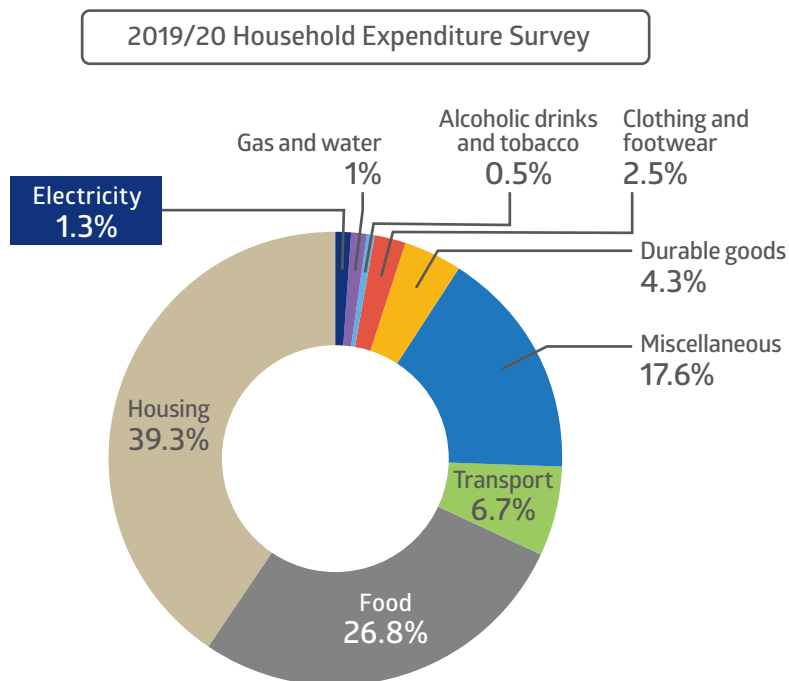
- CLP's tariff level is reasonable and competitive when compared to that of other key metropolitan cities in the world. In January 2025, our average tariff for residential customers in CLP's service areas is HK\$1.41/kWh while tariffs for Singapore and Sydney are about 25% and 65% higher than that of CLP's respectively, and tariffs for London and New York are more than double of CLP's.



Notes:

- Comparison based on monthly domestic consumption of 275kWh.
- Tariff and exchange rate in January 2025.

- In Hong Kong, electricity expenses account for 1.3% of total household expenditure, lower than other metropolitan cities like Singapore (1.6%), Sydney (1.8%), New York and London (1.9%).



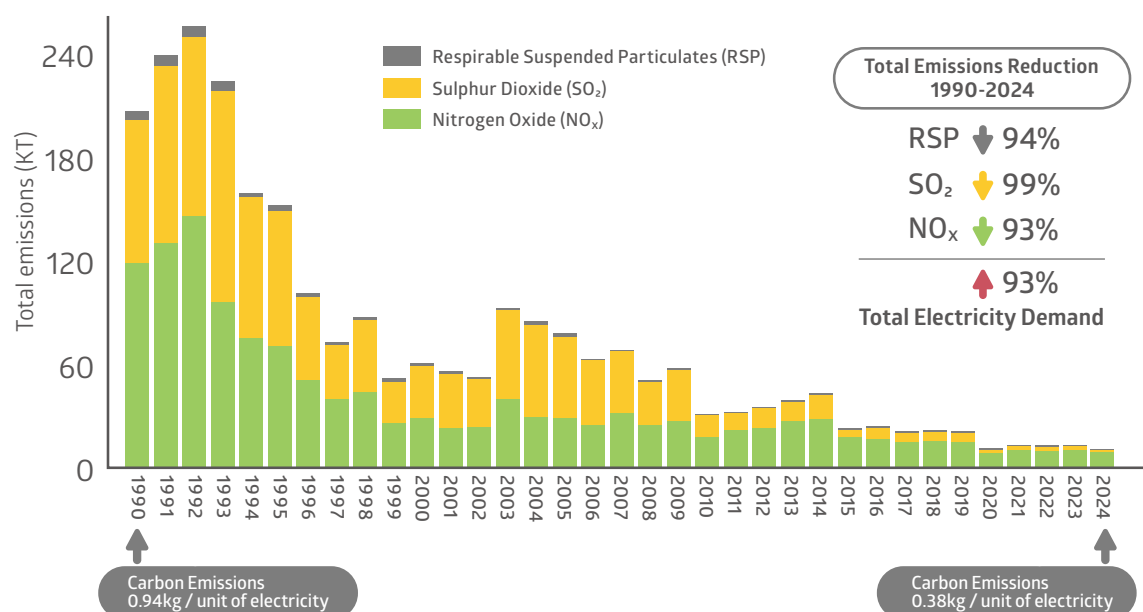
Source: "2019/20 Household Expenditure Survey and the Rebasing of the Consumer Price Indices", Census and Statistics Department

- The adjustments of tariff in recent years have mainly been due to the impact of fuel price fluctuations. In addition, in order to meet carbon reduction targets and the increasingly tightened air emissions caps set by the Government, we will need more natural gas and renewable energy. The costs of natural gas and renewable energy are generally higher than that of other fuels, leading to further challenges in tariff management.
- CLP has taken actions to minimise the cost impact as a result of significant fuel cost fluctuations and to maintain the tariff at a reasonable level. These actions include enhancing generation efficiency, making good use of the existing gas reserves, exploring new sources of gas supplies and contracting with different fuel suppliers, to secure competitively-priced fuels from the market and control cost. CLP also imports nuclear energy which is relatively stable in price. Amid a surge in international fuel prices, nuclear energy has played an important role to help smoothen out price fluctuations in case of market volatility.
- See also Chapter 3 on [Electricity Tariff](#).



## Care for the Environment

- Over the years, CLP has been supporting the community's expectations for **better air quality and a reduction in greenhouse gas emissions** by deploying the best practical technologies and operational excellence, and through changes to our fuel mix.
- Our **emissions control measures** – including installation of emissions control facilities – helped improve Hong Kong's emissions performance substantially.
- Managing our fuel mix** is also a key contributor to resolving the issues of climate change and air quality. CLP has made sustained efforts in improving the environment through the use of low sulphur coal, natural gas, nuclear and renewable energy. We started to import nuclear energy from Daya Bay Nuclear Power Station in 1994. In 1996, we pioneered the use of natural gas for power generation in the region. We launched the Feed-in Tariff Scheme in 2018 to encourage local renewable energy development. In 2020, the landfill gas generation project at the West New Territories (WENT) Landfill started operation to utilise landfill gas produced locally as fuel.
- The Hong Kong offshore liquefied natural gas (LNG) terminal, jointly developed by CLP and The Hongkong Electric Co., Ltd. (HK Electric) has gone into operation in July 2023. It enables Hong Kong to further increase the diversity and security of supply and to access competitive supplies from the global LNG market over the long term.
- CLP's emissions have reduced over 90% since 1990 while electricity demand has grown by more than 90% during the same period.**
- CLP is also committed to **energy efficiency and conservation**. A wide range of tools and programmes have been developed to provide practical assistance to both residential and commercial and industrial customers to achieve energy saving and change their habits of electricity consumption.



- We also conduct **energy audits** for commercial and industrial customers. CLP's professional engineers are assigned to conduct detailed analysis of energy usage and energy efficiency at customers' premises. Professional reports and practical advice are provided after evaluation which greatly enhance customers' awareness of energy conservation.
- **Concerted efforts from all sectors in the community** and a change of the public's lifestyle and habits are required to effectively conduct energy efficiency and conservation work.
- See also Chapter 7 on [Energy Management](#).
- Link to reference information:  
[Scheme of Control Financial & Operating Statistics \(10-year Summary\)](#)

# 3 ELECTRICITY TARIFF

## CLP Tariff Components

- CLP's tariff is made up of two major components:

<b>1. Basic Tariff</b>	<ul style="list-style-type: none"> <li>It is set at a level to cover the total costs of electricity supply, including operating cost, standard cost of fuels and SCA return</li> </ul>
<b>2. Fuel Cost Adjustment</b>	<ul style="list-style-type: none"> <li>It is either a charge or rebate to cover the difference between the actual cost of fuels spent and the standard cost of fuel collected through the Basic Tariff</li> </ul>

- At-a-glance table of CLP's tariff in the past four years:

Tariff Component (cents/kWh)	2022	2023	2024	2025
Basic Tariff	93.7	93.7	96.6	98.0
Fuel Cost Adjustment	38.6	62.0	46.3	46.3
<b>Total Tariff</b>	<b>132.3</b>	<b>155.7</b>	<b>142.9</b>	<b>144.3</b>
Special Rebate	-2.1	-	-	-
Rent and Rates Special Rebate <sup>1</sup>	-1.3	-1.3	-	-
<b>Net Tariff</b>	<b>128.9</b>	<b>154.4</b>	<b>142.9</b>	<b>144.3</b>

- In April 2017, CLP signed a new Scheme of Control Agreement (SCA) with the Hong Kong SAR Government. The permitted rate of return has been reduced from 9.99% to 8% under the current SCA which came into effect in October 2018.
- International fuel prices have eased, which are timely reflected in the monthly Fuel Cost Adjustment. Yet geopolitical factors remain uncertain. We will continue to adopt prudent cost control, a diversified fuel mix and utilise innovative technologies to maintain tariffs at a reasonable level.

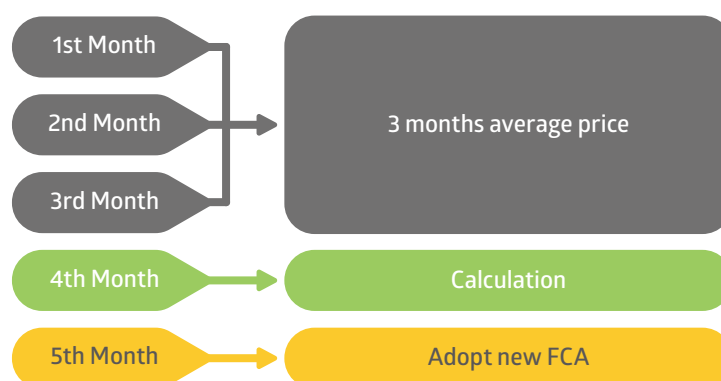
<sup>1</sup> Since the Government refunds of overcharged rents and rates received by CLP were fully rebated to customers by 28 April 2023, the Rent and Rates Special Rebate was discontinued from 29 April 2023.

## Annual Tariff Review

- CLP submits to the Government a tariff proposal for the coming year before the end of October every year. The proposal includes sales and maximum demand forecasts, total capital expenditure, total operating expenditure, cost of fuels and projected basic tariff rate, etc.
- The basic tariff rate agreed with the Government will be implemented on 1 January of the following year.

## Monthly Fuel Cost Adjustment

- Under the current SCA, the Fuel Cost Adjustment (FCA) is automatically adjusted on a monthly basis to reflect changes in actual price of fuel used. This arrangement is more transparent and reflects fuel price changes in a more timely manner. It also helps smoothening out short term fluctuations in case of market volatility.
- The monthly FCA is calculated based on the average actual fuel prices over three preceding months as compared with the fuel prices projected at the most recent tariff review. The revised FCA will be applied the following month after a process of data collection and verification. The monthly FCA is published on CLP Power website and electricity bills.



- Links to reference information:
  - [Fuel Cost Adjustment](#)
  - [Explanatory Note for Fuel Cost Adjustment](#)
  - [2025 Tariff Review Presentation](#)

## Tariff Structure

- CLP has four tariff categories, namely:
  1. **Residential Tariff** (Residential customers)
  2. **Non-Residential Tariff** (Small and medium enterprises customers)
  3. **Bulk Tariff** (Large businesses and public services with monthly consumption not less than 20,000 units)
  4. **Large Power Tariff** (Large businesses and public services with monthly demand not less than 3,000kVA)
- CLP's tariff structure is designed to be fair and cost reflective for each tariff group of customers, and it therefore avoids cross-subsidies between the customer groups.
- The cost of electricity supply to each tariff group takes into account the investment and resources needed to supply them and the efficiency with which these resources are used. In general, fixed operating costs like metering, billing and customer services are lower per unit for higher-consuming customers.
- For **Residential Tariff**, an inclining block structure is applied. Under this structure, there are seven blocks with different rates. Higher consumption is charged at a progressively higher unit rate. This encourages the efficient use of energy by residential customers. The lower blocks provide protection for residential customers with lower household incomes and encourage energy saving. Inclining tariff structures for residential customers are common in many cities world-wide.
- Unlike Residential Tariff customers, inclining tariff structures for businesses and public services are uncommon in other cities in the world.
- A fixed rate is applied for **Non-Residential Tariff**. Customers are charged according to their consumption. High consumption customers under **Bulk Tariff** and **Large Power Tariff** categories have a declining tariff structure of two blocks. They have two tariff features:
  - ♦ They have to pay a Demand Charge in addition to the cost of the energy units they consume. The Demand Charge reflects the capacity of the supply customers draw from CLP's network based on their maximum energy demand.
  - ♦ In addition, under a Time-of-Use tariff feature, they also pay a premium for energy used at peak times but are able to reduce costs if they can move this to off-peak periods. This facilitates demand side management and better utilisation of power generation facilities.
- As electric vehicles become increasingly popular, CLP launched an **Electric Vehicle Residential Time of Use Tariff** in May 2025. This EV tariff plan provides residential customers with flexible options for EV charging at residential parking lots to encourage smart charging. Customers who opt for the Electric Vehicle Residential Time of Use Tariff can enjoy a discounted energy charge during "Off-peak Period" which helps enhance resource utilisation of the power grid and reduce peak load.
- With the launch of Electric Vehicle Residential Time of Use Tariff, the existing fixed-rate tariff for EV charging was renamed **Electric Vehicle Tariff** for identification purposes.

- At-a-glance table of CLP's tariff structure:

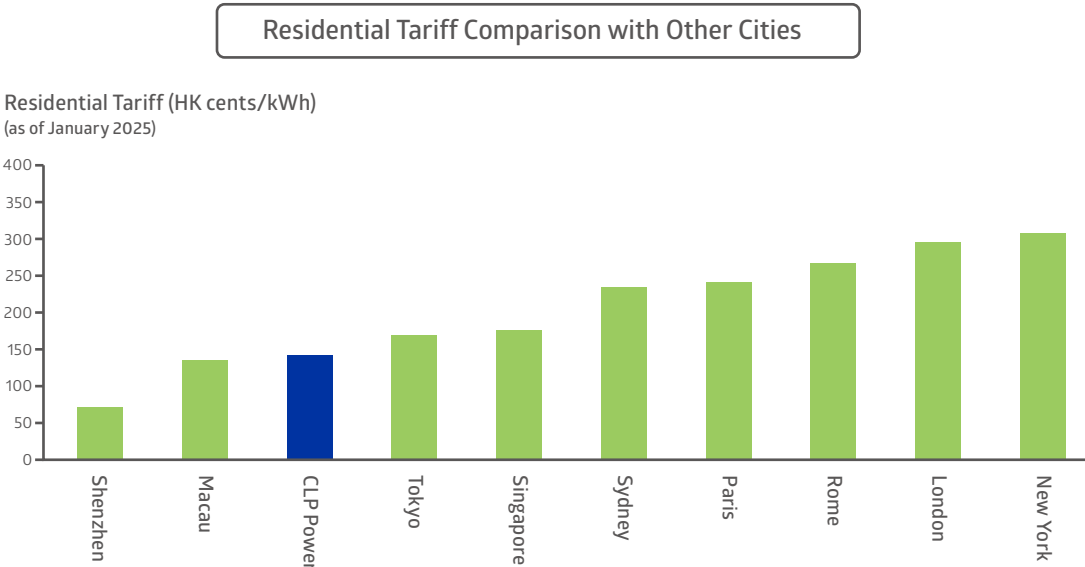
Tariff Categories	Customer Type	Basic Tariff	
		Energy Charge	Demand Charge
Residential Tariff	Residential customers	✓ With 7 inclining blocks	
Non-Residential Tariff	Small and medium enterprises customers	✓ Uniform rate	
Bulk Tariff	Large businesses and public services with monthly consumption not less than 20,000 units	✓ With Time-of-Use feature	✓ With Time-of-Use feature
Large Power Tariff	Large businesses and public services with monthly demand not less than 3,000kVA	✓ With Time-of-Use feature	✓ With Time-of-Use feature
Electric Vehicle Tariff	Electric vehicle customers	✓ Uniform rate	
Electric Vehicle Residential Time of Use Tariff*	Electric vehicle customers at residential buildings	✓ With Time-of-Use feature	

\*Customers may opt to apply this plan

- Link to reference information:  
[CLP Tariff Table 2025](#)

Tariff and Fuel Costs Challenge

- Compared to other key metropolitan cities in the world, CLP's tariff is highly competitive. Cities with lower tariffs than CLP are mostly characterised by having government subsidies, being state-owned power companies, or having relatively abundant natural resources to support power generation.

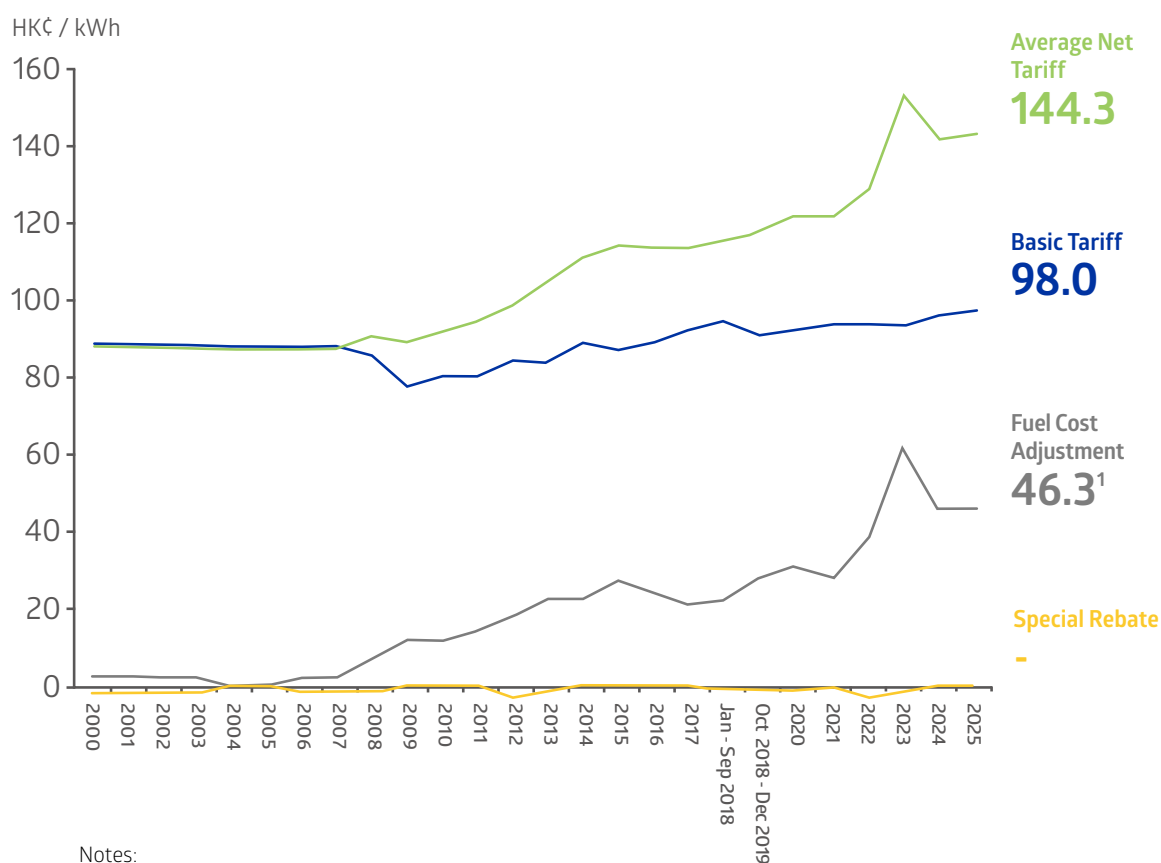


Notes:  
1. Comparison based on monthly domestic consumption of 275kWh.  
2. Tariff and exchange rate in January 2025.

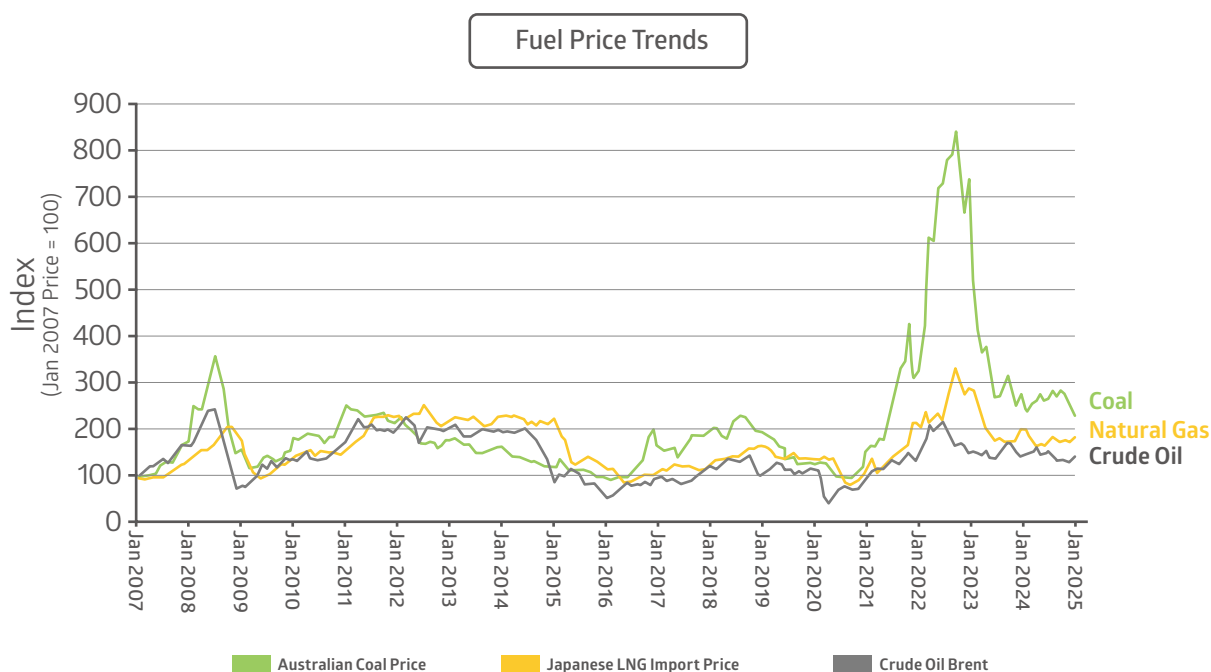
Source: Web



- CLP has for many years adopted a **diversified fuel mix** comprising more natural gas, less coal, importing zero-emission nuclear power, and renewable energy to ensure the reliability of electricity supply at a reasonable cost.
- In support of the Government's environmental policy, the proportion of natural gas has increased to over 50% in CLP's generation fuel mix. To support the goal of achieving carbon neutrality before 2050, CLP will continue to gradually replace coal-fired generation units with gas-fired generation units and zero-carbon energy sources.
- Currently, nuclear energy from Daya Bay meets about a quarter of the city's electricity needs, accounting to a significant percentage in Hong Kong's diversified fuel mix. Nuclear, which is non-carbon emitting and relatively stable in price compared to coal or natural gas, plays an important role to help smooth out fuel cost increases and stabilise tariff levels amid market volatility.
- Volatility in international fuel prices has been a key driver for CLP's total tariff adjustments over the past few years.



- The following chart shows the volatility of fuel prices since 2007.



Source: World Bank

- With the increased gas consumption for power generation, CLP has taken additional steps to ensure sufficient gas supply and to further increase the diversity and security.
- In 1996, CLP started importing natural gas from Yacheng gas field in the South China Sea for power generation. With the gradual depletion of the Yacheng gas field, CLP has been importing natural gas from the Chinese Mainland through the Second West-East Gas Pipeline (WEPII) and has been receiving additional gas from CNOOC's gas fields in the South China Sea under a new long-term contract using the existing Yacheng pipeline since 2013 and 2020, respectively.
- In 2023, the launch of the offshore liquefied natural gas (LNG) terminal made available a critical new source of natural gas for CLP to ensure a reliable and stable supply of natural gas to Hong Kong in the long term, while allowing Hong Kong to purchase competitively-priced LNG directly from the global market.
- To enhance tariff information transparency, CLP has been providing information related to [fuel mix](#) on our website. The published information enables our customers to better understand CLP's fuel mix and the latest fuel cost adjustment.

## Alleviating Tariff Pressures

- The SCA has **mechanisms to stabilise tariff**. It sets out a role for two balancing funds — the Tariff Stabilisation Fund and the Fuel Clause Recovery Account, which are designed to act to smooth out volatility in adjusting the Basic Tariff and the Fuel Cost Adjustment respectively.
- CLP tries its very best to alleviate the pressure of rising tariffs, especially due to the impact of fuel price fluctuations. It works hard in containing tariff increases to a minimum level through **prudent cost management and control**, as well as supporting customers with practical help and advice in both energy saving and reducing bills.
- CLP has provided an **Energy Saving Rebate Scheme** for low-consumption residential and small and medium enterprises customers since 2013 to help them reduce electricity expenses and encourage energy saving. Under the scheme, customers consuming 400 units or less per bill can enjoy savings in their electricity bills.
- CLP also offers a **Concessionary Tariff for the Elderly**. Customers aged 60 or above who live alone or with other similarly qualified elderly, and those who are relying on or entitled to Comprehensive Social Security Assistance are eligible for the concessionary tariff. The approved applicant will be offered a 50% reduction for the first 400 units of electricity consumed in each two-month billing period plus an exemption of the minimum charge on each bill.
- Under the current SCA, a **CLP Community Energy Saving Fund** has been set up and begun operations in 2019. Under this fund, one of the initiatives being launched is **CLP Power Connect programme**, which aims to encourage residential customers to save energy year-round. In 2025, CLP is allocating HK\$50 million from the Fund to provide electricity subsidies to 20,000 subdivided unit tenants and 50,000 households in need a year, including the elderly, disabled and low income families.
- See also Chapter 7 on [Energy Management](#) and Chapter 10 on [Community Commitment](#).

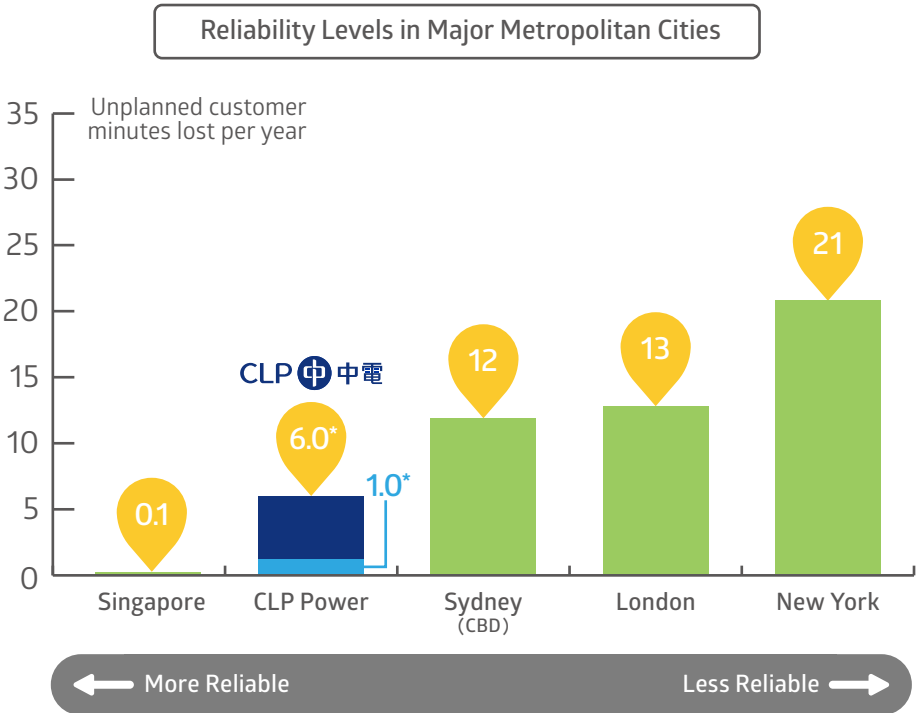
# 4 RELIABLE ELECTRICITY SUPPLY

## Why is Reliable Power Supply Critical to Our Customers?

- A **reliable and safe power supply** is an important pre-requisite for Hong Kong to maintain its competitiveness and attractiveness for organisations to set up their businesses. Maintaining high reliability is critical for our customers in an economy which is built around service industries that depend on a reliable electricity supply.
- Hong Kong is a densely populated city with more than 74,000 elevators in operation daily. It is also a key international financial centre and the electrified mass transit networks carried an average of over 5.57 million passengers each weekday in 2024. These unique characteristics make exceptional power supply reliability essential for Hong Kong.

## CLP's Supply Reliability

- CLP provides reliable and safe electricity supply in Hong Kong at a **world-class reliability of 99.999%**.
- Between 2022 and 2024, on average a CLP customer experienced 6.0 minutes of unplanned power interruption per year (1.0 minute if excluding cable bridge fire incident in Yuen Long and Super Typhoon Saola). This compares to the 2021 to 2023 average of 0.1 minutes for Singapore, 12 minutes for Sydney CBD, 13 minutes for London and 21 minutes for New York.



Notes:

- \*2022-2024 average for CLP Power is 6.0 minutes, and 1.0 minute if excluding cable bridge fire incident in Yuen Long in 2022 and Super Typhoon Saola in 2023.
- 2021-2023 average for all other cities.
- There are no overhead lines in Singapore.

## Maintaining World-Class Supply Reliability

- CLP's high supply reliability cannot be taken for granted. It is the result of our power expertise, and long-term commitment to generation, network and operational excellence. The following areas demonstrate CLP's ongoing efforts to uphold its world-class supply reliability.

### Sufficient Generation Capacity

- Reserve capacity is essential to cater for any loss of generation capacity due to planned maintenance and unforeseen outages even at peak load. Reserve margin is similar to keeping a spare tyre in a car, which is crucial for contingency management.
- CLP sets the level of reserve margin by making reference to the maximum electricity demand as one of the most important indicators for planning and operations. This is in line with the practices adopted in the electricity industry all over the world.
- To ensure top service quality and reliability, CLP's **reserve margin is maintained at an appropriate level** and is within the recommended range of 20% to 35% by the International Energy Agency.

### Facilities and Network Upgrades to Address New Demand

- To maintain the highly reliable supply and support the Government's environmental policy, a key challenge is **meeting our customers' increasing demand for electricity in Hong Kong and embracing more distributed renewable energy systems**. A large number of territory-wide development and infrastructure projects are in progress simultaneously, these important projects support population growth, new housing, railway expansions, Airport three-runway system expansion, hospital development plan, West Kowloon Cultural District, Kai Tak Sports Park, Tung Chung New Town Extension (TCNTE), Advanced Manufacturing Centre (AMC) & Microelectronics Centre in Industrial Estate, desalination plant, the development of the Lok Ma Chau Loop, Northern Metropolis, data centre infrastructure, electric vehicle development and so on, which call for increasing needs of power supply.
- These projects are closely linked with Hong Kong's ongoing social and economic growth, and a safe and reliable electricity supply is a key contributing factor to their successful developments.
- To cope with the demand growth while ensuring a stable power supply, CLP has been adopting different measures to **enhance our generation and network infrastructure** to address the challenge.
- In 2024, CLP announced a new Five-year Development Plan (2024-2028) which aims to fully support Government policy priorities and covers a number of important projects, with the majority on network development, to underpin Hong Kong's economic growth and infrastructural development, continued delivery of a world-class reliable electricity system, the transition to a smart and resilient city, and continuation of the decarbonisation journey.

- For our **generation facilities**, in response to the Government's plan to increase the proportion of local gas-fired generation to around 50% of the total fuel mix in 2020 and to ensure a reliable power supply, the two new gas-fired generation units (Units D1 and D2) at Black Point Power Station were commissioned in 2020 and 2024 respectively. The new units deploy the combined cycle gas turbine (CCGT) technology with more advanced design and are capable of achieving an efficiency rate of around 60%, making them two of the most efficient gas-fired power plants in the world. Units D1 and D2 also play a key role in facilitating the decarbonisation of Hong Kong's power supply and supporting the gradual retirement of coal-fired generation units at Castle Peak A Power Station.
- Upgrading the efficiency of existing and aging generation facilities is essential to ensure that we increase output, meet increased demand and maintain reliability. Efficiency upgrades in our plants are also important to improving our emissions performance. We have also been making replacements and carrying out refurbishments for aged facilities to ensure that generation capacity is able to meet increasing electricity demand. As an example, turbine upgrades on eight gas-fired generation units in Black Point Power Station were completed in 2022, increasing the capacity of each unit by 25MW (8%) and driving improvements in efficiency, as well as reducing the nitrogen oxides emissions.
- On **power systems**, reinforcement of our supply networks are crucial to ensure adequate and reliable electricity supply. These will include continuous improvements and extensions of our transmission and distribution facilities to meet new demand, connect more renewable energy systems, and ensure safe and reliable delivery of supply to customers and minimise the interference due to external factors.
- CLP has implemented the Clean Energy Transmission System project to enhance the reliability and transmission capacity of the existing 400kV cross-border transmission overhead line circuits currently connecting Hong Kong and the Chinese Mainland. This enhancement will increase the resilience of the system and provide the necessary infrastructure to enable greater flexibility to tap into cleaner energy and for possible increased use of non-fossil energy in future.
- Network enhancements also cover refurbishing current transmission facilities and equipment to increase the transmission capacity as well as ensuring continuous reliable operations.



## Advanced Technology

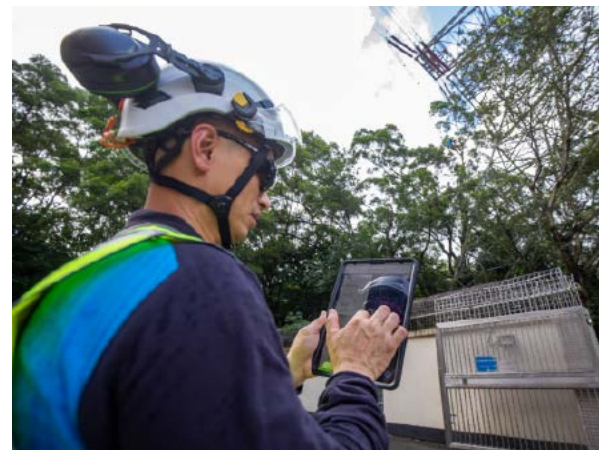
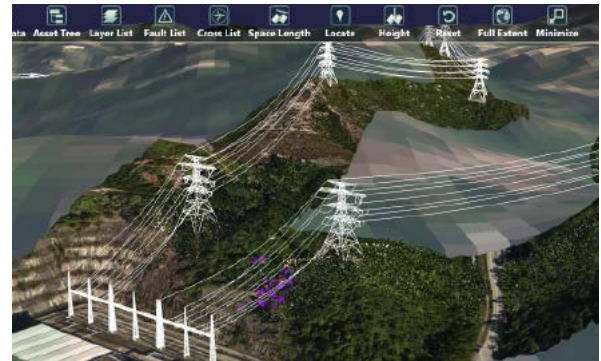
- A reliable and secure power grid is critical to ensuring supply reliability. CLP's strategy is to incorporate advanced and the most relevant technologies to improve the performance of our power system, thereby facilitating decarbonisation of the future, delivering customer-centric solutions and continuously enhancing our operational excellence.

## Smart Grid

- Smart grid development is an emerging global trend of power grid modernisation. CLP is one of the few power companies worldwide which develops smart grid in a vertically integrated approach, covering all aspects including power generation, transmission and distribution, as well as customer services. By integrating clean and sustainable power generation, leveraging advanced control and monitoring technologies, enhancing information and communications system, the new power system is capable of delivering low-carbon, reliable and efficient power service to customers. It can open up new opportunities to engage customers in energy saving and demand side management. CLP also applies data analytics to enhance customer services, operational efficiency, supply reliability, safety and power quality.
- ♦ **11kV overhead line automatic restoration system:** CLP applies smart technology to carry out real-time analysis to protect and control the power grid. When the 11kV overhead lines equipped with automatic restoration system are interfered by external factors such as lightning strikes or vegetation interference, the system will automatically isolate the faulty section, and shift to other sources for immediate supply restoration.
- ♦ **Intelligent transmission substations:** CLP continuously introduces automated equipment in our transmission substations to enhance operational efficiency and supply reliability. Among all smart features, a self-healing system can significantly shortening the power restoration time from several minutes to less than one second. This self-healing system is widely deployed as standard requirement in all new CLP transmission substations.
- ♦ **Online condition monitoring:** Aside from intelligent substations, CLP also introduces online condition monitoring systems at transmission transformers and switchgears for conducting round-the-clock health checks. Once irregularities are observed, the system will automatically issue alerts to relevant engineering staff, so that inspection or repair can be conducted at an early stage. The data collected can also serve to support the implementation of Condition Based Maintenance through the calculation of Asset Health Index to optimise the maintenance cost.
- ♦ **Smart meters for all customers:** To support Hong Kong's transformation into a smart city, all CLP customers' conventional meters are now being replaced with smart meters in phases from November 2018, which is targeted for completion by 2025. As of the end of June 2025, CLP Power has connected about 2.79 million smart meters for customers.
- ♦ Smart meters connected through a telecommunication system form the Advanced Metering Infrastructure (AMI) system. It can provide detailed electricity usage information and a range of digitalised services to customers, empowering them to efficiently manage their consumption, reduce energy use and demand at peak times, so as to move towards a low-carbon living. The AMI system can also further improve supply reliability and enhance customer experience.

### Overhead line vegetation management

- There are a large number of fast-growing tree species in Hong Kong, and fallen trees or branches that make contact with overhead lines under strong wind or heavy rain can disrupt electricity supplies. CLP has adopted **vegetation management** techniques since 2001. The vegetation management team carries out pruning work on trees which might affect overhead lines. Since 2022, CLP has implemented its self-developed **Predictive Vegetation Management System**. The system is a comprehensive tree management platform that combines Geographic Information System (GIS) technology. It recorded the data of more than 170,000 trees within range of CLP overhead lines, including tree species, age, and pruning records. It can predict the growth of vegetation at the route of overhead lines and identify trees that pose potential risks to the overhead lines. Engineering personnel can schedule and carry out pruning in a timely and effective manner based on tree risk level, so as to enhance supply reliability to the customers.



### Drone inspections for power station facilities and overhead lines

- Engineers from CLP's Generation Business Group began studying drones in 2016 and set up the first team responsible for using drones to carry out safety inspections on various facilities and mechanical components at power stations as a means to assess their health and level of wear-and-tear. For better precaution, by installing infrared technology on outdoor drones, engineering team can also detect signs of faults from components such as overheating or leaks from pipes, allowing for earlier detection of issues that may require the need for worn-out components to be replaced.



- For indoor inspection within the power stations, the drone team introduced a cutting-edge innovation known as the cage drone, which is small and uses a Light Detection And Ranging (LiDAR) system and sensors to reach high and inaccessible spaces flexibly and quickly. This not only makes inspections more thorough and comprehensive but also saves the time and cost of erecting scaffolding.
- The use of drones not only enhances work safety by mitigating the potential risks associated with working at height and confined spaces, but also improves the accuracy of inspections, uplifting overall operational efficiency. In addition, the video recording by a cage drone helps engineering teams analyse the condition and defects of generation facilities in fine detail so that maintenance can be carried out immediately to avoid any equipment failures.
- Since September 2018, CLP extended the use of drones to outdoor power supply facilities, including transmission towers and overhead lines, making up for certain areas inaccessible for helicopters in the past. In 2021, CLP further adopted an Extended Visual Line of Sight operations to increase operation distance of drone, thus enhance the efficiency of drone operation during overhead line inspections.
- In support of measures promoting the low-altitude economy outlined in the 2024 Policy Address, CLP submitted Beyond Visual Line of Sight operations for the inspection of overhead lines and towers as "Low-altitude Economy Regulatory Sandbox Pilot Project" and was among the first batch of selected projects. The pilot project is expected to bring about nearly a fourfold increase in the efficiency of inspecting overhead lines and towers, further enhancing grid management and maintaining world-class supply reliability.



### Application of robotics

- CLP uses a variety of robots for inspections of generation and auxiliary facilities, including the crawler robot which inspects underground culverts in power stations. There are many underground culverts in the power stations to divert water from the sea to power generation units for cooling purposes. Regular inspection of the culverts is essential to ensure that their structure is intact and there are no blockages. As the culverts are confined space, the inspections used to be conducted by specially trained personnel. Because of the physical constraints, and capacity of the breathing apparatus and diving cylinder, it took several days to inspect a single culvert.





- CLP switched to crawler robot to inspect underground culverts in 2021. The crawler robot is small and has a retractable top. It is equipped with lights and a rotation lens, allowing it to capture detailed footage inside narrow and poorly-lit culverts. The crawler robot overcomes the physical and time constraints of manual inspections, making culvert inspections safer and more accurate and efficient. The inspection time required for each network of culverts has also been reduced by more than 50% to two days. In addition, engineers are able to gain a deeper understanding of culvert conditions through the data gathered by the robot, allowing them to develop more comprehensive inspection procedures and maintenance strategies.
- Apart from underground culvert inspection, CLP has also extended the robotic applications to other facilities in the power stations for the enhancement in work quality and safety.

## Measures against Extreme Weather

- As reliable electricity supply is very important to our customers, CLP constantly explores new technologies to sharpen our emergency preparedness. In recent years, extreme weather conditions occur more frequently as a result of climate change, with stronger destructive power, posing challenge to supply reliability. CLP's power supply is at particular risk from super typhoons, storm surges, lightning strikes and high temperature. Therefore, we implement a number of measures to enhance the resilience of our power equipment against extreme weather, aiming to maintain a reliable power supply and minimise the impact on critical services and infrastructure, as well as our customers.
- More than 30% of CLP's transmission network consists of overhead lines. There are more than 700 transmission towers that form the backbone of our 400kV supply system. Overhead lines are exposed and susceptible to the influence of weather and the external environment. If a tower is destroyed by super typhoon or collapses because of a landslide, it could take several months to be restored.
- Hong Kong is exposed to increasing challenges posed by high-impact extreme weather events including super typhoons. CLP constantly reviews and enhances its measures for emergency preparedness. These include: **strengthening the structures and foundations of 400kV towers** that can withstand super typhoons with wind gusts up to 300km/hour at 500m height; and **introducing an Emergency Restoration System** that enables rapid construction of temporary masts that the time to restore power supply can be shortened to just two weeks when an existing tower is damaged. In addition, CLP has also established a typhoon response protocol and coordinating systems. Drills are conducted on a regular basis.
- Hong Kong may also be vulnerable to storm surges caused by tropical cyclones. To counter the potential impact of storm surges on the power supply, CLP has since 2014 introduced a **flood calculator**, which evaluates the flooding risk at substations during typhoons based on real-time data and forecasts released by the Hong Kong Observatory, allowing for meticulous monitoring and timely coordination by our engineering staff. Upgraded mitigation measures have also been taken at flood-prone transmission substations and distribution substations such as **installing flood gates, sealing the cable inlets, equipping the substations with sump pumps and flooding alarm systems**. In addition, flood prevention measures have also been put in place at some of our power generation facilities. CLP collaborated with a local university in 2024 to conduct risk assessment on the impacts of severe rainstorms and landslides on the power system. Based on the assessment results, CLP expedites the installation of flood gates or devices at more critical substations.

- Overhead lines are exposed and susceptible to lightning strikes. To minimise voltage dips caused by lightning, CLP has installed **line arresters** on transmission towers and poles. Line arresters can drain tremendous lightning current to the earth and hence help stabilise the system voltage, and improve the resilience of the power systems against lightning. As a result, supply reliability and power quality are enhanced. In consideration of the adverse weather triggered by climate change, CLP plans to install more line arresters to further enhance the supply reliability and power quality.
- The self-developed intelligent management system known as **Grid-V** enables real time monitoring of critical assets, such as transmission overhead lines and substations. Its AI features can detect external disturbances, such as hill fire, smoke, or flying objects, and alert engineering staff to take prompt action. Supply reliability is further enhanced by its proactive monitoring and AI-assisted analysis functions.
- In view of the more frequent high temperature days, a study was initially conducted in 2006 to assess the impact of a high ambient temperature up to 40°C on power systems equipment. All equipment were found to maintain operation. Since 2007, a new operating condition at substations against high temperature of 45°C for new equipment has been incorporated in CLP guidelines to ensure the operations in substation would be maintained. The guidelines on operating condition of power supply facilities are regularly reviewed against the trend of climate change and actual data released by Hong Kong Observatory and CLP closely monitors the performance of the power supply facilities to avoid heavily loaded situation.



Linesmen are connecting conductors on a 70-feet high temporary mast. The construction of a temporary mast takes a little over 10 days, which is over 10 times faster than repairing a damaged tower



Grid-V & Condition Monitoring Centre

- In recent years, extreme weather events have become increasingly frequent. Hong Kong has been affected by multiple super typhoons and heavy rainstorms. In 2025, the number of Black Rainstorm Warnings reached a record high, and for the first time since 1964, two No. 10 Hurricane Signals were issued within the same year.
- In September 2025, Hong Kong was hit by Super Typhoon Ragasa. To mitigate the impact of extreme weather on the power system, CLP proactively implemented various measures to strengthen the resilience of its power supply system. During the typhoon, CLP Power's overall operations remained intact.
- Ahead of the storm, CLP made full preparation by putting in place contingency mechanisms and precautionary measures. These included strengthening inspections of critical power facilities to ensure equipment was in good condition and operating reliably. Flood protection measures were implemented at substations vulnerable to flooding. In addition, vegetation management was carried out to prune trees that could pose potential risk to overhead lines. CLP continues to adopt innovative technologies such as intelligent management system Grid-V and drone inspections. These measures aim to enhance grid resilience and mitigate the impact of extreme weather on the power supply system.
- During the typhoon, CLP's System Control Centre and command teams closely monitored operations, while frontline engineering staff remained on standby to carry out emergency repairs and restore electricity to affected customers swiftly. On the customer support front, CLP strengthened its 24-hour emergency hotline service by deploying additional staff in advance. CLP's Customer Services Team and Community Support Team also maintained close communication with relevant Government departments, community leaders, property management offices and relevant stakeholders to coordinate the handling of emergency incidents.
- CLP also enhanced public communication and understanding of its preparation efforts through a video that showcased mitigation measures before, during, and after a typhoon.



CLP's Typhoon Preparedness Measures



Public education video on tips to follow before, during and after typhoons



Tips for dealing with power interruptions during typhoons

- To enhance public awareness and preparedness towards natural hazards, CLP launched a short video providing precautionary tips for the public in bracing for the imminent typhoons, as well as information on matters to keep in mind in the event of power incidents during a typhoon.

## Power Quality

- Power quality has become a concern of our customers in recent years with the increased use of sophisticated computing, automation and control technologies especially in the financial, medical, communication and industrial sectors. One of the most common power quality issues is **voltage dip**.
- A voltage dip is not a power supply interruption. It is a voltage fluctuation in a very short period of time. Power companies all over the world have not been able to totally eliminate voltage dips. Voltage dip can be caused by various factors, for example, overhead lines are exposed and susceptible to the influence of adverse weather such as typhoons, lightning strikes, or third party interference including trees and wildlife, all of which may cause voltage dip in the power system.
- Over 30% of CLP Power's transmission network consists of overhead lines, which are exposed and vulnerable to external factors such as weather and environment conditions. In the past few years, an average of more than 80% of voltage dips were caused by external factors.
- In general, voltage dips last for less than 0.1 seconds. Individual users may experience momentary dimming or flickering of lights. Some electrical installations sensitive to voltage fluctuation, such as lifts, may trip as a result of the activation of the equipment's protection mechanism. Property management office could arrange a qualified contractor to restart the tripped equipment.
- To proactively deliver Power Quality services and help customers mitigate the impacts of voltage dips, CLP invites developers or consultants to attend our planning-ahead meeting upon new supply applications. By testing the equipment on site and identifying the sensitive components, CLP can recommend tailor-made and cost-effective solutions to improve the equipment performance when a voltage dip occurs.
- CLP's professional engineers have been carrying out an ongoing study to improve the quality of our power supply. CLP actively engages customers and industry practitioners, provides **power quality consultation services** and

recommends engineering solutions for mitigating the impact of voltage dip such as suitable ride-through devices. Over the past few years, we have reached out to nearly 150 housing estates and organisations, and almost half of them have adopted our recommendations to mitigate voltage dips.

- To enhance customer support, CLP organises seminars and workshops for corporate customers and property management industry personnel, sharing the knowledge and mitigation measures related to voltage dips, helping the industry strengthen the capability to respond to voltage dips.



CLP Tutorial – Introduction to Voltage Dips



CLP organised seminar for property management professionals to help improve their capability to handle voltage dips



# 5 ENVIRONMENTAL MANAGEMENT

## Government's Environmental Policy

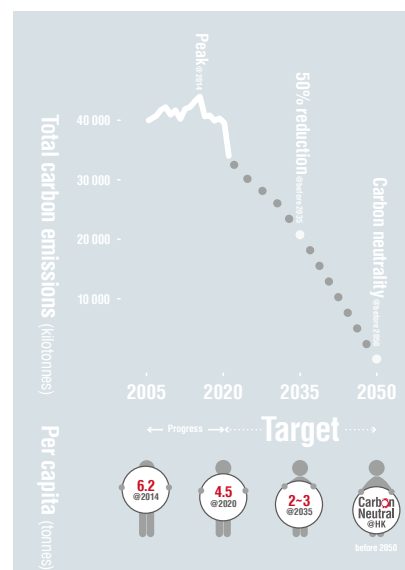
- Climate change is affecting every corner of the Earth. Like other coastal cities, Hong Kong faces multiple climate-related threats. With the community's increasing environmental awareness, the Government and the community are more concerned about monitoring and managing emissions. **Carbon emissions** are sometimes used as a shorthand for referring to the emissions of carbon dioxide (CO<sub>2</sub>), or greenhouse gases (GHGs) in general.
- Strictly speaking, gases that absorb and trap heat on the planet are called GHGs. The main GHGs in the Earth's atmosphere are CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and ozone (O<sub>3</sub>). **Air emissions** refers to the emission of air pollutants. At present, the Hong Kong Government monitors emission of the following pollutants: sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), respirable suspended particulates (RSP/PM<sub>10</sub>), fine suspended particulates (FSP/PM<sub>2.5</sub>), ozone, carbon monoxide (CO) and lead.

## Carbon Reduction

- In addressing the increasingly stringent challenges brought by climate change, global cooperation and concerted efforts by every member in the society are needed. The Central Government announced its target as early as 2009 to reduce **carbon intensity** (in terms of carbon dioxide emissions per unit GDP) by 40% to 45% by 2020, as compared with the 2005 level. Subsequently, in 2020, the Central Government set a "dual carbon" goal, aiming to achieve peak carbon emissions by 2030 (i.e. carbon peak) and carbon neutrality by 2060; and further announced a new commitment to lowering the nation's carbon intensity by over 65% from the 2005 level by 2030.
- On the other hand, the Paris Agreement, endorsed by many countries in 2015 with an aim of holding the increase in the global average temperature to well below 2°C above pre-industrial levels, brought a clear direction for low-carbon energy development at the international level.
- Hong Kong is among the earliest cities in Asia to take actions to combat climate change. The city's carbon emissions already peaked in 2014 through a series of carbon reduction measures, including halting the construction of new coal-fired power plants in 1997 and gradually replacing coal with natural gas and zero-carbon sources for power generation.
- To align with the nation's carbon reduction goals and respond to the Paris Agreement, the Hong Kong SAR Government announced the **Hong Kong's Climate Action Plan 2030+** in 2017, pledging to reduce carbon intensity by 65% to 70% compared to the 2005 level by 2030. In order to meet the target, Hong Kong will continue to phase down the remaining coal plants in the next decade and replace them with natural gas and non-fossil fuel sources.
- In 2019, the then Council for Sustainable Development (now Council for Carbon Neutrality and Sustainable Development) launched the **Public Engagement on the Long-term Decarbonisation Strategy** to gauge the views from the community for developing feasible strategies and measures for carbon reduction. The Government accepted the recommendations submitted by the Council and committed to striving to achieve carbon neutrality before 2050 in the 2020 Policy Address.



- In 2021, the Government unveiled the **Hong Kong's Climate Action Plan 2050**, setting out new measures for Hong Kong's long-term decarbonisation strategy, including achieving net-zero electricity generation before 2050 and setting an interim target to reduce total carbon emissions by half against the 2005 level before 2035. CLP will offer full support to the Government and work closely with the community to decarbonise. Addressing both demand and supply sides, CLP will encourage customers to save energy and achieve decarbonisation in electricity generation.
- See also Chapter 6 on **Cleaner Fuel Mix for Electricity Generation**



Hong Kong's Roadmap to Carbon Neutrality

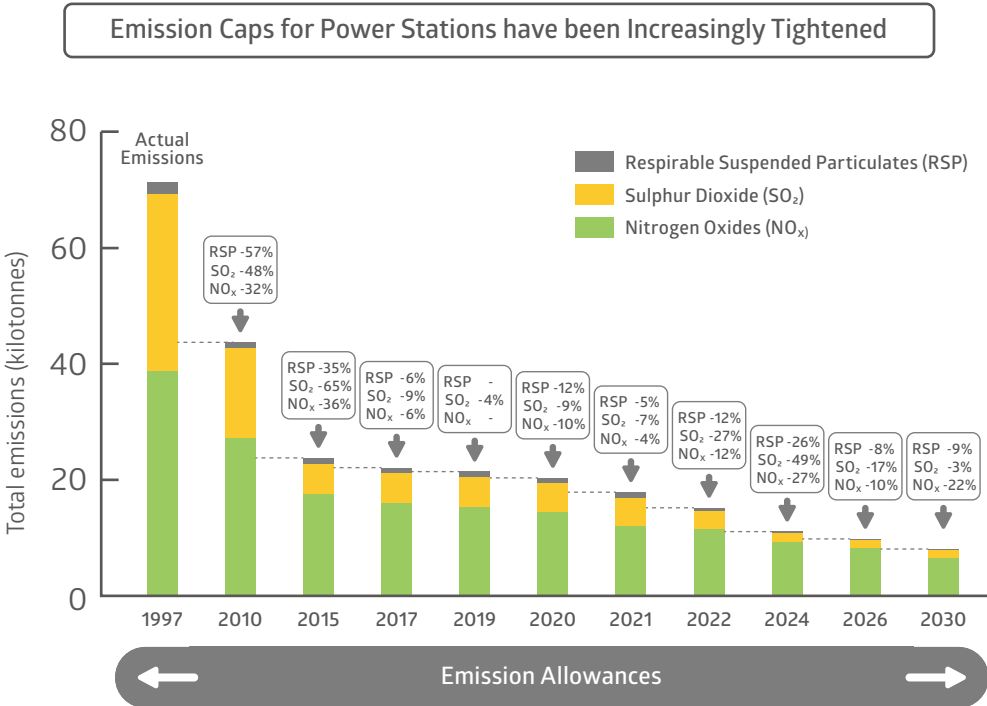
Source: [Hong Kong's Climate Action Plan 2050](#)

## Air Quality Improvement

- To regulate the emissions from power plants, the Government in 2008 issued its first Technical Memorandum (TM) under the Air Quality Control Ordinance to set emission caps of pollutants (including sulphur dioxide, nitrogen oxides, and respirable suspended particulates) for power plants based on the levels of 1997 actual emissions. Since the emission allowances stipulated in the first TM came into effect in 2010, the Government reviewed the emission allowances at least once every two years and has tightened the requirements for several times to continuously improve air quality in Hong Kong.
- The Government has issued ten TM to date, with the latest version issued in 2025 which further reduced the annual emissions cap for power plants in 2030 and beyond. The emission allowances have dropped significantly by about 70% to about 90% as compared with those for 2010 set under the first TM.
- In June 2021, the Government announced the **Clean Air Plan for Hong Kong 2035**, setting out the challenges, goals and strategies to enhance the air quality of Hong Kong to 2035. The Plan covers six major areas of action on green transport, livable environment, comprehensive emissions reduction, clean energy, scientific management, and regional collaboration. Action areas related to the power industry such as promoting the use of new energy transportation, carrying on reducing emissions from electricity generation and exploring at the same time the use of new low-carbon energy such as hydrogen energy and liquefied natural gas.

- Moreover, the Government reviewed the Air Quality Objectives (AQOs) at least once in every five years, with the last AQOs took effect from January 2022. The Government conducted the public consultation in 2023 on the new round of the AQOs review to assess the improvement of Hong Kong’s air quality in 2030. The new AQOs, which took effect in April 2025, further tighten 5 prevailing AQOs which include sulphur dioxide, respirable suspended particulates and fine suspended particulates, and add 3 new parameters introduced in the **World Health Organisation's Global Air Quality Guidelines**. The working group has also consolidated 21 air quality improvement measures with significant emission reduction impact by 2030 which cover aspects

of power generation and transportation, such as tightening of emission limits of power plants under the new low-carbon electricity generation strategy, reduction of energy consumption of new and existing commercial and residential buildings and promoting the use of liquefied natural gas by marine vessels.



## Powering Responsibly and Reducing Emissions

- CLP manages the environmental impact of electricity generation responsibly. We adopt the world's best practices to improve our operational efficiency, safety and environmental performance. We have also established effective environmental management systems which conform to the globally recognised ISO 14001 Standard. Over the years, CLP has diligently put in effort to manage carbon and air emissions in our operations.

### CLP's Emissions Management Measures

- CLP has successfully met the increasingly stringent emissions caps for our power plants set by the Government.** We continually seek to adopt new technologies, fuel sources and processes to help make the air in Hong Kong cleaner. We have successfully achieved significant emissions reduction through a combination of emissions reduction technologies and changes to our fuel mix including the introduction of natural gas, nuclear power, low sulphur coal, renewable energy and the addition of sophisticated emissions control facilities.
- From 2010 to 2011, we retrofitted by phases the largest four coal-fired generation units at Castle Peak Power Station with **large-scale desulphurisation and nitrogen oxides reduction facilities** which have significantly improved the emissions performance of the station. In addition, gypsum produced during the desulphurisation process is recycled as material for the construction industry such as plasterboard, bringing extra environmental benefits to the society.
- Turbine upgrades on eight gas-fired generation units at Black Point Power Station were completed in 2022, increasing the capacity of each unit by 25MW (8%) and driving improvements in efficiency, as well as reducing the nitrogen oxides emissions.
- Meanwhile, jointly developed by CLP and HK Electric, the Hong Kong offshore liquefied natural gas (LNG) terminal went into operation in mid-2023 to increase the gas supply security by diversifying supply sources, and to enable procurement of LNG at competitive prices from the global market.
- CLP is also enhancing the Clean Energy Transmission System which would allow more flexibility to tap into cleaner energy and for possible increased use of non-fossil energy in future to support the Government's environmental policy.
- CLP has always strived for reducing emissions. More than 90% emissions reduction in SO<sub>2</sub>, NO<sub>x</sub> and RSP have been achieved since 1990, while electricity demand has grown by over 90% during the same period.** Electricity generation emissions have fallen greatly as a result of various emissions reduction efforts. The chart below illustrates these efforts.

## New Gas-Fired Generation Units Driving Decarbonisation

- Two new gas-fired generation units (Units D1 and D2) at Black Point Power Station were commissioned in 2020 and 2024 respectively, increasing the proportion of gas-fired generation to over 50%. Along with other improvements in generation efficiency, the emissions will be further reduced.
- Both new gas-fired generation units adopt advanced and efficient combined-cycle gas turbine (CCGT) technology, achieving an operational efficiency of approximately 60%.

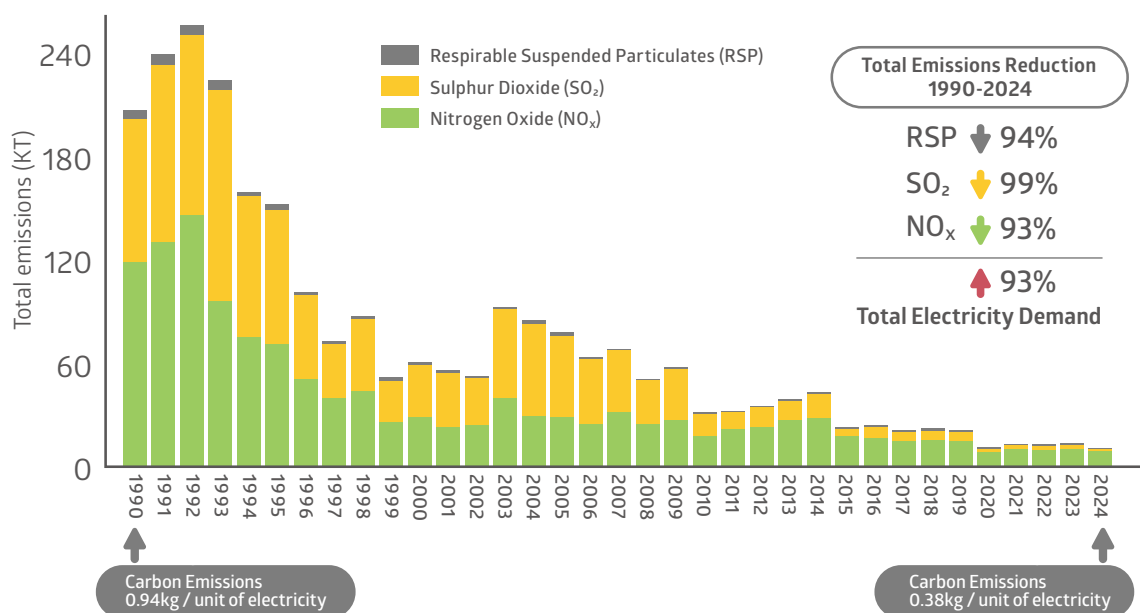
Natural gas is first burned in the gas turbine to generate electricity. During the process, the heat from the gas turbine is captured and transported to heat up water in the boiler. Steam is then produced to drive the steam turbine for power generation. The combined cycle design allows for greater output of electricity without the use of additional fuel. In addition, both units are equipped with selective catalytic reduction facilities which can reduce nitrogen oxide emissions compared with traditional coal-fired generation units.





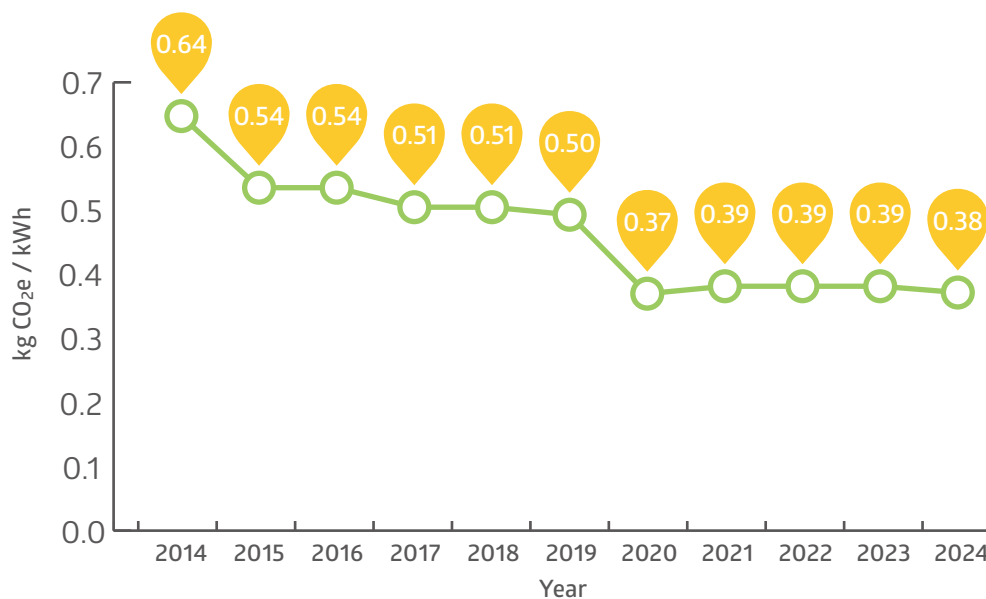
Ongoing Improvement in CLP's Environmental Performance





- The GHG emissions intensity of the electricity sold in Hong Kong in 2024 was maintained at 0.38kg CO<sub>2</sub>e/ kWh.

GHG emissions intensity of CLP Power Hong Kong electricity sold



Source: CLP Sustainability Report 2024

## Long-term Decarbonisation Target

- As a major power company in Hong Kong, CLP recognises its role in addressing climate change. In 2004, CLP Group published its first Group-wide renewable energy target of 5% by 2010. In 2007, the Group published CLP's **Climate Vision 2050** which set out the blueprint of moving towards a net-zero future. It has informed our business strategy since its launch and supports our long-term development. It is also integral to our broader climate strategy.
- To ensure we keep up to the pace of change in our operating environment, CLP Group reviews its climate targets and commitments from time to time. The Group updated the **Climate Vision 2050** in early 2024 which strengthened the greenhouse gas emissions intensity target for 2030 to bring it closer to the goal of limiting global warming to 1.5°C, while maintaining existing commitments including phasing out coal before 2040 and achieving net-zero greenhouse gas emissions across our value chain by 2050.
- CLP Group is committed to reviewing its climate transition plan and targets at least every three years, taking into consideration the latest climate science, policy drivers, technological advancement, industry trends and community expectations, guiding the Group in managing climate-related risks and opportunities to ensure an orderly transition.
- The 2050 carbon neutrality target is an important milestone for Hong Kong. CLP will promote the development of local renewable energy and explore ways to enhance regional cooperation on zero-carbon energy with the Government and identify sources of zero-carbon energy in neighbouring regions, including seeking joint investment and development opportunities for participating in and operating zero-carbon energy projects near Hong Kong. We will also keep abreast of developments in technologies that utilise renewable energy for electricity generation. At the same time, we are working on ways to convert our local gas generation infrastructure to support the use of green fuels such as zero-carbon hydrogen. In decarbonising our electricity generation, CLP continues to adopt careful planning to maintain high levels of safe and reliable supply for our customers.
- CLP will continue to help customers manage energy demand and promote energy saving as well as innovative technology applications. We also engage the wider community to adopt low-carbon living through energy efficiency and conservation public education programmes.

## Other Environmental Initiatives

- Caring for the environment is one of CLP's core values. We strive to introduce various initiatives in the process of operations that contribute to improving the environment we live.

### CLP Sky Woodland

- To promote city greening, CLP has introduced the Sky Woodland at Chui Ling Road Substation in Tseung Kwan O. Largest in Hong Kong, the Sky Woodland is planted on the rooftops of two substation blocks, covering an area of 520m<sup>2</sup> with 500m<sup>2</sup> of vertical greening on the substation walls. The project was presented with the Gold Award for the Transmission and Distribution Project of the Year at the Asian Power Awards.
- The Sky Woodland is far more than just a rare stretch of urban greenery. It is a slice of genuine woodland in the city with its building structures tailor-made to replicate a natural woodland environment for trees of native species. The Sky Woodland has attracted an abundance of birds and insects since its launch. In addition to its ecological benefits, the Sky Woodland also contributes to a better living environment by improving air quality, enhancing buildings' energy efficiency by reducing the indoor and outdoor temperature through solar heat absorption and transpiration.



CLP Sky Woodland

### Green Substation with Low Carbon Initiatives

- CLP is introducing a more systematic and innovative approach for the design of green substations, introducing features such as increased ratio of greenery, rainwater recycling system and automatic dripping irrigation system to save more water for irrigation, as well as photovoltaic (PV) panels to maximise the harvest of the solar energy.
- A number of CLP substations were awarded for their excellent green design. The Hong Kong-Zhuhai-Macao Bridge Substation, Queen's Hill Substation, and Ho To West Substation were presented with the Gold Award for the Transmission and Distribution Project of the Year at the Asian Power Awards. The Hong Kong-Zhuhai-Macao Bridge Substation, Queen's Hill Substation, Shing Kai Road Substation, Ma Sik Road Substation, and Kwu Tung North Substation were awarded Final Platinum rating under BEAM Plus New Buildings, while Ho To West Substation, Tuen Mun Eco Park Substation, and Yuen Long Industrial Estate Substation were awarded Provisional Platinum rating.



Kwu Tung North Substation



## Waste Management

- Waste generated during power generation is also treated responsibly. For example, the coal ash from coal combustion is classified at the Ash Classification Plant in Castle Peak Power Station in accordance with the British Standard. Classified pulverised fuel ash (CPFA) that fully complies with the standard is sold to local concrete production companies as a direct replacement for cement in concrete production while the lower quality ash, such as furnace bottom ash (FBA), raw PFA and reject PFA are sold to local plants for cement production.

## Green Driving



CLP's EV charging station

- CLP plays an orchestrating role in the local electric vehicle (EV) ecosystem by promoting the wider adoption of EVs for Hong Kong.

## Promote Green Motoring

- CLP has set up EV charging stations in Kowloon, the New Territories and major areas of Lantau since 2009 to promote the wider use of EVs in Hong Kong. With the EV charging service market maturing, CLP will gradually introduce fee-paying EV charging services in 2025 in line with market development.
- In support of the Government's EV-charging at Home Subsidy Scheme (EHSS), CLP has introduced **Eco Charge 2.0** which provides one-stop technical support to the customers who are interested in installation of EV charging-enabling infrastructure in the car parks of private residential blocks. CLP has provided preliminary power supply capacity assessment for all of the around 550 applications received, covering around 133,000 parking spaces in private residential buildings.
- As EVs become increasingly popular, CLP launched an EV Residential Time of Use Tariff in May 2025. This EV tariff plan provides residential customers with flexible options for EV charging at residential parking lots to encourage smart charging. Customers who opt for the EV Residential Time of Use Tariff can enjoy a discounted energy charge during "Off-peak Period" which helps enhance resource utilisation of the power grid and reduce peak load.



eMobility Network launch ceremony

## Promote Wider Use of Electric Commercial Vehicles (ECVs)

- CLP and various businesses and organisations formed a cross-sector partnership called the **eMobility Network** to promote the wider use of ECVs in Hong Kong. The network, which includes ECV manufacturers and operators, charging service providers and battery swapping operators, battery recycling company as well as a bank offering green finance services, encourages technology exchange and accelerates the popularisation of ECVs. Network members will cooperate to promote green transport in a holistic manner and drive sustainable mobility in four key areas: (1) power supply infrastructure and equipment, (2) quick charging facilities, (3) EV manufacturing and operation, and (4) green finance.
- CLP is also working with the Government and stakeholders to support e-transport trials of buses, minibuses, taxis, and ferries. Strategy will be adjusted from time to time to keep abreast of the latest EV development. In addition, CLP has been working closely with the Government and petrol station operators to facilitate the conversion of Petrol Filling Stations (PFS) to EV quick charging stations and the retrofit of existing PFS to EV quick charging network.
- CLP actively promotes the expansion of EV charging network, and fully supports the HKSAR Government's Fast Charger Incentive Scheme. Through a range of initiatives, including close communication with relevant Government departments throughout the planning phase, preliminary power assessments across its supply areas to identify around 8,000 potential sites for fast charger installation, and offering a diverse range of power supply solutions tailored to industry needs, CLP Power helps enable effective planning and deployment of fast chargers for the industry.

## Adoption of the Latest Technology

- To support the expansion of the EV charging network, CLP has developed the **eMobility Grid Management Platform (eGMP)**. The platform analyses EV charging data to assess the utilisation and patterns of charging stations in different locations of Hong Kong, enabling the power company to optimise grid planning and resource allocation.
- Link to reference information: [eMobility](#)



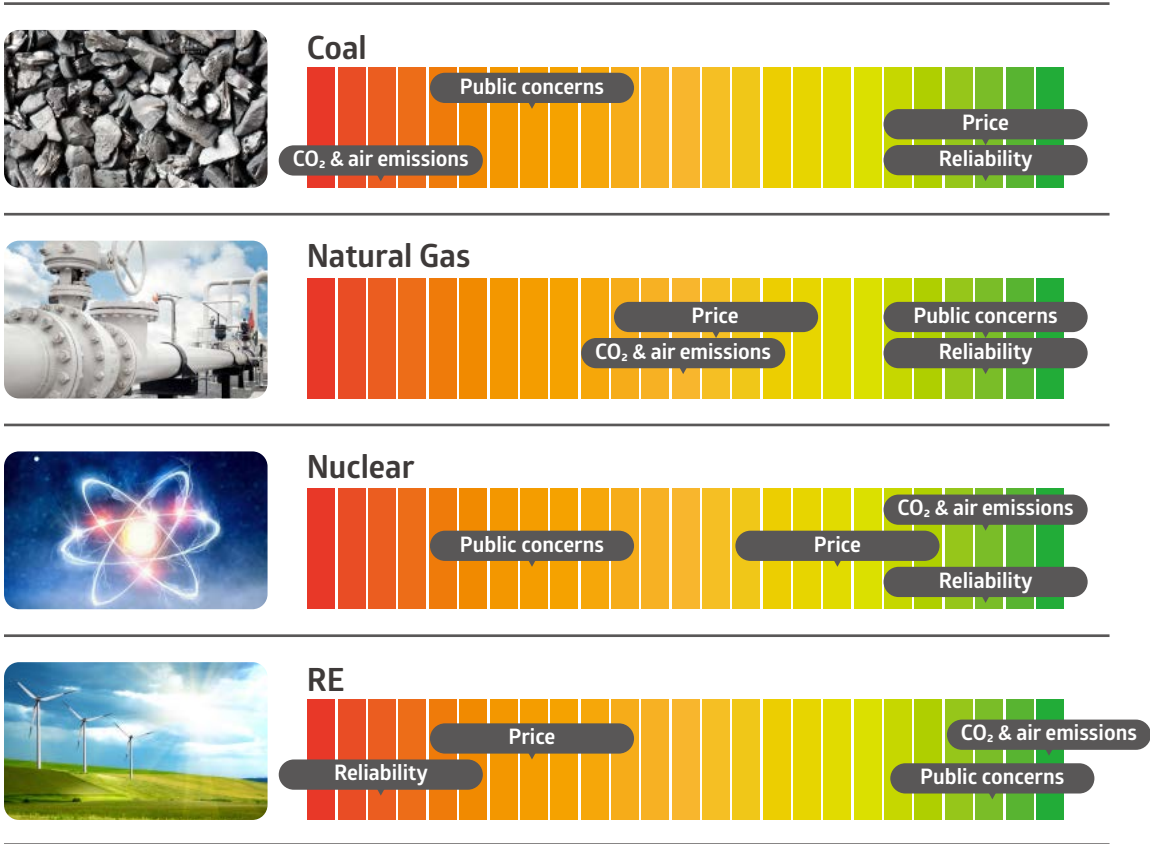
# 6 CLEANER FUEL MIX FOR ELECTRICITY GENERATION

## Getting to Know the Fuels for Power Generation

- Different fuels used for electricity generation have their own unique properties and each plays different roles in the fuel mix.
- Hong Kong has no indigenous energy resources and most of the fuels needed for electricity generation are imported. CLP takes into careful consideration of the properties of different fuels to strive for an optimal fuel mix to achieve a balance among safety and reliability, environmental performance and cost. The following introduces them in terms of cost and efficiency etc.

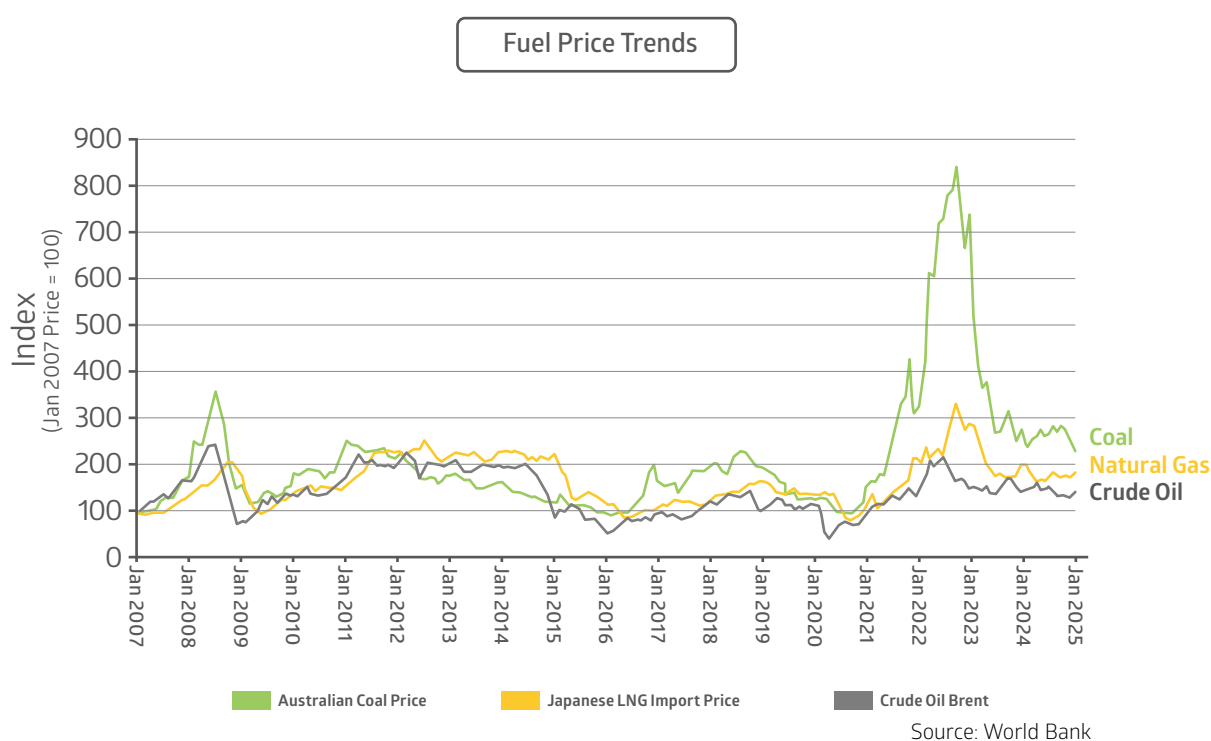
Coal	<ul style="list-style-type: none"><li>▪ Provides high reliability, can be stored on site and a quick response to meet changes in demand</li><li>▪ Fuel cost is typically low</li><li>▪ High carbon emissions and other air emissions even with the latest available abatement measures are the major drawbacks</li></ul>
Natural gas	<ul style="list-style-type: none"><li>▪ Provides high reliability and a very quick response to meet changes in demand. Outperforms coal in emissions performance</li><li>▪ A significantly higher generation cost in place</li><li>▪ World demand for gas is increasing given its environmental benefits</li></ul>
Nuclear	<ul style="list-style-type: none"><li>▪ High reliability, enables large-scale and steady base-load electricity</li><li>▪ Competitive generation cost for stabilising tariff levels</li><li>▪ Non-carbon emitting and no other air emissions</li><li>▪ Requires sophisticated and careful operational safety and waste management</li><li>▪ Public concern over nuclear safety still remains after the Fukushima accident</li></ul>
Renewable Energy (RE)	<ul style="list-style-type: none"><li>▪ Natural resources availability is intermittent in nature, and support from conventional fossil fuel generation is required to ensure reliable electricity supply</li><li>▪ Large amount of land is often required for developing RE</li><li>▪ Due to continuous technological advancement in zero-carbon energy development, the generation cost has become more competitive</li><li>▪ It is practically emission-free and thus is gaining in popularity in countries where its relatively high cost can be supported</li><li>▪ RE is growing important in the world’s fuel mix, and where there are abundant quantities of RE available (e.g. Hydro in British Columbia, Canada; wind in Australia; solar in Arizona, United States.) However, abundant natural RE resources and favourable criteria for developing RE are not available everywhere</li></ul>

- The chart below compares the fuel types in terms of emissions, price, reliability and public concerns.



## Managing Fuel Costs

- Most of the fuels in Hong Kong required for power generation are imported and they are subject to price volatility in the international fuel markets.
- In support of the Government's environmental policy and the increasingly tightening emissions requirement, more than half of CLP's generation fuel mix is natural gas, while the cost of gas-fired generation is typically higher than that of coal-fired generation.
- The following chart shows the volatility of fuel prices since 2007.

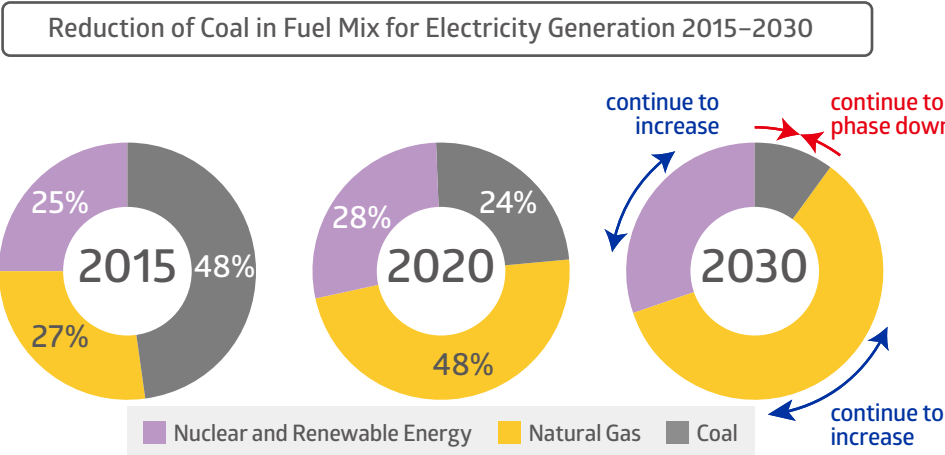


- CLP adopts a **diversified fuel mix**, including more natural gas, less coal and importing zero-emission and relatively stable-priced nuclear. Stable fuel supply and nuclear power have played an important role in mitigating the impact of market volatility.
- CLP adopts prudent fuel costs control. Measures taken include enhancing the efficiency of power generation units, and contracting with different suppliers, to secure competitively-priced fuels from the market. CLP also uses the Fuel Clause Recovery Account under the Scheme of Control Agreement to stabilise tariff levels.



Fuel Choices

- The Government launched a public consultation in 2014 on the **Future Fuel Mix for Electricity Generation**. Most of the respondents supported local power generation by natural gas and expressed reservation about importing electricity from the Chinese Mainland. Following the consultation, the Government proposed to revamp fuel mix target for power generation with around 50% natural gas by 2020 in order to reduce the carbon intensity of Hong Kong by 50% to 60% by 2020 when compared to 2005.
- In 2017, the Government announced **Hong Kong's Climate Action Plan 2030+**, which stated that in order to meet its new carbon intensity reduction target of 65% to 70% by 2030, Hong Kong needed to continue to phase down remaining coal plants in the next decade and replace them with natural gas and non-fossil fuel sources.
- To tackle the imminent challenge of climate change, and to fulfil the obligation of carbon reduction target in the Paris Agreement, the then Council for Sustainable Development (now Council for Carbon Neutrality and Sustainable Development) launched the **public engagement on Long-term Decarbonisation Strategy** in 2019 and suggested different fuel mix strategies for carbon reduction in the power sector. It pointed out that if the global average temperature rise is to be limited to 2°C or even 1.5°C, it is estimated that 80% or even 100% of the electricity has to come from zero-carbon fuel sources, including renewable energy and imported nuclear energy. CLP Power submitted a response paper to the Council in September 2019, supporting the need for deep decarbonisation of electricity generation and the Government's environmental policy by exploring increasing low-carbon electricity supply through more gas-fired generation and regional cooperation in the longer term.
- Subsequently, the Government announced **Hong Kong's Climate Action Plan 2050**, setting out net-zero electricity generation as one of the strategies to achieve carbon neutrality before 2050. This requires the city to strive by 2035 to cease coal-fired generation, to raise the proportion of zero-carbon energy in the fuel mix for electricity generation to about 60% to 70%, as well as to increase the proportion of renewable energy in the fuel mix for electricity generation from less than 1% at that time to 7.5% to 10% by 2035, and further increase to 15% before 2050.
- Links to reference information:
  - ♦ [CLP's Response to the Public Engagement on the Long-term Decarbonisation Strategy](#)
  - ♦ [Council for Sustainable Development's Report on Public Engagement on Long-term Decarbonisation Strategy](#)



Source: Hong Kong's Climate Action Plan 2050

## CLP's Fuel Mix for Electricity Generation

- CLP has been adopting a **diversity of fuel types** supplied from multiple sources and optimising its fuel mix. The objectives of the diversified fuel mix are to **ensure energy security and price stability** while providing a reliable electricity supply and meeting environmental standards at reasonable costs.
- CLP endeavours to source fuels with high quality and at competitive prices. A well-established mechanism for fuel procurement is in place to source the fuels that can satisfy our requirements such as emission standards and costs. Our procurement team also keeps exploring new sources of cleaner fuels.
- The following table and chart illustrate CLP's ongoing efforts in managing a diversified fuel mix to achieve these objectives.

### Evolution of CLP's Fuel Mix

1960s–1980s	<ul style="list-style-type: none"> <li>Single fuel supply from <b>oil</b></li> </ul>
1982	<ul style="list-style-type: none"> <li>Began fuel diversification with the introduction of <b>coal</b> with multiple sources of supply</li> </ul>
1994	<ul style="list-style-type: none"> <li>Further diversification by importing <b>nuclear energy</b> from Daya Bay Nuclear Power Station</li> <li>Began to phase out oil</li> </ul>
1996	<ul style="list-style-type: none"> <li>CLP pioneered the use of <b>natural gas</b> for power generation in the region in the early 1990s</li> <li>Secured natural gas supply from one of the four largest offshore gas fields in the Chinese Mainland near Hainan with a 20-year contract</li> </ul>
2000	<ul style="list-style-type: none"> <li>Began to use <b>low-emission coal</b> to further improve emissions performance</li> </ul>
2013	<ul style="list-style-type: none"> <li>Started using natural gas supplied via the <b>Second West-East Gas Pipeline (WEPII)</b> in the Chinese Mainland</li> </ul>
2015	<ul style="list-style-type: none"> <li>HKSAR's Sludge Treatment waste-to-energy facility connected to the CLP grid</li> </ul>
2018	<ul style="list-style-type: none"> <li>Feed-in Tariff was introduced to promote the development of <b>local renewable energy</b></li> </ul>
2020	<ul style="list-style-type: none"> <li>The <b>first new gas-fired generation unit (Unit D1)</b> at Black Point Power Station was commissioned to increase the share of gas-fired generation to around 50%</li> <li>The landfill gas generation units at the West New Territories (WENT) Landfill, <b>WE Station</b> started operation to utilise <b>landfill gas</b> produced locally as fuel</li> </ul>
2023	<ul style="list-style-type: none"> <li><b>Hong Kong offshore liquefied natural gas (LNG) terminal</b> went into operation to increase the gas supply security by diversifying supply sources, and to enable procurement of LNG at competitive prices from the global market</li> </ul>
2024	<ul style="list-style-type: none"> <li>The commissioning of the <b>second new gas-fired generation unit (Unit D2)</b> at Black Point Power Station further increased CLP's gas ratio in the local fuel mix and supported the gradual retirement of coal-fired generation units at Castle Peak A Power Station</li> <li>The second phase of WE Station has been put into operation</li> </ul>

- As early as the 1990s, CLP spearheaded the introduction of nuclear energy and natural gas for power generation, achieving **a diversified fuel mix** that enables an abundant and reliable electricity supply, an improving environmental performance and a stable tariff for Hong Kong.
- CLP fully supports the new measures set out for Hong Kong's long-term decarbonisation strategy in the Government's Hong Kong's Climate Action Plan 2050. CLP strives to advance energy transition, phase out coal-fired generation, promote the development of local renewable energy, explore the use of green hydrogen, promote electrification, as well as enhance regional cooperation to seek new zero-carbon energy sources. The section below illustrates our key initiatives of using cleaner fuels: natural gas, nuclear energy, renewable energy, and zero-carbon energy.

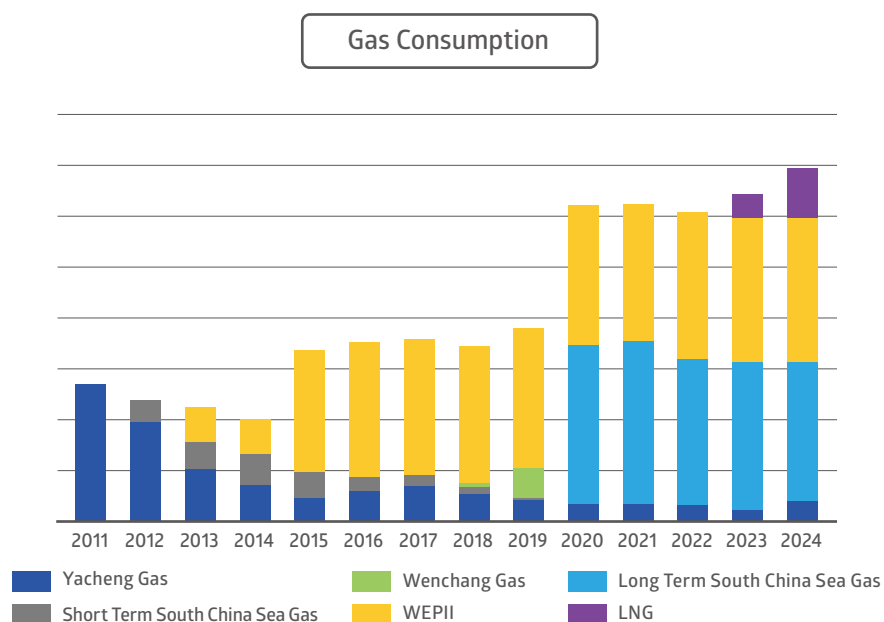
## Natural Gas

- **CLP was the first electricity supplier to bring natural gas to Hong Kong for power generation**, for which natural gas emits much less sulphur dioxide, nitrogen oxides, particulates and carbon dioxide than most other fossil fuels. Over the years, the use of natural gas has helped CLP reduce emissions from its operations.
- CLP started importing gas from **Yacheng Gas Field** near Hainan Island in 1996 at a very attractive price, providing an abundant and reliable energy source to support Hong Kong's economic development. It enabled significant environmental improvement accompanied with a stable tariff regime.
- A Memorandum of Understanding (MOU) on energy cooperation was signed between the Central Government and the Hong Kong SAR Government in 2008, paving the way for the use of new gas sources from the Chinese Mainland. One of the primary sources is the **Second West-East Gas Pipeline (WEPII)**.
- WEPII, operated by China Oil & Gas Pipeline Network Corporation, is currently the **world's longest natural gas pipeline**. It consists of one trunk line and eight branches that starts in Horgos, Xinjiang, where it connects to the Central Asia-China Gas Pipeline and crosses 14 provinces, autonomous regions and municipalities, and terminating at Hong Kong's Black Point Power Station.
- In line with the MOU, a long-term gas supply agreement with PetroChina was signed for supplying WEPII gas to Hong Kong starting from 2013. Gas is delivered via a 20-km undersea pipeline connecting the gas launching station at Dachan Island in Shenzhen and Black Point Power Station.
- With the gradual depletion of the Yacheng gas field, CLP has since 2020 brought in additional gas from CNOOC's gas fields in the South China Sea using the existing Yacheng pipeline under a new long-term contract.
- CLP has been importing liquefied natural gas (LNG) from international markets through the Hong Kong Offshore LNG Terminal since 2023 to meet Hong Kong's electricity generation fuel needs.



### Ensuring Gas Supply

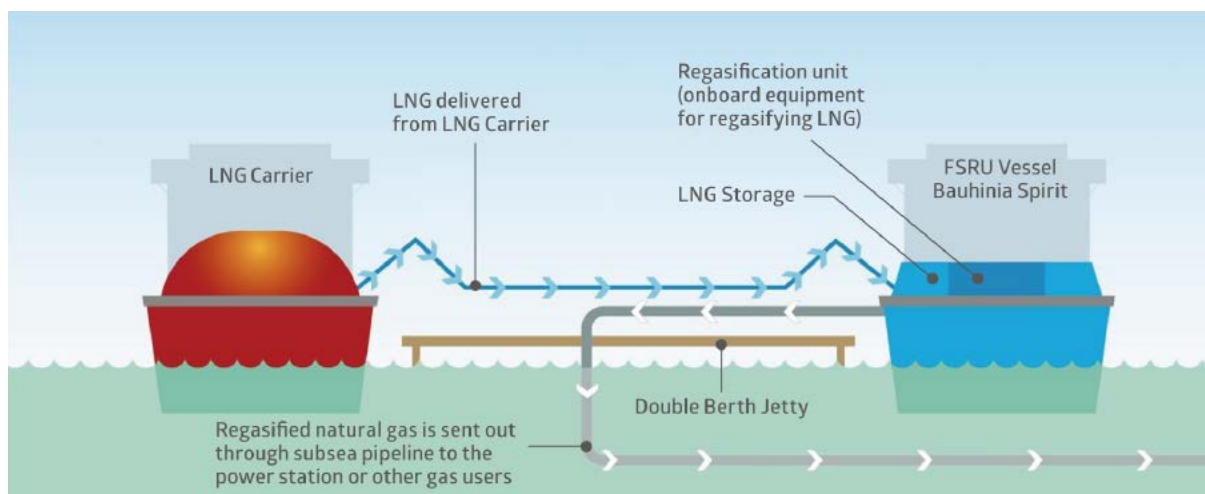
- To meet the Government's target of increasing local gas-fired generation by 2020, CLP is taking additional steps to ensure sufficient gas supply and to further increase the diversity and security of supply. In view of the depleting Yacheng gas fields and the two-month temporary suspension of gas supplies from the existing WEPII due to a landslide in Shenzhen in December 2015, CLP sees the importance to diversify the gas sources for CLP, and for Hong Kong as a whole.
- CLP has developed a plan to ensure future energy supply stability, security and diversity. This also helps enhance the city's bargaining power for natural gas purchases and provide our customers a more cost-effective electricity supply.



### Hong Kong Offshore Liquefied Natural Gas (LNG) Terminal

- Jointly developed by CLP and HK Electric, the Hong Kong Offshore Liquefied Natural Gas (LNG) Terminal went into operation in mid-2023 to provide a long-term alternative source to meet Hong Kong's need for fuel supply, which is crucial for enhancing the security of the city's natural gas supply. It also gives the two power companies direct access to international LNG markets, strengthens their ability to source competitively-priced gas, and ultimately benefits customers and Hong Kong as a whole.
- The offshore LNG terminal in the south-western waters of Hong Kong is the first of its kind in the city. It applies the technology of **Floating Storage Regasification Unit (FSRU)** to regasify the LNG, and the natural gas is supplied to CLP Power's Black Point Power Station and HK Electric's Lamma Power Station through two separate subsea gas pipelines. This initiative by the two power companies helps raise the low-carbon generation capability and fuel supply security of the power companies in support of Hong Kong's energy transition.
- Bauhinia Spirit, the world's largest FSRU vessel with an LNG storage capacity of 263,000 cubic metres, has moored at the jetty of the terminal. It is used to receive, store, and regasify LNG.
- To support marine ecology conservation and the sustainable development of fishing industries, the two power companies have established a Marine Conservation Enhancement Fund and a Fisheries Enhancement Fund. A total of HK\$100 million was injected into two funds to support community initiatives that contribute to the enhancement of the marine environment and fisheries.





- In parallel, CLP continues to consider opportunities for additional gas sources as stipulated in the MOU on energy cooperation and strives to achieve an optimal balance between different fuel types.



The Hong Kong Offshore  
LNG Terminal Project Website



Hong Kong LNG Terminal Limited Website



At-a-glance video of the  
Hong Kong Offshore LNG Terminal

## Nuclear Energy

### Nuclear Energy in Hong Kong



- In 1985, the Chinese Government and CLP joined hands to develop Daya Bay Nuclear Power Station in Guangdong Province, the nation's first large-scale commercial nuclear power station. It was CLP's first large-scale power project in the Chinese Mainland and our new milestone to low-emission power generation. In the same year, CLP established a joint venture company with Guangdong Nuclear Investment Co., Ltd. (a subsidiary of China General Nuclear Power Corporation) and signed a 20-year contract for nuclear power supply to Hong Kong starting from 1994.
- In September 2009, the supply contract for Hong Kong was extended for another 20 years to 2034.
- As of today, nuclear energy accounts for about a third of CLP's fuel mix in Hong Kong and has been safely and reliably meeting a quarter of Hong Kong's electricity needs for more than 30 years. Importing non carbon-emitting nuclear energy directly from a dedicated plant through a dedicated line has been proven effective.
- Daya Bay Nuclear Power Station produces around 15 billion kWh of electricity per year. To ensure that more non-carbon and cost-competitive energy is provided to Hong Kong, Daya Bay increases its electricity supply to Hong Kong from 70% to around 80% of its output starting from late 2014.
- As of December 2024, Daya Bay has supplied Hong Kong with a cumulative total of over 320 billion kWh of electricity.
- Importing nuclear energy to Hong Kong has helped avoid carbon dioxide emissions in the city by over 7.5 million tonnes a year. Given that the cost of nuclear energy is less affected by volatile fuel prices, nuclear energy helps smoothen price fluctuations amid recent global energy crisis, ensuring a reliable power supply at a competitive price.

- In the longer term, CLP believes that nuclear power should continue to be a part of the fuel mix to support Hong Kong and the Chinese Mainland's decarbonisation plan. CLP is discussing with the Government and industry players on the importation of more nuclear energy through regional cooperation to meet Hong Kong's decarbonisation targets.
- CLP has three distinct roles in the Daya Bay Nuclear Project. We:
  - ◆ act as an investor;
  - ◆ contribute our expertise; and
  - ◆ import nuclear power into Hong Kong.
- In 2025, Daya Bay Nuclear Power Station was presented the Legacy Award (Industrial) and the Grand Award (Industrial, 1990s) in the Hong Kong Institution of Engineers 50<sup>th</sup> Anniversary Legacy Award, recognising its outstanding contribution to Hong Kong over the past three decades.



## Facts and Figures about Daya Bay Nuclear Power Station

CLP Ownership	25% (through Hong Kong Nuclear Investment Company Limited (HKNIC))
Joint Venture Partner	China General Nuclear Power Corporation
Reactor Technology	Pressurised Water Reactor
Generation Capacity	Gross capacity → 1,968MW (2 x 984MW) Capacity attributable to HK → 1,577MW*
Commencement Date of Construction	7 August 1987
Date of Commissioning	Unit 1 → 1 February 1994 Unit 2 → 6 May 1994
Plant Management & Operation	Daya Bay Nuclear Power Operations & Management Company, Limited (DNMC) (CLP has 12.5% stake)

- Link to reference information: [Nuclear Energy - A Sustainable Choice for Powering the Future](#)

\* Daya Bay has increased its electricity supply to Hong Kong from 70% to around 80% of its output starting from late 2014.



### Safety Excellence and Emergency Preparedness

- **Safe operation** is always the top priority for all nuclear power operators. At Daya Bay Nuclear Power Station, the **defence-in-depth** principles are applied to ensure a robust and safe operation, covering a full spectrum of activities from the initial plant design to the installation of all equipment and the implementation of all operational procedures. They include:
  - ◆ site selection;
  - ◆ plant design and operational safety;
  - ◆ staff training and qualification;
  - ◆ international benchmarking;
  - ◆ radiation protection and environmental monitoring; and
  - ◆ emergency preparedness
- Daya Bay Nuclear Power Station is located in a seismically stable region. The site was selected meticulously according to international guidelines and stringent safety assessment by the National Nuclear Safety Administration, after a comprehensive analysis and survey.
- The nuclear power station is designed according to the local situation around the site of the power station and able to withstand natural hazards such as tsunami and earthquake.
- In the event of an emergency due to equipment failure or human error, standby equipment is ready to step in and maintain the safe operation of the plant, minimising the chances of any incidents and their adverse impacts on the environment.
- **Well established contingency plans** are in place at Daya Bay Nuclear Power Station. A communication mechanism is also set up to facilitate communication with the general public and between relevant government authorities in Guangdong and Hong Kong in the unlikely event of a nuclear accident.
- To enhance public's understanding of nuclear operation and promote higher transparency, Daya Bay Nuclear Power Station has adopted a **public notification mechanism** to release information of non-emergency Licensing Operational Events through the websites of DNMC and HKNIC. These events carry no nuclear safety consequences and have no impact on the environment or public safety. Events of an emergency significance will be announced quickly and as appropriate by the government authority.
- **Daya Bay Nuclear Power Station has maintained an excellent record of plant reliability, performance and safety since its commissioning in 1994.**
- To comply with the statutory requirement of National Nuclear Safety Administration, the first 30-year overhaul of the two units of Daya Bay Nuclear Power Station was successfully completed in June 2024, further enhancing the operational safety, supply reliability and digitalisation capability of the power station, laying a solid foundation for extending its lifespan.
- Over the years, Daya Bay Nuclear Power Station has ranked high in the World Association of Nuclear Operators (WANO)'s performance indices across major aspects of generation capability, plant safety and efficiency, industrial safety and radiation protection. In 2024, Daya Bay Nuclear Power Site reached the world's level of excellence of WANO performance indicators. Daya Bay Nuclear Power Site was also named champion in Capability Factor at the EDF Safety Challenge Competition for consecutive years.
- Daya Bay Nuclear Power Station has a **comprehensive environmental monitoring programme** to safeguard the health of its staff and the general public. Regular checks over the years have indicated that there has been no excessive or undue release of radioactivity and the effect of radioactive releases on the environment is very low if not negligible. No adverse public health impact from Daya Bay (and the nearby Ling Ao Nuclear Power Station) is confirmed in a 25-year survey by the Shenzhen Municipal Health Bureau.

## Renewable Energy (RE)

- CLP supports the Government's energy policy and strives to explore practical local RE opportunities despite limited RE resources and land scarcity in Hong Kong. The following provides an overview about CLP's support to facilitate the community in developing distributed RE systems and RE projects constructed by CLP.

### Grid Connected Renewable Energy Projects

- While large-scale distributed RE projects prove challenging, CLP provides technical support, a simple application procedure for grid connection to encourage local RE developments. In addition, we provide back-up electricity supply for these systems so that customers could enjoy clean electricity from renewable sources without sacrificing power supply reliability.
- Solar power is the most popular technology applied in distributed RE systems in Hong Kong. Project examples include the Siu Ho Wan Sewage Treatment Works of Drainage Services Department. This solar farm, which is connected to CLP's electricity grid, comprises over 4,200 solar panels covering an area of 11,000m<sup>2</sup> and is anticipated to generate as much as 1.1 million kWh of electricity annually. It is one of the large-scale solar farms in Hong Kong.
- There are also larger scale RE facilities under construction, planning and operation, e.g. the Government's waste-to-energy facilities including the T-PARK in Tuen Mun and the Organic Resources Recovery Centers (O-PARK1 and O-PARK2 located in Lantau and North District respectively) were connected and electricity generated are also sent to the grid. The Integrated Waste Management Facilities Phase 1 (I-PARK1) under construction at Shek Kwu Chau would have larger capacity and may generate surplus electricity to CLP grid. We fully support the operation of these new facilities in order to provide help to meet the Government's environmental goals.



Renewable Energy Feed-in Tariff (FiT) Scheme

- CLP introduced a Renewable Energy Feed-in Tariff (FiT) scheme and Renewable Energy Certificates in May 2018 and January 2019 respectively, with an aim to promote the development of local RE. The new initiatives also aim to encourage the community to embrace low-carbon lifestyles through their participation in the development of RE.
- The FiT scheme is applicable to electricity produced by solar and wind power systems with a total generation capacity of up to 1MW. CLP will purchase the electricity produced by an approved RE system once it is successfully connected to the company's power grid. A smart meter will be installed to record the amount of electricity generated by the RE system. The FiT rate will be the same for both solar and wind power systems.
- For instance, if a customer has installed solar panels at his rooftop and the system is approved and connected to CLP's power grid, CLP will offer him FiT rate, ranging from HK\$2.5 to HK\$4 depending on the generation capacity of the RE system. The FiT rates are higher than the prevailing tariffs to incentivise RE investment which is expected to enjoy a shortened payback period of around 10 years. The FiT rate applies to the electricity generated during the entire project technical lifetime or until the end of the current SCA on 31 December 2033, whichever is earlier.

- The FiT rates:

RE system generation capacity	FiT rate (per unit)
≤10kW	HK\$4
>10kW to ≤200kW	HK\$3
>200kW to ≤1MW	HK\$2.5

- The FiT scheme is open to all CLP's customers other than government departments. FiT rates may change from time to time as agreed with the Government. The new rates will apply to new applications after the effective date of change.

- The scheme attracted customers from a variety of sectors including business and industrial sector, schools, and both urban households and village houses. Since the commencement of applications in May 2018, CLP received over 27,600 applications as of end-June 2025. Around 96% of the applications have been approved, majority of them are from village houses. So far about 24,800 applications have been completed and successfully connected to CLP power grid to enjoy FiT. Among the systems that have been connected to our grid, the largest systems are from 5 commercial and industrial customers with a capacity of 1,000kW each.
- RE promotions are launched through the CLP website, CLP One, and social media, etc. to help customers understand the FiT application procedures, information related to system design and installation. CLP will offer technical assistance to customers all the way till the RE system is connected to the power grid. Customers can also refer to the Technical Guidelines on Grid Connection of Renewable Energy Power Systems, and Guidance Notes for Solar Photovoltaic (PV) System Installation from [Electrical and Mechanical Services Department website](#) for more information.







### Renewable Energy Certificates (RECs)

- For customers who want to support local development of RE but cannot afford an RE system on their own, they can purchase the Renewable Energy Certificates (RECs). Each unit of REC represents environmental attributes of electricity produced by local RE sources including solar power, wind power, and landfill gas projects, generated or purchased by CLP.
- Launched on 1 January 2019, the current price per unit of RE electricity is HK\$0.5, and the minimum purchase is 100 units. Any residential or commercial and industrial customer with a CLP Power electricity account is eligible to purchase RECs.
- To encourage more commercial and industrial customers to participate, CLP Power has offered a variety of purchasing options since mid-2020.
- Revenue generated from the sale of RECs will contribute towards part of the cost of purchasing RE through the FiT scheme, helping minimise the costs of electricity as a whole.
- The units of electricity carried in the RECs available for sale will match the total amount of electricity from local RE sources generated or purchased by CLP over a specific period of time. Any CLP's residential or business customers can support local development of RE by purchasing RECs.
- CLP's RECs have been well-received by commercial and industrial customers since its launch. As of end-June 2025, around 660GWh were sold through RECs, equivalent to a reduction of 254,300 tonnes<sup>1</sup> of carbon emissions. Many corporate customers have committed to larger and longer RECs purchases, demonstrating their commitment to long-term sustainability and supporting local renewable energy development.



CLP Feed-in Tariff Scheme



CLP Renewable Energy Certificates

<sup>1</sup> Calculation based on the carbon intensity of the electricity sold by CLP Power in Hong Kong from 2019 to 2024.

## RE Projects Developed by CLP

### Town Island Renewable Energy (RE) Supply Project

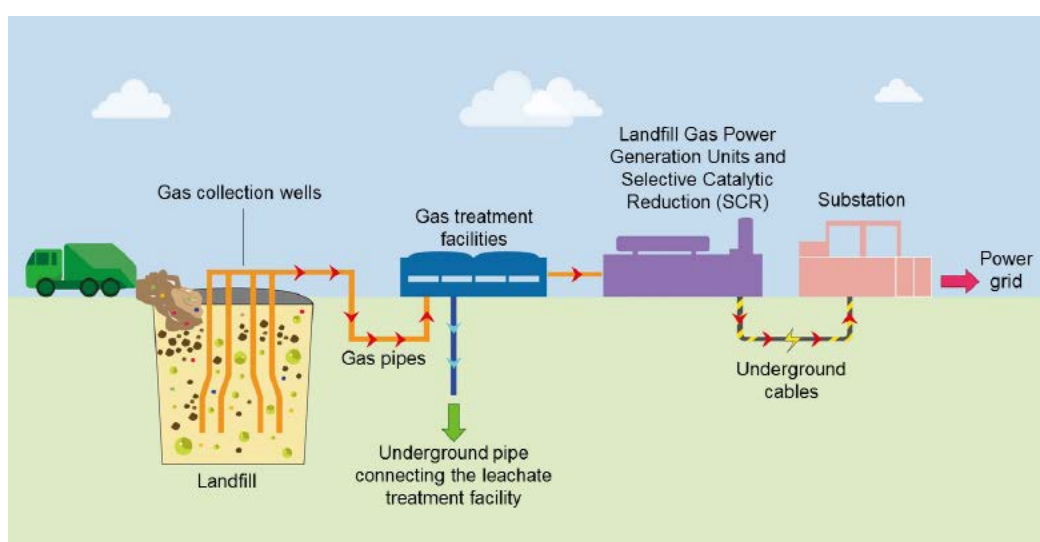
- CLP has developed Hong Kong's first commercial-scale standalone RE generation and storage system on Town Island, located off Sai Kung. The Town Island RE Supply Project powers a non-profit drug rehabilitation centre run by Operation Dawn.
- Staff and residents at the centre used to rely on the intermittent running of small diesel generators for a few hours every day for their power supply. Since the commissioning of the first phase of the system in 2010, more reliable electricity has been available to meet their basic energy needs.
- After the system upgrade, the project now comprises 672 solar panels, two wind turbines and 190 batteries. As the system is not connected to the grid, it features batteries capable of storing over 1,000 kWh of electricity to provide power supply for the rehabilitation centre's use lasting for around 30 hours.
- By the first quarter in 2025, the system generated more than 954,300kWh of electricity, equivalent to the monthly consumption of over 2,700 households. It achieved a significant reduction of over 458,000kg carbon emissions.
- The Project was named one of the "Hong Kong People Engineering Wonders in the 21<sup>st</sup> Century" in a prestigious public vote organised by Hong Kong Institution of Engineers in recognition of CLP's commitment to promoting sustainability, the use of clean energy and caring for the community.



### Landfill Gas Power Generation Project

- CLP's waste-to-energy initiative involves the installation of power generation units at the **West New Territories (WENT) Landfill**, namely **WE Station**. The units **make use of landfill gas produced locally at the landfill site for power generation** and the electricity produced will be transmitted to CLP's power grid.
- The first phase of WE Station comprises five generation units with a total generation capacity of 10MW, which began operation in the first quarter of 2020. The second phase of the project has added two more units, increasing the generation capacity by 4 MW to a total of 14 MW, which was completed in 2024.

Landfill Gas Generation Process



### Zero-Carbon Energy

- CLP will explore ways to enhance regional cooperation on zero-carbon energy with the Government and identify sources of zero-carbon energy in neighbouring regions, including seeking joint investment and development opportunities for participating in and operating zero-carbon energy projects near Hong Kong.
- Power generation by using green hydrogen is an important development for Hong Kong to achieve zero-carbon electricity supply by 2050. In order to further understand the relevant technical, safety and legal requirements, CLP is considering some pilot projects in the next five years to mix small amounts of hydrogen to natural gas as fuel for gas-fired generation units.

# 7 ENERGY MANAGEMENT

## Helping Customers with Energy Efficiency and Conservation (EE&C)

- CLP is firmly committed to energy efficiency and conservation. We encourage our residential and business customers and the Hong Kong community to use energy more efficiently. We provide tools and organise activities for residential customers to raise their environmental awareness and change their energy consumption habits. On the other hand, we have introduced a series of measures for business customers to help them reduce energy use and save costs in their operations, hence accelerating their decarbonisation journey, and together creating a greener and smarter city.

## Helping Residential Customers in Energy Saving and Carbon Reduction



### Smart Meter

- CLP has been gradually replacing or installing smart meters for customers since late 2018. Customers who have connected smart meters can enjoy a variety of new and convenient services through the CLP One and website, including projected consumption, personalised unusual consumption alert, daily or hourly consumption data. With these consumption data, customers are equipped to better manage their energy usage, and reduce energy use.



Improved services of  
smart meter





## Save & Earn

- Apart from helping customers manage energy usage, **Domeo Points** will be offered to customers who are able to save energy and adopt eService for redemption of eco products and energy efficient appliances at the **Domeo eShop**, so as to promote low-carbon green lifestyle.
- Since April 2020, CLP invited some residential customers with smart meters to join the **Summer Saver Rebate Programme**. Customers who meet energy saving targets on specific days during the peak period can earn Domeo Points for redeeming gifts. We also teamed up with property management partners to promote energy saving, setting up interactive game stations at large shopping malls, where the energy management functions of smart meters were introduced to raise awareness of the importance of energy conservation and carbon reduction. Nearly 70% of the participating households successfully saved electricity during the event period in 2024.
- In 2024, we launched the **CLP Eco-Grade Energy Efficiency Grading & Rewards Pilot Programme**. Participating residential customers are rated based on their monthly household electricity consumption and the frequency of their participation in low-carbon and green activities. Customers can earn Domeo Points based on their monthly grades to redeem gifts, which further encourages residential customers to actively save electricity and practise a low-carbon green lifestyle.



## Helping Business Customers in Enhancing Energy Efficiency

### Energy Audit Services

- CLP has been conducting **Energy Audits** for business customers since the 1990s. It is a free service helping businesses to save energy and operating costs. Our engineering staff carry out energy system performance analysis at customers' premises to identify Energy Management Opportunities and propose energy saving solutions.
- Under the current SCA, CLP increases the number of energy audits it offers to business customers from 150 to 600 a year, with total electricity saved expecting to reach 48GWh each year.

### Eco Building Fund

- Eco Building Fund** was first set up in 2014 to help residential building owners to carry out energy efficiency improvement works in the communal areas. Under the current SCA, its scope has been extended to cover commercial and industrial buildings as well, and its funding has been increased five-fold to HK\$100 million a year to subsidise about 400 buildings. On top of lighting and air-conditioning systems replacement, the upgraded fund will also support retro-commissioning projects and the use of smart technology.

### Electrical Equipment Upgrade Scheme

- CLP **Electrical Equipment Upgrade Scheme** aims to subsidise business customers, in particular small and medium enterprises, to replace or upgrade the lighting and air-conditioners to more energy-efficient models.

### Retro-commissioning (RCx) Charter Programme

- Launched in May 2021, the programme provides business customers with RCx training courses to equip participants with practical knowledge. It encourages business and organisations to set up energy saving targets and implement with RCx works at their properties to enhance building energy efficiency in a highly cost-effective way.



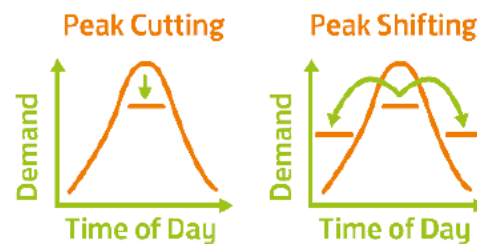
### Smart Energy Online platform

- Equipped with smart meters and remote meter reading systems, large businesses are able to monitor and analyse their electricity consumption data of business premises or buildings through the one-stop energy management platform **Smart Energy Online**, which helps them manage energy usage and enhance operational efficiency.

## Peak Demand Management programme

- CLP continuously promotes Demand Side Management measures to our customers, with an aim to reduce customers' and entire community's peak electricity demand to achieve energy efficiency through closer customer engagement. This will help defer the new investment in electricity infrastructure by the power companies.
- CLP has launched a **Peak Demand Management programme** since 2013 to encourage commercial and industrial customers to reduce electricity consumption during peak demand hours by offering incentives. This programme is especially suitable for Bulk or Large Power Tariff customers

who have high energy demand. Participating customers can earn rewards if they successfully implement measures to reduce their electricity usage during peak demand hours when CLP gives them advance notice about anticipated specific hours of extremely high electricity demand.



## Smart Energy Award

- CLP is committed to encouraging our customers to conduct their business in a greener way and participate in Hong Kong's low carbon transformation. In 2018, we launched the **Smart Energy Award** to recognise businesses and organisations for their outstanding performance in applying innovative solutions to reduce energy use and improve efficiency, with hundreds of organisations participating each year.



## Deepen Cooperation with Various Industries to Promote Low-carbon Transformation

### Sustainability-Linked Loans

- To accelerate the pace of energy conservation and emission reduction in the commercial and industrial sectors, and support the development of the green finance ecosystem, CLP has been providing energy audits services and formulating energy management solutions for businesses since 2022. Those suggestions were accepted as sustainability performance targets for their application for a sustainability-linked loan, supporting the businesses to secure loan to drive expansion in a sustainable way. CLP has so far helped customers from different industries to obtain more than HK\$16 billion in sustainability-linked loans.

### Electrification of Residential Buildings

- CLP has in recent years supported and encouraged property developers and property management industry to promote low carbon property developments as well as 'All-Electric Homes'. We introduce innovative energy-saving technologies and energy-efficient appliances such as induction cookers and water heaters to property developers for improving the premises' energy efficiency. We also provide support for installing solar panels and EV charging facilities at the buildings, with an aim to reduce carbon emissions and support the transformation of Hong Kong into a low-carbon smart city.
- In 2023, CLP collaborated with Hong Kong Housing Society (HKHS) to drive decarbonisation and sustainable lifestyle through raising residents' understanding on the benefits of 'All-Electric Homes', smart and safety tips on energy use. The elderly housing projects under HKHS's Senior Citizen Residences Scheme, including Blissful Place, adopt an 'All-Electric Homes' design to allow the residents to use energy in a smart, safe and environmental way.
- The advantages of 'All-Electric Homes':
  - ◆ Induction cooking's energy cost is lower than that of gas cooking
  - ◆ High energy performance appliances help enhance energy efficiency at homes
  - ◆ Smart meters and CLP One enable residents to better manage their electricity expenses
  - ◆ Enable residents to adopt a low-carbon lifestyle





## Promoting Electric Cooking

- In May 2025, CLP donated induction cookers to 1,000 families in light public housing and transitional housing to help reduce their energy costs. Induction cookers use less energy and produce fewer carbon emissions than gas cookers. Additionally, induction cookers do not involve an open flame, which reduces fire risk. It is suitable for light public housing where open flame cooking is prohibited.
- Meanwhile, CLP set a new GUINNESS WORLD RECORDS™ title for the "Largest Induction Cooker Word" by laying out 1,000 induction cookers to spell "CARBON NEUTRAL" to raise public awareness of decarbonisation.



## Promoting Adoption of All-Electric Cooking by Catering Industry

- CLP has always been providing professional advice to the catering industry to enhance its operational efficiency. We commissioned the City University of Hong Kong to analyse the energy efficiency of commonly used electric appliances in Chinese restaurants, including electric steam cabinets, induction woks, and induction stoves. The results show that the energy efficiency of the three electric appliances is superior to traditional cooking appliances. The energy efficiency of electric woks was as high as around 80%, about four times that of traditional woks, saving more than 60% on energy costs and reducing carbon emissions by more than 50%. In addition to improving operational efficiency, electric cooking has lower energy cost, contributing to reduction in operational costs in the long run.
- An all-electric kitchen also helps lower the kitchen's temperature and improve the working environment. In 2023 and 2024, CLP organised the "Low Carbon Legacy · All Electric Professional Cooking Competition" to promote low-carbon electric cooking to the industry, which received tremendous support from the industry.

## Battery Energy Storage System

- Diesel generators were traditionally used to provide power supply for equipment at construction sites. CLP promotes electrification and encourages the industry to switch to battery energy storage system (BESS) to protect the environment and reduce carbon emissions. The BESS, which operates without fuel and is more environmentally friendly than existing backup generators. CLP further developed a 'General Guideline on BESS Adoption for Construction Sites' which provides practical guidance for the industry on the installation, application, and maintenance of BESS.
- To help enhance the Hong Kong International Airport's energy efficiency and reduce carbon emissions, CLP introduced the city's largest BESS to the Airport Authority Hong Kong for storing electricity produced by the existing generators during routine testing. Currently, it is the largest emergency backup power supply system in Hong Kong.



- CLP looks forward to cooperating with more customers to further expand the adoption of BESS.

## Supporting Commercial and Industrial Customers to Achieve Decarbonisation Goals

- CLP is committed to assisting commercial and industrial customers in low-carbon transformation at all levels, and has signed Memorandums of Understanding (MoU) with different companies to further strengthen our partnership in energy-saving and carbon reduction. CLP and Chinachem Group (Chinachem) signed a MoU to launch a wide range of new sustainability initiatives to help Chinachem decarbonise its premises, including using a pilot Energy Management System powered by 5G technology and big data analytics solution to predict and deliver precise cooling load at Nina Mall. CLP Power will also conduct energy audits on new development projects covering a prime cold storage and logistics facility in Kwai Chung, and on the new Tung Chung business hub which will include a green data centre, to identify further opportunities for decarbonisation.





- Also, CLP and Link Asset Management Limited (Link) have established a framework to collaborate on a variety of energy-saving and electrification initiatives, including improving the energy efficiency of Link premises, encouraging sustainable business operations among its tenants, exploring the feasibility of adopting battery energy storage systems on Link's construction sites, providing technical support to Link for electric vehicle charging systems to reduce carbon emissions. Additionally, we are exploring opportunities to provide energy solutions in the Greater Bay Area.
- CLP and Creative Property Services Consultants Limited (Creative Property) – Hong Kong's major public housing property management service provider – signed a MoU, aiming to strengthen the capability of Creative Property's property management team in energy management and handling of power incidents, improving the industry's resilience to cope with extreme weather conditions. The partnership will also help Creative Property enrich its residents' knowledge of energy saving and decarbonisation and promote the use of digital customer services to mitigate the impact of climate change in the long run. An emergency supply restoration drill was held at Yung Shing Court in Fanling managed by Creative Property to strengthen the communication and co-ordination between the two companies.
- To support the low-carbon transformation of the Hongkong International Terminals Limited (HIT), CLP has conducted carbon emission analyses for terminal operations to identify opportunities for energy saving and emission reduction, and explored the use of battery energy storage systems to meet the terminal's peak electricity demand. The solar energy system located 52 meters above ground on the roof of the crane control room at the terminal was connected to CLP's power grid to promote the development of local renewable energy.



# 8 SAFETY IS OUR VALUE

## Safety is Our Core Value

- CLP Power cares for the health and safety of our employees, contractors, customers and the public. Our goal is to prevent harm, ensuring that everyone returns home safely. We have strict safety rules in place, such as **Life Saving Rules** and **CLP Power Electrical & Mechanical Safety Rules**, to prevent serious incidents. These rules are enforced for all staff and contractors to ensure safety in all work processes and facilities.
- To ensure a safe working environment for our staff and contractors, we proactively conduct safety inspections, provide supervision and monitor risks to upkeep our safety performance and pursue continuous improvement.



## Our Commitment to Safety

- Total Engagement** — At CLP, safety is everyone's responsibility. Each staff member has specific safety responsibilities and accountabilities. We also actively engage with our contractors to ensure high safety standards are maintained across the board.
- Safety Performance** — CLP is dedicated to preventing incidents and achieving world-class safety standard. We hold the ISO 45001:2018 certificate for Occupational Health and Safety Management Systems. CLP endeavours to maintain recordable injury rates well below industry average.

## Promoting Safety

- A well-established **Safety Management Framework** is in place to uphold the safety performance across CLP. Leading by example, a steering committee led by senior management sets the company's safety policies, management systems, practices and programmes. We regularly monitor and drive our safety performance, aiming for excellence as well as cultivating a safety culture among staff and contractors. Designated safety teams are set up in every operation and business unit to promote safety in every aspect of our operation.
- At CLP, we focus on preventing **Serious Injuries and Fatalities (SIF)** by proactively mitigating potential hazards that pose significant risk to personal safety.
- Our **"See-it, Own-it, Fix-it"** campaign encourages everyone to collectively identify and address risks in our workplaces.
- Our colleagues and contractors actively apply the concept of **Situational Awareness** and the principle of **Risk Assessment** to enhance their risk awareness during work activities. To further enhance situational awareness, capability, responsibility and accountability among our staff and contractors, which include managers, supervisors and front-line workers, we initiated **A Day in Life** safety culture promotion programme in 2023. A series of safety culture enhancement initiatives on **Human Performance Improvement** were launched in 2024 to promote proactive safety behaviours.
- The **"Own-it" Approach** has been implemented for contractor management to uplift their capability and commitment on safety. Contractors are expected to take ownership of their Safe Systems of Work (SSoW) and be responsible for their own health and safety. With more control and autonomy, they are empowered to leverage their expertise under our ongoing monitoring and guidance.
- CLP strives to strengthen our capabilities as a **Learning Organisation**. We focus on managing HSE risks by learning from incidents, enhancing investigation capabilities and using learning teams to drive operational improvements and strengthen leadership capabilities.
- We are proud to be an accredited international licensed Training Provider for the **Institution of Occupational Safety and Health (IOSH) Foundational Training**, demonstrating our dedication to enhancing safety competency to various levels of staff.





Safety Incentive Scheme Recognition Ceremony 2025

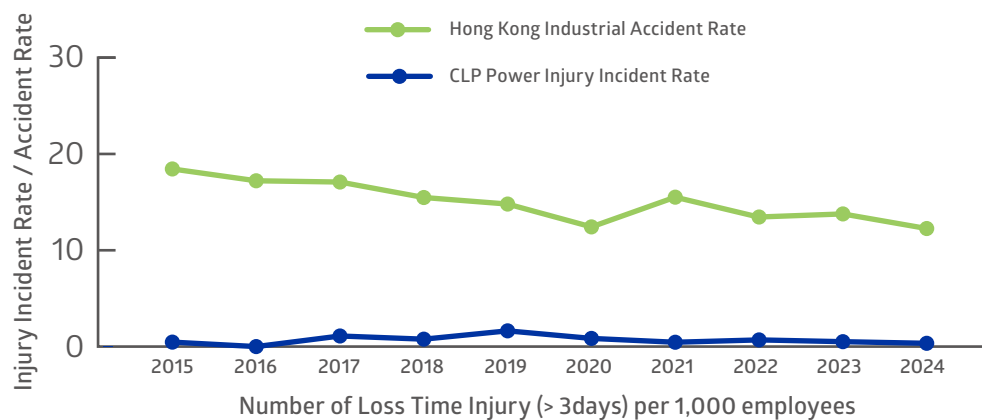
- CLP appoints dedicated employees as our safety role models through the **Safety Champion Programme**, with aims of inspiring peer colleagues to strive for continuous improvement in safety and health.
- At CLP, we promote **Safety Family** culture that emphasises treating our employees, contractors and the public like family members. This culture fosters mutual care to each other's health and safety. Additionally, CLP Power **SHE (Safety, Health and Environment) Day** is organised annually to promote safety awareness and safety family culture among the participants.
- **Safety Incentive Scheme** at CLP is a signature and insightful programme that connects colleagues' safety effort with the community. The scheme encourages staff to implement safety processes by rewarding their effort with accumulation of reward scores. These scores are then converted into a sum of money for donations to local charities.
- CLP proactively participates and organises occupational health and safety seminars to keep the industry workforce abreast of the latest health and safety knowledge. These seminars also provide a platform for sharing good safety practices with other utilities in the industry and promoting a continuous learning culture.



## Safety Performance

- CLP achieves excellent safety performance, and our accident rates are far better than the average industrial accident rates of Hong Kong over the years.

Industrial Accident Rate of Hong Kong Industries and CLP (2015-2024)



Note: The Hong Kong Industry Accident Rate is sourced from Labour Department Occupational Safety and Health Statistics Bulletin, and information paper of Legislative Council Panel on Manpower on Hong Kong's Occupational Safety Performance in 2024.

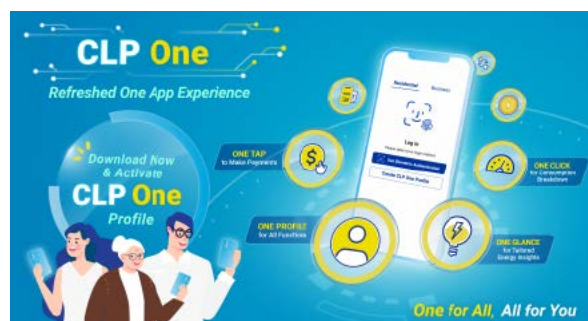
# 9 NEW GENERATION CUSTOMER EXPERIENCE

## Improving Online-to-Offline Customer Experience

- We strive to be the trusted partner of our customers, creating bespoke experiences and empowering them with customer centric solutions. We offer greater convenience and benefits to our customers by integrating our online and offline service channels.

### CLP One – Refreshed One App Experience

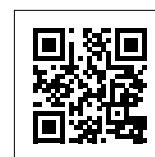
- The CLP App has been revamped to **CLP One**. Each customer can now consolidate all the electricity accounts belonging to the same customer including eMobility account by activating their CLP One Profile.
- Customers can login to their account easily using their mobile number, email address, Facebook account, Apple ID, WeChat or iAM Smart account, and start experiencing the CLP e-Journey to manage their electricity accounts.
- The improved **CLP One** offers various self-service functionalities, including online move-in applications, bill checking and consumption management, enhancing the overall customer experience.
- This transformation of our customer interaction channels enables us to better understand their consumption patterns and provides personalised energy-saving insights, helping our customers optimise their usage habits and reduce electricity expenses.
- Customers can also participate in online game or adopt eService to earn points to redeem rewards, or purchase energy efficient home appliances at the **Domeo eShop** (See also Chapter 7 on **Energy Management**).



Download the CLP One



App Store



Google Play

- Useful information including energy saving tips, locations of CLP Customer Service Centres, service hotlines, and information on nearby charging facilities for electric vehicles is also available at CLP One and CLP Website.

- Power Kid serves as our digital ambassador on CLP One and CLP Website, handling general enquiries from residential and business customers in a chatbot format, including questions on application procedures of electricity accounts, billing and payments.



### eBill Notifications and Mobile Payment Services

- **eBill notifications** will be sent to customers via CLP One and email, which not only reduces paper usage but also helps protect our environment. Customers can track their billing and payment history up to the past 14 months online, and sign up for receiving billing and payment alert via CLP One and website.
- Customers can settle their electricity bills instantly by AlipayHK, WeChat Pay HK, and mobile banking app with Faster Payment System QR code via CLP One.
- The new CLP One introduces the PPS and Faster Payment System App-to-App payment functions to make it more convenient for customers to settle bills.



### Enhancing Customer Experience with Cutting-edge Technology

- At the end of 2022, CLP's Customer Interaction Centre introduced a Data-driven Operation Model. Leveraging on machine learning algorithms and integrating big data analytics and artificial intelligence (AI) technology, the system analyses previous customer enquiry data, and predicts the peak times, categories, and volume of customer enquiries. This helps the Centre flexibly allocate customer service manpower to enhance work efficiency and service quality.



### Helping Senior Customers Adopt Digital Technology

- CLP's Customer Service Centres regularly organise free 'Elderly Digital Classes', teaching elderly practical skills such as video calling with smartphones, as well as checking home electricity consumption, online bills and bus schedules.

### Customer Service Hotlines

- A **Customer Service Hotline (2678 2678)** attends to customer enquiries related to their electricity accounts.
- A 24-hour **Emergency Hotline (2728 8333)** is dedicated to handling customer enquiries on supply interruptions, planned outages, voltage fluctuations, cable damages and dangerous wiring.
- To enhance service flexibility, customers can use the eForm channel to deal with account matters, self-report meter reading, apply for renewable energy schemes, or enquire about energy saving products and services.

### Customer Service Centres

- CLP's Customer Service Centres are conveniently located at Kowloon and the New Territories to meet different needs of residential and business customers.

Customer Service Centres	
Smart Energy@Mong Kok	<ul style="list-style-type: none"> <li>The five-storey building serves as CLP's flagship store that promotes low carbon living and electric cooking.</li> </ul>
Smart Energy@Kwun Tong	<ul style="list-style-type: none"> <li>It promotes energy efficient electrical appliances. The Centre introduces self-service technologies to facilitate the electricity service application and billing enquiries. Grab &amp; Go machines and Pay &amp; Go lockers are also available to provide you a more flexible shopping experience.</li> </ul>
Smart Energy@Sham Shui Po	<ul style="list-style-type: none"> <li>It offers smart home product experience. Customers can purchase energy efficient appliances and also learn more about green living.</li> </ul>
Smart Energy@Tai Po	<ul style="list-style-type: none"> <li>It promotes the latest energy efficient home appliances. The electric vehicle zone allows customers to experience the benefits of eMobility through interactive learning games.</li> </ul>
Smart Energy@Yuen Long	<ul style="list-style-type: none"> <li>It promotes smarter and greener lifestyles. You can also experience the CLP e-Journey by trialling various smart mobile services at the Centre, so as to get a taste of smart living.</li> </ul>

- Link to reference information: [CLP Customer Hotlines and Customer Service Centres](#)





## Performance Pledges

- CLP is committed to providing our customers with the best quality service and value. We are continuously improving both our productivity and efficiency for the benefit of our customers.
- We establish a performance pledge on a yearly basis, regularly assess and report our performance.** CLP's service excellence has been recognised by the community and a number of prestigious awards.
- CLP won 28 corporate and individual awards in the Hong Kong Customer Contact Association Award 2024, including the Greater China Contact Centre Alliance Recognition Award, 14 Gold awards, 9 Silver awards, and 4 Bronze awards.
- Also, the Customer Interaction Centre won 2 international awards at the Contact Center Association of Asia Pacific Regional Awards 2024 organised in Singapore, including 2 Gold awards in the categories of Customer Experience and Contact Centre Operations.
- In 2025, CLP team won 4 awards in the Customer Service Excellence Award 2024 organised by Hong Kong Association for Customer Service Excellence, including the Field & Special Service Award, the Customer Care Award, the Young Star Award and the Individual Frontline Service Award.
- CLP strives to achieve the service targets pledged to our customers. The table below shows our 2025 targets and 2024 performance.

Performance Standards	2025 Targets	2024 Results
Reliability of electricity supply	>99.99%	✓
Notify customers 3 working days in advance of planned outage	>99%	✓
Average arrival time for loss of supply inspection	<28 minutes <sup>#</sup>	✓
Average supply restoration time after fault outage	<2 hours <sup>#</sup>	✓
Provide appointments for installation inspections within 3 working days	96.50%	✓
Carry out site investigations on consumption enquiries within 3 working days	98%	✓
Keep appointments to visit customers for supply applications within a 1.5-hour time slot	99.8%	✓
Connect and supply electricity within the same day after satisfactory installation inspection	99.98%	✓
Reconnect supply within the same day of payment of outstanding charges	95%	✓
Answer Emergency Service Hotline by Customer Service Officer within 20 seconds	90% of answering time	✓
Answer Enquiries Hotline by Customer Service Officer within 20 seconds	80% of answering time	✓
Average queuing time for customer service enquiries at Customer Service Centres	Within 3.5 minutes	✓

✓ Target met

<sup>#</sup> Excluding incidents occurred during major events which are specified in the Scheme of Control Agreement.

## Customer Engagement

- CLP understands the importance of listening to our customers, who come from all walks of life, because their opinions help us continuously improve our services. In 1992, CLP established the **Customer Consultative Group (CCG)** with the support from the Consumer Council by inviting members from a wide spectrum of customers. CLP was the first public utility company in Hong Kong to form a CCG. With the expansion of our customer base and the variety of services offered, the number of CCG members has increased from 5 to 15.
- The main purpose of CCG is to further enhance the relationship between CLP and its customers, improve customer services, address the ever-increasing demands of customers, and ensure that customer complaints are handled properly.
- Following the success of CCG, CLP formed **Local Customer Advisory Committees (LCACs)** in 1994 to strengthen our connection with the community. Members of the LCACs include representatives from different customer segments, such as management professionals, resident associations, community leaders and members of rural committees. Currently, there are 14 LCACs in CLP's supply area.
- Each LCAC meets periodically to offer advice on CLP's customer service and to collaborate with CLP on various community services. Over the years, this well-established communication channel between CLP and local communities has effectively reflected customers' expectations in a timely manner.





# 10 COMMUNITY COMMITMENT

## Care for Our Community

- The success of CLP as a business is closely linked to the well-being of the community we serve. At CLP, we deliver reliable and safe electricity at reasonable tariff with minimal environment impact. We also **contribute positively to the community of Hong Kong**.
- Our community commitment initiatives focus on four areas: **community well-being, environment, education and development**, as well as **arts and culture**. We work closely with local NGOs and community groups to **identify evolving social needs** and to devise programmes that will have long-lasting impact.
- Over the years, we contributed our **skills, expertise and resources** in our community activities which have improved people's quality of life.

## Our Flagship Programmes

### CLP Hotmeal Canteens

- We are continuing our efforts in enhancing community well-being. In 2011, CLP launched Hotmeal Canteen, serving hot meals to the underprivileged at a nominal cost.
- CLP has partnered with **Po Leung Kuk** to provide CLP Hotmeal Canteen service in Sham Shui Po, Kwun Tong and Kwai Tsing. The Canteens provide nutritious hot meals at discounted prices to low-income families, unemployed people, and elderly people in need. The service also includes meals for people with special dietary requirements and conditions such as diabetes.
- To celebrate the milestone of providing over 1 million hot meals to the community, around 3,000 free meals were provided for eligible beneficiaries of CLP Hotmeal Canteens in May 2023. A total of more than 1.2 million hot meals had been provided to the community as of June 2025.
- CLP volunteers regularly serve up meals to diners at the canteens and organise special themed activity day to encourage Canteen users to take part in physical exercises, handicraft workshops and social activities, delivering warmth and care to the community.



- Through CLP's own publicity channels, such as CLP website, bill insert and CLP eBill, the Hotmeal Canteen programme has been well received with strong public support, generating **more than HK\$11 million** in donations from customers and members of the public as of June 2025.



## Caring for the Elderly

- CLP launched the **Sharing the Festive Joy programme** in 2014, inviting single elderly people/ elderly couples and people in need to spend the festivities such as the Tuen Ng Festival, Mid-Autumn Festival and Senior Citizens Day with CLP volunteers to show our care and spread messages on energy efficiency and electrical safety. CLP volunteers also accompanied the elderly to visit the beautified distribution boxes and substation and provided digital classes to teach common mobile applications, enhancing their confidence in connecting with the community.
- In 2024, the programme celebrated its 10<sup>th</sup> anniversary with the theme of "Upcycling". A series of workshops with talks were organised for the elderly to learn how to turn used clothes into daily necessities, and the concept of waste reduction at source and upcycling, encouraging them a life-long learning.







- CLP Power teamed up with the Fusion HUB, Yan Chai Hospital, the Hong Kong Sheng Kung Hui Welfare Council, and the Youth College (International) to host an upcycling fashion show. Design students created outfits inspired by trends from the 1960s to the 1990s and worked with senior citizens with rich sewing experience to transform recycled clothing into innovative fashion pieces, which were modelled by elderly participants and CLP volunteers.
- In 2025, the programme continues with the theme of "Upcycling". A series of workshops with talks were organised for the elderly to learn how to transform used clothes to daily necessities, and to learn waste reduction at source and deepen environmental awareness.
- To date, CLP volunteers have celebrated festivals and shared energy-saving tips with more than **20,000 elderly and the grassroots participants**.



## Promoting Energy Conservation in the Community and Providing Assistance to the Disadvantaged

- CLP is committed to promoting energy efficiency and conservation to our residential and business customers through **public education, community programmes** and **subsidy programmes**; and at the same time, CLP is devoted to offering assistance to the disadvantaged and low-income families.
- Under the current Scheme of Control Agreement, a **CLP Community Energy Saving Fund** began operations in 2019. It is funded by 65% of the incentives earned by CLP from achieving energy saving targets.



## CLP Community Energy Saving Fund

- CLP allocated more than HK\$240 million from the **CLP Community Energy Saving Fund (CESF)** to launch a range of community support programmes in 2025, to encourage people from all sectors of society to promote decarbonisation, boost Hong Kong's economy, and care for the community. The key programmes include:
  - ◆ The brand new CLP Community Green Programme comprises three subsidy schemes:
    - **Subvented Organisation Energy Saving Improvement Scheme** to provide eligible government subvented organisations with one-stop energy services, including free energy audits and recommendations for energy efficiency improvements, and funding for implementing the recommended energy improvement works;
    - **Inverter Air Conditioner Replacement Subsidy Scheme** to subsidise underprivileged households to replace traditional window-type air conditioners with inverter models;
    - **Building Electrical Safety Advisory Service** to test the electrical equipment for buildings in need, and recommend cost-effective solutions to improve the electrical safety and energy efficiency of these buildings.
  - ◆ Launching the **CLP Electricity Subsidies for the Underprivileged Families Programme** to provide electricity subsidies of HK\$600 to each of the 50,000 eligible households, including single elderly people and elderly couples aged 65 years or above, low-income families, and people with disabilities, as well as electricity subsidies of HK\$1,000 to each of the 20,000 tenants of subdivided units (SDUs).
  - ◆ Continuing the **CLP Retail and Catering Coupons Programme** and providing coupons with a total value of HK\$100 to each of around 580,000 households, including residential customers with low electricity consumption and elderly customers receiving tariff concessions.



- ◆ Continuing the assistance for tenants of SDUs, including conducting rewiring works for the installation of individual electricity meters to improve the electrical safety and living conditions of the tenants referred by community partners. As at end of June 2025, a total of 501 households from 149 subdivided units benefited from the scheme.
- ◆ Providing subsidies to equip Community Living Rooms with energy-efficient electrical appliances and education resources relating to energy saving and conservation to help tenants of SDUs.



- ◆ Continuing the **Home Electrical Safety Enhancement for the Underprivileged Programme** to arrange qualified electricians to inspect and repair fixed electrical installations to improve home safety for an estimated 2,000 underprivileged households, including elderly people, ethnic minorities households, low-income families, and people with disabilities.
- ◆ Continue running the **E-learning Assistance Programme** to support the e-learning needs of students. Since its launch, new e-learning devices were distributed to about 5,100 primary, secondary schools and tertiary students from underprivileged families.
- ◆ Continuing the **Electrical Equipment Upgrade Scheme** to provide subsidies for commercial and industrial customers, particularly small and medium-sized enterprises, to install or replace more energy-efficient electrical equipment such as lighting and air conditioning systems to improve their energy efficiency and reduce their operating costs.
- ◆ Continue encouraging residential customers to save energy year-round through the **CLP Power Connect Programme**.

## Alleviating Tariff Pressure

- **Energy Saving Rebate Scheme:** An energy saving rebate CLP has been providing to low-consumption customers since 2013. Residential and SME customers consuming 400 units or less per bill are eligible to enjoy the rebate.
- **Concessionary Tariff for the Elderly:** A rebate CLP provides to eligible elderly customers aged 60 or above who live either alone or with other similarly qualified elderly, and who are relying on or entitled to Comprehensive Social Security

Assistance. They can enjoy half-price for the first 400 units of electricity consumed in each two-month billing period plus an exemption of the minimum charge per bill.



CLP's other community programmes launched in the past years



## CLP Volunteer Team

- Employee involvement is a very important part of the success of our community projects. The **CLP Volunteer Team** is one of the largest corporate volunteer teams in Hong Kong. It was **found in 1994** by a group of frontline staff who provided free rewiring services to underprivileged elderly people. Today, it comprises **more than 1,800 employees and retirees along with family members and friends**. Senior CLP executives lend their enthusiastic support to the team and actively participate in volunteer services. CLP also encourages staff to bring their family members and friends along for volunteer work, fostering greater compassion in the community.
- CLP volunteers provide support to the community initiatives led by CLP and other organisations. These initiatives include:
  - ◆ Organising workshops on electrical safety; and energy efficiency, and caring visits and a range of other activities for people in need;
  - ◆ Conducting rewiring work for the elderly;
  - ◆ Making regular visits to the elderly with early signs of dementia;
  - ◆ Training elderly people as docents and organising guided tours for beneficiaries to learn about the history of power industry and Hong Kong community;
  - ◆ Actively participating in CLP community programmes, including CLP Hotmeal Canteens and Sharing the Festive Joy Programme;
  - ◆ Knitting scarves for people in need;
  - ◆ Engaging with students with special educational needs through various activities;
  - ◆ Supporting fund-raising activities for NGO partners, such as wheelchair carnival, charity run, and city orienteering race.
- We encourage our employees to take part in volunteering work. Employees can apply for a one-day **Wellbeing Leave** for community service rendered during a normal working day to participate in projects run by the Company or recognised voluntary service organisations.





Year of Award	Key Social Performance Awards Received by CLP	Organiser(s)
2024	<ul style="list-style-type: none"> <li>Outstanding Corporate Award in the Hong Kong Volunteer Award 2023</li> <li>Hong Kong Volunteer Award 2023 – Corporate (Volunteer Hours) Silver Award</li> </ul>	Home and Youth Affairs Bureau and the Agency for Volunteer Service
2022–2024	<ul style="list-style-type: none"> <li>20 Years Plus Caring Company Logo</li> </ul>	The Hong Kong Council of Social Service
2022	<ul style="list-style-type: none"> <li>Outstanding Corporate Award in the Hong Kong Volunteer Award 2022</li> <li>Hong Kong Volunteer Award 2022 – Corporate (Volunteer Hours) Gold Award</li> </ul>	Home and Youth Affairs Bureau and the Agency for Volunteer Service
2022	<ul style="list-style-type: none"> <li>Jockey Club Age-friendly City Partnership Scheme 2022 Logo</li> </ul>	The Hong Kong Jockey Club Charities Trust
2022	<ul style="list-style-type: none"> <li>Excellence in Construction Industry Volunteering Collaboration – Gold Award</li> <li>Excellence in Construction Industry Volunteering Project – Merit Award</li> <li>Most Supportive Organisation</li> </ul>	Construction Industry Council
2021	<ul style="list-style-type: none"> <li>Excellence in Construction Industry Volunteering Project – Gold Award</li> <li>Excellence in Construction Industry Volunteering Collaboration – Bronze Award</li> <li>Most Supportive Organisation</li> <li>First-Time Participation Award</li> </ul>	Construction Industry Council
2021	<ul style="list-style-type: none"> <li>Age-Friendly Appreciation Scheme 2020–2021 Gold Star Award</li> </ul>	The Hong Kong Council of Social Service
2017–2021	<ul style="list-style-type: none"> <li>15 Years Plus Caring Company Logo</li> </ul>	The Hong Kong Council of Social Service
2019	<ul style="list-style-type: none"> <li>The 10<sup>th</sup> Hong Kong Outstanding Corporate Citizenship Awards (Volunteer Team Category) – Gold Award</li> <li>The 10<sup>th</sup> Hong Kong Outstanding Corporate Citizenship Awards (Enterprise Category) – Silver Award</li> </ul>	Hong Kong Productivity Council
2018	<ul style="list-style-type: none"> <li>Age-Friendly Appreciation Scheme 2018–2019 – Gold Star Award</li> <li>The 9<sup>th</sup> Hong Kong Outstanding Corporate Citizenship Awards (Volunteer Team Category) – Bronze Award</li> </ul>	The Hong Kong Council of Social Service Hong Kong Productivity Council

Year of Award	Key Social Performance Awards Received by CLP	Organiser(s)
2017	<ul style="list-style-type: none"> <li>Friend of Social Enterprise Awards</li> <li>Metro Awards for Corporate Social Responsibility 2017</li> </ul>	Home Affairs Bureau and Social Enterprise Advisory Committee Metro Daily and Metro Prosperity
2017 (Since 2007)	<ul style="list-style-type: none"> <li>Corporate Voluntary Team Award – Sing Tao Services Awards</li> </ul>	Sing Tao Daily
2016–2020	<ul style="list-style-type: none"> <li>Gold Award for Volunteer Service (Organisation)</li> </ul>	Social Welfare Department
2016	<ul style="list-style-type: none"> <li>Outstanding Contribution Award of the Partnership Fund for the Disadvantaged</li> </ul>	Social Welfare Department
2015	<ul style="list-style-type: none"> <li>Grand Caring Award (Enterprise Group) – Corporate Social Responsibility (CSR) Recognition Scheme – Industry Cares</li> <li>The 6<sup>th</sup> Hong Kong Volunteer Award, Corporate Award</li> </ul>	Federation of Hong Kong Industries Agency for Volunteer Service
2013–2016	<ul style="list-style-type: none"> <li>10 Years Plus Caring Company Logo</li> </ul>	The Hong Kong Council of Social Service



## Public Education and Youth Engagement

- We firmly believe in the importance of public education and knowledge sharing for the continuous development of our businesses as well as a sustainable future. Over the years, CLP has launched a host of educational initiatives, covering the entire education pathway, from kindergarten to primary, secondary and tertiary education. Our visitation facilities are open to public, guests including shareholders, government officials, Legislative Council members, professional groups, business counterparts, community leaders as well as students.

### For Kindergarten Education

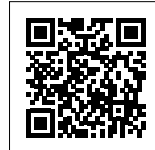
#### POWER YOU Kindergarten Education Kit and Related Outreach Activities

- In 2016, CLP launched a **POWER YOU Kindergarten Education Kit**. The electricity-themed education kit is an innovative public education initiative for kindergarten students that aims to spark interest among them in the work of electricity, to give them the basic knowledge about energy and teach them good habits in energy efficiency. CLP is the first commercial company in Hong Kong providing a comprehensive tool kit for 180,000 pupils of 1,000 kindergartens for free.
- In 2018, CLP introduced a new team of energy saving cartoon characters called **POWER FOUR**. Teamed up with Power Kid, the new characters are brainy Professor K, mischievous Lululu, and cheeky yy Boy. A series of **3D cartoon videos on the Power Kid Channel**, featuring their daily lives, was also launched to help young children explore the world of electricity and acquire energy saving knowledge in a fun and engaging way. A new episode of cartoon videos was launched in 2025 to feature the power quality.
- In 2019, an updated Education Kit with enriched content was sent to around 1,000 kindergartens for free again. The updated education kit comprises storybook series with game sheets, hand and finger puppets to facilitate storytelling, a board game, stamp chops, a Cartoon MV and a theme song titled "Please Come and Save the Earth" as well as 3D cartoon videos on Power Kid Channel. The accumulated viewership of over 54 million has been recorded so far for the whole series of 13 episodes.
- In 2024, CLP developed a new board game, "**Low-Carbon City Planner**", and distributed it for free to around 1,000 kindergartens and over 500 primary schools. The newly-developed board game aims to teach young children the knowledge of energy conservation, low-carbon living, and waste reduction, so as to encourage them to apply the knowledge in their daily lives and build a sustainable low-carbon city. With the coding element, young children can develop logical thinking and problem-solving skills through playing the board game.





- A **Power Kid Mobile App**, an e-version of the Education Kit, was also launched to bring the education kit from school to home and to teach young kids on green knowledge anytime and anywhere. The App was awarded My Favourite Green Phone App at the U Green Awards 2020-21 organised by U Magazine. The digital version of the "Low Carbon City Planner" board game has recently incorporated into the App, enabling children to learn about environmental protection and waste reduction in a more interactive and engaging way.
- As an extended activity, CLP young engineers and graduate trainees started to visit the kindergartens from 2017 to introduce power generation journey, safe use of electricity, work life of engineers and energy saving tips. Over 60,000 children in more than 800 kindergartens were reached out so far. In 2020 while the city was suffering from COVID-19 pandemic, CLP produced a visitation video with different versions to suit the needs of K1-K3 children, introducing the work of engineers, their personal protective equipment, power journey and energy conservation.
- In addition, CLP participated in Hong Kong Book Fair by setting up a booth in the Children's Paradise zone, where the public learnt about energy saving and low- carbon lifestyle through fun and interactive games at CLP booth.



Download the Power Kid Mobile App



POWER YOU Kindergarten Education Kit and related outreach activities



## For Primary School Education

### Green Studio - Multi-Purpose Vehicle

- CLP **Green Studio** (GS) has toured around primary schools and local communities since 2009. The two Multi-Purpose Vehicles (MPVs) enhance public's understanding of climate change and spread green messages using different multi-media technologies including 4D movie, immersive cinematic experience and interactive educational games.
- Equipped with a unique seagull-wing design and an open stage platform, the MPV2 can be transformed into a mobile service station, allowing visitors to experience CLP's latest products and services, and encouraging them to adopt a low-carbon living.



Green Studio -  
Multi-Purpose Vehicle

### CLP Climate Ambassadors Programme 2025

- The CLP Climate Ambassadors Programme is launched in 2025 to enhance awareness of the impact of climate change, power quality and to promote low-carbon living and renewable energy among senior primary school students.
- In partnership with The Green Earth and Metro Broadcast Corporation Limited, school talks, a podcast training workshop and a competition will be organised to encourage students to share their insights and innovative ideas on climate changes solutions. They will also act as young ambassadors to promote a sustainable lifestyle.



### Green Elites Campus Accreditation Programme

- With the aim of nurturing primary students to develop green living behaviour at an early age, CLP launched the Green Elites Campus Accreditation Pilot Programme and Green Elites Portal cum Award Scheme in the 2014/15 academic year. In the past decade, the programme was carried out in about 120 primary schools under Tung Wah Group of Hospitals, Po Leung Kuk, Sheng Kung Hui and Catholic Education Office in which all participated primary schools were accredited as Green Elites Campuses. The programme also encouraged over 83,000 primary school teachers and students to apply low-carbon tips in their daily lives.



Green Elites Campus  
Accreditation Programme



- To further promote environmental protection and low-carbon living, the programme's teaching activities are now available on the website for teachers to use.
- CLP launched animation cartoons under the **Power Kid Channel Advanced Series** designed to teach primary school pupils about Hong Kong's fuel mix, electricity generation and the smart grid in a fun and interactive way. Each episode comes with complementary worksheet to deepen their understanding.



## Public Education

### 'Save Energy Today for a Low-Carbon Tomorrow' Webpage

- In support of the Government's goal of achieving carbon neutrality for Hong Kong before 2050, CLP launched a webpage titled '**Save Energy Today for a Low-Carbon Tomorrow**' in 2022 to raise public awareness of decarbonisation, highlight CLP's strategies and commitments, and encourage people to save energy and embrace a low-carbon lifestyle.



'Save Energy Today for a Low-Carbon Tomorrow' webpage

### CLP TomorroVerse

- CLP has launched a metaverse game platform, **CLP TomorroVerse**, to promote energy efficiency and electricity conservation messages to the digital-savvy new digital generation, while bringing an interesting game learning experience to the public. The world of CLP TomorroVerse leads people to explore a low-carbon lifestyle, and uses different tasks to encourage participants to contribute to environmental protection.



CLP TomorroVerse

### 'Understanding Nuclear Energy' Animated Video Series

- CLP developed a series of '**Understanding Nuclear Energy**' **animated videos** in partnership with the Nuclear Division of the Hong Kong Institution of Engineers. The videos aim to enhance understanding of nuclear energy in a simple and engaging way, helping the public and students to understand its importance in enabling Hong Kong to achieve its carbon neutrality goal.
- The four animated videos introduce the science of nuclear energy, covering nuclear power generation, radiation in daily life, how nuclear power helps address climate change and nuclear safety.



'Understanding Nuclear Energy'  
animated videos

### Home Electrical Safety & EE&C Community Talk

- We are launching the Home Electrical Safety & EE&C Community Talk in collaboration with the Home Affairs Department. In 2025 and 2026, CLP engineers or ambassadors will conduct a total of 56 seminars on household electrical safety and energy saving across 14 districts within CLP supply area to promote household electrical safety, and offer tips on energy saving and guidance on handling unexpected power incidents. It is expected to benefit over 10,000 people.



## Youth Engagement

- At CLP, we see engaging young people, from early teens who are in junior secondary education to undergraduates in tertiary institutions, as a key focus area of our community initiatives. Initiatives targeting this group, as they move along the education pathway, are launched with the objectives to stimulate early interest in power engineering, offer alternative career paths and opportunities for academic, vocational and professional education and training (VPET), so as to facilitate their career development and upward mobility.

### Mainland Study Tours to Daya Bay Nuclear Power Station arranged by Education Bureau

- CLP and Daya Bay Nuclear Power Operations and Management Co., Ltd. fully support the Mainland study tours of the subject of Citizenship and Social Development organised by the Education Bureau. The Mainland study tours have included visits to Daya Bay Nuclear Power Station since 2024/25 academic year, enabling secondary students to learn about the importance of nuclear energy in achieving decarbonisation goals and sustainable development, as well as nuclear safety and the development of the nation's nuclear industry.







### Engineer in School

- CLP's Engineer in School programme was launched in 2016 to enhance junior secondary school students' understanding of the power engineering profession and get them prepared for their career planning. Through visitations to CLP facilities, school talks by engineers and STEM workshops, the programme wishes to increase students' knowledge in decarbonisation, environmental protection and energy conservation, and also to inspire their interests in engineering profession. Since its launch, the programme has benefitted over 75,000 students from around 240 schools.





### Community Beautification Project

- CLP's Community Beautification Project aims to connect art and sciences with people and the community. CLP has also teamed up with higher education institutions, local artists and NGOs to beautify distribution boxes and substations in its supply area in Kowloon, the New Territories and the outlying islands. The design depicted local landmarks with historical, culture and environmental elements. Local residents, elderly and youth worked together with CLP volunteers at painting days to beautify substations. Over 100 distribution boxes and 10 substations have been beautified under this initiative.



### CLP supports CSD's Rehabilitation Programme

- CLP Power has supported the Correctional Services Department (CSD) 's rehabilitation programme in a holistic approach. Courses and career talks, interview skills workshop and experience sharing sessions are organised for more than 230 young people in custody to equip them with knowledge in power industry.
- Visitations, special internship programme and employment opportunities were also offered for the teens to assist them in planning for their career and reintegrating into the society.
- CLP Power was presented with an Outstanding Rehabilitation Partners Award by CSD which recognised CLP Power for providing rehabilitation opportunities to young people in custody and helping to build a more inclusive and harmonious society.



### CLP Empowering Youth for a Sustainable Future Programme

- The programme was launched in 2024 to increase the awareness of sustainable development and social responsibility among the younger generation through an Energy-Saving and Low-Carbon Innovation for Tomorrows Competition. Funded by CLP Community Energy Saving Fund and organised in partnership with the Institution of Engineering and Technology Hong Kong, the competition attracted entries from more than 90 teams from higher educational institutions, who were challenged to improve the lives of disadvantaged people and the community at large by designing practical solutions to encourage energy saving and low carbon living.
- Twenty teams were selected as finalists and received funding of HK\$15,000 each from CLP to create prototypes of their proposed solutions. Feedback and advice on the prototypes were provided by professional engineers and representatives from the social welfare sector to help the students turn their ideas into reality.



### The Strive and Rise Programme

- CLP supports the Government's Strive and Rise Programme for a consecutive three-year by nominating CLP colleagues, including graduate trainees, young engineers and other representatives from various business units, to join the mentorship programme as mentors. The mentors are paired with junior form underprivileged students and provide them with advice on life and study via a wide range of activities including visits to CLP facilities.



### Initiatives to Stimulate Interest in Power Engineering

- CLP set up a cable jointing workshop at **St. James' Settlement Career Sparkle Centre** in 2018. The workshop aims at giving senior secondary students the first-hand experience on the craftsmanship of power industry and inspiring their interest in the power industry to help promote the engineering careers. Our workshop received around 27,000 visitors since its opening in September 2018.
- In collaboration with the Hong Kong Federation of Youth Groups, CLP has been the Energising Partner of the **CLP Energy for Brighter Tomorrows Award** for seven consecutive years since 2018. CLP each year awarded scholarships to 20 secondary students who have overcome adversity in life, remained positive and dedicated to driving a better future. The awardees also joined a year-long mentorship programme in which guidance by CLP mentors was provided for the awardees' further growth and development.



### Initiatives to Introduce Power Engineering as a Career of Choice

- CLP actively collaborated with industry, community partners and NGOs in various programmes to reach out to the youth, introducing power engineering as a career of choice and training opportunities in the industry. These programmes include:
  - ♦ **Hong Kong Trade Development Council Education and Careers Expo** — CLP joined hands with the other 18 members of the Hong Kong Electrical and Mechanical Trade Promotion Working Group (the Working Group) to showcase the electrical and mechanical (E&M) industry, highlight CLP's training programmes and recruit technical trainees for CLP.
  - ♦ **E&M Go!** — CLP initiated and co-organised the E&M Go! function with the Working Group from 2017 onwards, to welcome new recruits of young entrants to the E&M industry, and at the same time reinforcing the opportunities as a professional and skilled workforce.



### Opportunities for Vocational and Professional Education and Training

- **CLP Power Academy** has become an important building block for CLP's youth engagement framework since it was established in 2017. It expanded CLP's well recognised and structured internal training programme to the E&M industry. It aims to become the leading vocational-based academy for power engineering, bridging the gap between career training and higher education, providing industry practitioners with the necessary professional and accredited qualifications, paving way for their career advancements. It also provides an alternative runway for youths with the necessary vocational and professional education and training (VPET) path. In collaboration with various tertiary institutions, CLP Power Academy offers a complete articulation pathway from short-term training courses to Diploma, Professional Diploma, Bachelor's Degree and Dual Master's Degree in the electrical and mechanical engineering aspects in part-time mode.
- The Academy will continue to explore opportunities to launch more professional training programmes, as well as training programmes specially for power engineering talents to work in the Greater Bay Area.



### CLP Internship Programme and Scholarships for Tertiary Students

- To identify and nurture new talents for the company, CLP Internship Programme offers full-time hands-on work experience for tertiary students studying different disciplines during the summer vacation or for a 12-month period. Moreover, CLP offers a number of scholarships every year to outstanding engineering students from local tertiary institutions, and provides opportunities for some of the scholarship awardees to join the CLP Internship Programme and experience the work life of engineers.
- See also Chapter 11 on [People Development](#).

Our Key Visitation Facilities

- CLP offers a wide range of exhibition and education facilities to share knowledge with the public and provide value-added services to customers. Members of the public are welcome to visit these facilities and interactive platforms, to learn about CLP’s energy business, fuels, and energy efficiency.
- For more information on visitation facilities: [Visit to CLP](#)

CLP Power Low Carbon Energy Education Centre	<ul style="list-style-type: none"><li>CLP has sponsored the City University of Hong Kong to set up a <a href="#">CLP Power Low Carbon Energy Education Centre</a> on campus, where visitors can learn about the importance of low-carbon energy in addressing the challenge of climate change. Various exhibition zones are connected by an array of multimedia and interactive elements, illustrating the complex scientific concepts and generation principles of different kinds of energy in an interesting and vivid manner. The Centre provides free onsite or online guided tours and a variety of educational activities to offer visitors an inspiring and enlightening learning experience.</li></ul>
CLP Pulse	<ul style="list-style-type: none"><li>The CLP clock tower was built in 1940 and served as the CLP headquarters for more than seven decades. This landmark architecture was named as a Grade 1 historic building in 2018. The building has been revitalised to become <a href="#">CLP Pulse</a>, showcasing the intertwined history of Hong Kong’s electricity development and the Kadoorie Family. The iconic building has been turned into a cultural hub with three themed exhibitions. "ElectriCity" details the development of Hong Kong’s electricity supply, Our Home · Our History tells the story of the Kadoorie family, and a thematic exhibition curated by the Intangible Cultural Heritage Office showcases a number of local intangible cultural heritage items. CLP Pulse also features a host of multimedia features and experiential activities for the public to enjoy and learn our history and culture, sustaining its decades-long bond with the Hong Kong community.</li></ul>
Green Studio - Multi-Purpose Vehicle	<ul style="list-style-type: none"><li>Green Studio environmental adventure tour welcomes primary schools and community organisations to experience the green adventure and learn more about environmental protection, climate change and energy conservation. Booking is available and free of charge.</li></ul>





CLP Pulse webpage



# 11 PEOPLE DEVELOPMENT

## People-first

- CLP Power Hong Kong Limited employs about 4,300 staff members in Hong Kong (as of December 2024). As the energy market pivots to a low-carbon and digitalised future, CLP is committed to developing an inclusive and diverse workforce that is skilled for the future.
- CLP has a clearly-defined company policy towards people development and invests constantly in **training and development** to equip staff members with skills and knowledge in areas covering power engineering, digital technologies, safety, business ethics, and leadership, allowing them to perform well in their current roles and nurturing talents for the power industry.
- CLP's commitment to people development is well recognised in the Randstad Employer Brand Awards. CLP was voted as the Most Attractive Employer in Hong Kong in 2016, 2018, 2019, 2022, 2023, 2024 and 2025. CLP was recognised as one of the world's 12 most attractive employers in 2019 and was inducted in the Global Hall of Fame for 2020/2021, becoming the first company in Hong Kong to receive this honour.
- Moreover, CLP has been continuously recognised by the Employees Retraining Board (ERB) as a "Manpower Developer" since 2010 for 10 consecutive years and was acknowledged as "Super MD" in 2020 (2020 to 2025).
- CLP makes dedicated efforts and continuous investment to promote knowledge management and an innovation culture. We are devoted to sustaining the specialised professional expertise of the power industry and encourage staff members to share their knowledge and experience. CLP has received the Hong Kong Most Innovative Knowledge Enterprise (MIKE) Award for seven consecutive years since 2018. We were also recognised by the Global MIKE Award from 2018 to 2023. Competing with other outstanding international companies and institutions from Asia, Australia, New Zealand, and the Middle East, CLP was one of the award winners.
- CLP cares for people and organises various activities to cultivate a healthy and pleasant workplace. CLP was recognised with relevant awards by different organisations in 2024 including the Elite Award in the "Grand Award of Employee Wellness - Organisational Category" at the HKiHRM HR Excellence Awards; Grand Awards in the categories of "Employer of the Year" & "Top Happiest Culture", and Gold Award for "Best Corporate Social Responsibility" by CTgoodjobs Best HR Awards; "Happy Company 10 Years+ Award" by "Happy@Work" co-organised by The Chinese Manufacturers' Association of Hong Kong and Promoting Happiness Index Foundation.
- CLP Group Provident Fund Scheme has been awarded by Asia Asset Management for "Hong Kong Best ORSO Scheme" and "Hong Kong Best Member Communications" awards over the years to acknowledge CLP's commitment to employees' retirement benefits.

- CLP has won the following engineering awards for its outstanding performance in power expertise:

Year of Award	Project / Expertise Area	Award / Recognition	Organiser
2025	5G-powered Cooling Load Prediction System for Sustainable Shopping Malls at Nina Mall	<ul style="list-style-type: none"> <li>Gold Medal at the 50<sup>th</sup> International Exhibition of Inventions Geneva</li> </ul>	International Exhibition of Inventions Geneva
2025	Innovative Optimisation Forecast Model	<ul style="list-style-type: none"> <li>Energy Project of the Year - International</li> </ul>	Association of Energy Engineers
2025	Ma Sik Road Substation  Kwu Tung North Substation	<ul style="list-style-type: none"> <li>Final Platinum Rating under BEAM Plus New Buildings V1.2</li> </ul>	Hong Kong Green Building Council
2024	Decarbonisation and electrification projects at Link properties	<ul style="list-style-type: none"> <li>Corporate Energy Management Award - Asia Pacific Rim Region</li> </ul>	Association of Energy Engineers
2024	New gas-fired generation unit D2	<ul style="list-style-type: none"> <li>Asian Power Awards 2024 Gas Power Project of the Year - Hong Kong</li> </ul>	Asian Power Awards
2024	Advanced Metering Infrastructure Programme	<ul style="list-style-type: none"> <li>Asian Power Awards 2024               <ul style="list-style-type: none"> <li>Innovative Power Technology of the Year – Hong Kong</li> <li>Smart Grid Project of the Year – Hong Kong"</li> </ul> </li> </ul>	Asian Power Awards
2024	Yuen Long Industrial Estate Substation	<ul style="list-style-type: none"> <li>Provisional Platinum Rating under BEAM Plus New Buildings V2.0</li> </ul>	Hong Kong Green Building Council
2023	CLP Smart Energy Online	<ul style="list-style-type: none"> <li>Innovative Energy Project of the Year – Asia Pacific Rim Region</li> </ul>	Association of Energy Engineers
2023	CLP Power Business Development Manager Ir Tony Chan Kai-Man	<ul style="list-style-type: none"> <li>Energy Engineer of the Year - Asia Pacific Rim Region</li> </ul>	Association of Energy Engineers
2023	Shing Kai Road Substation	<ul style="list-style-type: none"> <li>Final Platinum Rating under BEAM Plus New Buildings V1.2</li> </ul>	Hong Kong Green Building Council
2023	Kwu Tung North Substation	<ul style="list-style-type: none"> <li>Asian Power Awards 2023 Silver Award in Transmission and Distribution Project of the Year</li> </ul>	Asian Power Awards
2023	Distributed Energy Resource Management System Project	<ul style="list-style-type: none"> <li>Asian Power Awards 2023 Smart Grid Project of the Year – Hong Kong</li> </ul>	Asian Power Awards
2022	Battery Energy Storage System	<ul style="list-style-type: none"> <li>Innovative Energy Project of the Year – International</li> </ul>	Association of Energy Engineers

Year of Award	Project / Expertise Area	Award / Recognition	Organiser
2022	Smart Direct Load Control Device Program for Residential Demand Response Management in Hong Kong	<ul style="list-style-type: none"> <li>Innovative Energy Project of the Year - Asia Pacific Rim Region</li> </ul>	Association of Energy Engineers
2022	Ho To West Substation Tuen Mun Eco Park Substation	<ul style="list-style-type: none"> <li>Provisional Platinum Rating under BEAM Plus New Buildings V1.2</li> </ul>	Hong Kong Green Building Council
2022	Ho To West Substation	<ul style="list-style-type: none"> <li>Asian Power Awards 2022 Gold Award in Transmission and Distribution Project of the Year</li> </ul>	Asian Power Awards
2022	New gas-fired generation unit D1	<ul style="list-style-type: none"> <li>Final Platinum Rating under BEAM Plus New Buildings V1.2</li> </ul>	Hong Kong Green Building Council
2021	The predictive control system for air conditioning at Hong Kong International Airport	<ul style="list-style-type: none"> <li>Energy Project of the Year – Asia Pacific Rim Region</li> </ul>	Association of Energy Engineers
2021	Hong Kong-Zhuhai-Macao Bridge Substation	<ul style="list-style-type: none"> <li>Final Platinum Rating under BEAM Plus New Buildings V1.2</li> </ul>	Hong Kong Green Building Council
2021	Ma Sik Road Substation	<ul style="list-style-type: none"> <li>Asian Power Awards 2021 Silver Award in Transmission and Distribution Project of the Year</li> </ul>	Asian Power Awards
2021	New gas-fired generation unit D1	<ul style="list-style-type: none"> <li>Asian Power Awards 2021               <ul style="list-style-type: none"> <li>Gold Award in Gas Power Project of the Year</li> <li>Gold Award in Flexible Gas Power Project of the Year</li> <li>Gold Award in Dual Fuel Power Plant of the Year</li> <li>Gas Power Project of the Year for Hong Kong</li> </ul> </li> </ul>	Asian Power Awards
2021	Queen's Hill Substation	<ul style="list-style-type: none"> <li>Final Platinum Rating under BEAM Plus New Buildings V1.2</li> </ul>	Hong Kong Green Building Council
2020	Solar PV Renewable Energy Project at Li Po Chun United World College of Hong Kong	<ul style="list-style-type: none"> <li>Innovative Energy Project of the Year - Asia Pacific Rim Region</li> </ul>	Association of Energy Engineers
2020	Shing Kai Road Substation	<ul style="list-style-type: none"> <li>Asian Power Awards 2020 Silver Award in Transmission &amp; Distribution Project of the Year</li> </ul>	Asian Power Awards

Year of Award	Project / Expertise Area	Award / Recognition	Organiser
2020	Technician Trainee Career Development Programme	<ul style="list-style-type: none"> <li>Silver Award for Excellence in Training and Development</li> <li>Best in Career Development Award</li> </ul>	Hong Kong Management Association
2019-2023	Knowledge Management	<ul style="list-style-type: none"> <li>Global Most Innovative Knowledge Enterprise (MIKE) Award 2018-2023</li> <li>Top Winner of Hong Kong Most Innovative Knowledge Enterprise Award 2022</li> </ul>	Knowledge Management and Innovation Research Center of The Hong Kong Polytechnic University
2019	Pioneering First Retro-Commissioning Energy Saving Project at Caritas Medical Centre and North Lantau Hospital	<ul style="list-style-type: none"> <li>Special Administrative Region Energy Project of the Year - Asia Pacific Rim Region</li> </ul>	Association of Energy Engineers
2019	Queen's Hill Substation	<ul style="list-style-type: none"> <li>Asian Power Awards 2019 Gold Award in Transmission &amp; Distribution Project of the Year</li> </ul>	Asian Power Awards
2017	Hong Kong-Zhuhai-Macao Bridge Substation	<ul style="list-style-type: none"> <li>Asian Power Awards 2017 Gold Award in Transmission &amp; Distribution Project of the Year</li> </ul>	Asian Power Awards
2016	West Kowloon Cultural District Substation	<ul style="list-style-type: none"> <li>Asian Power Awards 2016 Silver Award in Transmission &amp; Distribution Project of the Year</li> </ul>	Asian Power Awards
2015	Kai Tak Cable Tunnel Project	<ul style="list-style-type: none"> <li>Asian Power Awards 2015 Gold Award in Transmission &amp; Distribution Project of the Year</li> </ul>	Asian Power Awards

## Internal People Development

### CLP Power Learning Institute

- To meet the unique requirements of the power industry, CLP puts a particular emphasis on people development and skills transfer from one generation to the next. CLP established training school (now known as **CLP Power Learning Institute**) in 1966. Through systematic and practical training, it has since nurtured tens of thousands of engineering talents, who have gone on to play important roles and contribute to the power industry and Hong Kong's economic and social development.
- **CLP Power Learning Institute** has a wide range of world-class training facilities, providing training on power generation, transmission and distribution for engineering staff. It also provides non-technical training such as commercial, project management and leadership. Moreover, it provides training in big data, robotics, and coding to keep staff members abreast of the cutting edge of new technology, so as to further improve our service quality and operational performance.
- The Institute has a dedicated team to promote knowledge management and learning culture. In addition, the Institute coordinates the development of training strategy and delivery of training programme with an ultimate goal to uplift the standard of customer services and capabilities of our staff in the energy retail industry.
- Well-structured trainee programmes are provided to transform talented young people into seasoned technical experts. These programmes include:
  - ◆ Graduate Trainee Programme
  - ◆ Engineering Cadet Programme
  - ◆ Operations Engineer Trainee Programme
  - ◆ Technician Trainee Programme
- CLP also organises the annual Graduation Ceremony to strengthen the bonding with the trainees upon their completion of trainee programmes at CLP. The occasion aims at building a sense of belonging among the new joiners in working at CLP.



CLP trainees received their graduation certificates at the Graduation Ceremony upon completion of the trainee programmes

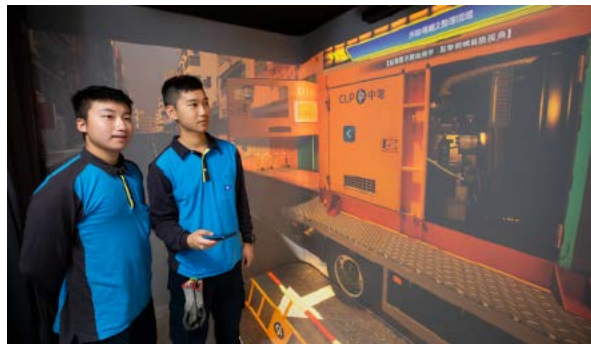


## Training Facilities

- The world-class training facilities at the CLP Power Learning Institute give our employees the opportunity for hands-on experience of the design, operation and maintenance of the power generation, transmission and distribution facilities.

### On Power Transmission and Distribution

- The Institute is well equipped with training facilities on power transmission and distribution including the Electrical Fitting Workshop, Cable Jointing Workshop, Electrical Installation Workshop, High-voltage Equipment Operations Training Centre, Fault Simulator, Simulated Primary Substation, Distribution Overhead Lines Training Poles, Transmission Training Towers, etc.
- With a total area of 27,200 square metres, the Overhead Line Training School is the largest outdoor training venue of its kind in Hong Kong. The School has various transmission and distribution overhead line training facilities, allowing trainees to work and practise in a safe environment.



### On Power Generation

- Situated within our power station, the Mechanical and Electrical Training Workshop is equipped with state-of-the-art facilities to provide comprehensive training to personnel in mechanical systems and electrical instrumentation. These skills are critical for the effective production and asset management of large-scale and complex generation units.

### Application of New Technologies

- Keeping pace with the latest technology, the Institute introduces Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), gamification tools, Minecraft, as well as Immersive Cave Automatic Virtual Environment (CAVE), providing zero-risk and interesting training in a virtual environment simulating the real one.
- To improve learning experience, micro learning and digital learning are being used to enable anytime, anywhere learning and interaction with trainers through mobile devices.

## Digital Graduate Trainee Programme

- CLP continuously drives its digital transformation and recognises the importance of introducing and cultivating relevant talents. The Digital Graduate Trainee Programme aims to attract young talents with potential to develop their digital technology career, in order to strengthen CLP's digital capabilities to implement new business solutions.

## Caring for Our Employees

- CLP cares for our employees and provides them with a safe, healthy, inclusive and diverse work environment that is free of discrimination or harassment on the basis of gender, physical or mental state, race, nationality, religion, age, family status or sexual orientation, ensuring everyone who works at CLP is treated fairly with respect.

### Embrace Inclusion and Diversity

- CLP believes that an inclusive and diverse workforce is important to our sustainable growth and innovation capability.
- The Inclusion and Diversity (I&D) Council reviews CLP team's progress in gender and racial diversity, and inclusion goals regularly. A gender affinity group has been set up to advocate for gender equality in the workplace, and provide insights to the I&D Council on issues related to gender inclusion and diversity.
- The company supports the career development of high potential female employees with diversified training programme to develop long-term career and take up leadership positions. CLP also sponsors young female engineers to attend the mentoring programme organised by The Women's Foundation where they can meet with female leaders from other industries and gain workplace experience and industry knowledge, allowing them to better plan for their career path.

### Family-friendly Measures

- CLP has been implementing various family-friendly measures that help our staff achieve a healthy balance between work and life, including:
  - Implements flexi-hours, part-time working policy and working from home policy.
  - Provides various leave entitlements beyond the statutory requirements:
    - Wellbeing leave: one day (not statutory)
    - Maternity leave: 16 weeks (statutory 14 weeks)
    - Paternity leave: 10 days (statutory five days)
    - Marriage leave: five days (not statutory)
    - Adoption leave: 10 days (not statutory)
    - Auxiliary service training leave: five days (not statutory)

- Provides lactation room to support female employees continuing breastfeeding after returning to work.
- CLP Centenary Scholarship Programme has been established since 2001. After evaluation, children of employees with outstanding academic performance and whole-person achievements can receive scholarships. Starting from 2019, we have increased the quota for the children of our employees who are studying engineering at university or physics in high school, in order to encourage them to develop their interests and potential in related fields, while cultivating the next generation of talent for the power industry.

### Care for Employee Well-being

- CLP leverages various tools, activities and events to promote the physical health, mental wellness, social health and financial well-being of our employees.
  - Introduces health and well-being digital platform and app to encourage employees to create records and keep track of their own healthy habits;
  - Organises financial talks to provide personal finance and provident fund information;
  - Organises mental health first aid training programme to equip employees with the knowledge to identify early signs of mental health sickness and make appropriate interventions;
  - Organises various social, recreational and sports activities; and
  - Provides various facilities including staff canteen and fitness room.

## Nurturing Power Talents

### CLP Power Academy

- To support the sustainable development of Hong Kong and to meet the growing demand for power engineering talents, CLP Power Academy (the Academy) was established in 2017. Being a vocational-based academy for power engineering, the Academy bridges the gap between career training and higher education. It also serves as an important building block for CLP to engage the younger generation by providing them alternative pathways to join the power engineering industry. Various part-time accredited programmes are offered to facilitate industry practitioners in their career development and professional techniques. This also helps ensure an adequate supply of competent engineering employees for the local power industry.
- CLP Power Academy has been working in partnership with tertiary institutions, such as the Vocational Training Council (VTC), the Royal Melbourne Institute of Technology University, The Hong Kong Polytechnic University's School of Professional Education and Executive Development, The Hong Kong University of Science and Technology, the University of Strathclyde, and Guangzhou Industry and Trade Technician College to offer part-time accredited programmes, ranging from short-term training courses to Diploma, Professional Diploma, Bachelor's Degree and Dual Master's Degree in electrical and mechanical engineering aspects. These programmes provide young people and industry practitioners multiple entry points to gain practical skills and to advance their career with a clear articulation path through continuous learning.
- At CLP Power Academy, classroom lectures are supplemented by practical sessions. Equipped with world-class training facilities and through applying the latest technologies such as Virtual Reality and Augmented Reality, the Academy gives students the opportunity for hands-on and practical experience of the design, operation and maintenance of different types of power facilities. Visits to power facilities and Work Experience programme are arranged to provide students with valuable experience of working in the power industry. The Academy also organises short courses periodically on Continuing Professional Development on generation and power systems.
- In view of the integration and development of the Guangdong-Hong Kong-Macao Greater Bay Area, the Academy signed a Memorandum of Understanding with the VTC and Guangzhou Industry and Trade Technician College in October 2021, which aims to provide professional electrical engineering courses, and Training Courses for High Voltage / Low Voltage Electrical Workers, to help local engineering talent in grasping career opportunities in the Greater Bay Area. After completing the course, students could take exam to obtain the Special Operations License (High-Voltage) or (Low-Voltage) from the Chinese Mainland for work.

CLP Power Academy  
中電學院



## Programme Overview

Programme	Partner
Diploma in Power Engineering / Certificate for Junior Electricians	<ul style="list-style-type: none"> <li>Vocational Training Council</li> </ul>
Diploma in Infrastructure Engineering (Electrical & Mechanical) / Certificate for Junior Mechanics	<ul style="list-style-type: none"> <li>Vocational Training Council</li> </ul>
Diploma in Power Installation	<ul style="list-style-type: none"> <li>Vocational Training Council</li> </ul>
Professional Diploma in Power Engineering (Power Systems Stream / Power Plants Stream)	<ul style="list-style-type: none"> <li>Vocational Training Council</li> </ul>
Professional Diploma in Engineering Studies (Mechanical)	<ul style="list-style-type: none"> <li>Vocational Training Council</li> <li>Royal Melbourne Institute of Technology University (RMIT)</li> </ul>
Training Course for Low Voltage Electrical Workers	<ul style="list-style-type: none"> <li>Vocational Training Council</li> <li>Guangzhou Industry and Trade Technician College</li> </ul>
Training Course for High Voltage Electrical Workers	<ul style="list-style-type: none"> <li>Vocational Training Council</li> <li>Guangzhou Industry and Trade Technician College</li> </ul>
Bachelor of Engineering (Honours) in Electrical Engineering	<ul style="list-style-type: none"> <li>School of Professional Education and Executive Development at the Hong Kong Polytechnic University</li> </ul>
Bachelor of Engineering (Honours) in Mechanical Engineering	<ul style="list-style-type: none"> <li>School of Professional Education and Executive Development at the Hong Kong Polytechnic University</li> </ul>
Dual Master's Degree (MPhil & MSc)	<ul style="list-style-type: none"> <li>The Hong Kong University of Science and Technology</li> <li>University of Strathclyde, Glasgow</li> </ul>

CLP Power  
Academy Brochure



### Stimulate Interest in Power Industry

- CLP has launched various programmes to deepen young people's understanding and interest in the power industry, providing a talent pool for our sustainable growth.
- To enhance junior secondary school students' understanding of power engineering profession and strengthen their career and life planning, CLP launched the **Engineer in School** programme in 2016 through a series of activities including visitations to CLP facilities, school talks, and STEM workshops.
- CLP also works with various community partners to stimulate young people's interest in the power industry. In 2018, a cable jointing workshop was set up at **St. James' Settlement Career Sparkle Centre**. Located at the centre's Engineering & Science Industries Experiential Area, the workshop enables senior secondary students to gain first-hand experience on the craftsmanship of the power industry.
- See also Chapter 10 on [Community Commitment](#) for other related programmes.
- CLP has taken steps to attract more females to join the power industry, including our Engineer in School programme and the Girls Go Tech Programme organised by The Women's Foundation. We send young engineers to secondary schools to deliver talks and organise activities, including power journey tour and job shadowing programme, with an aim to give students a chance to learn about the energy sector and the life as an engineer.
- Helps female university engineering students establish connections with industry professionals through the Female Engineering Students Mentoring Programme, hoping that the students can get ready and pursue their careers in engineering.



## Academic Collaboration and Scholarships

- CLP has built long-term partnerships with local tertiary institutions and offers the **CLP Internship Programme** to identify and nurture new talents, and to attract potential students to join CLP when they graduate. The internship programme offers full-time training for students studying different disciplines either during the summer vacation or for a 12-month period.
- CLP has been collaborating with the Department of Mechanical and Aerospace Engineering and the Department of Chemical and Biological Engineering at The Hong Kong University of Science and Technology to launch the University Co-op Programme, offering engineering students practical work experience to broaden their horizons.
- Starting from 2025, CLP offers internship opportunities to students referred by the Co-operative Education Office of The University of Hong Kong and the Career Center of The Hong Kong University of Science and Technology.
- CLP's internship programme offers students diverse internship opportunities and practical knowledge. Many students who participated in the programme have successfully been recruited by CLP as Graduate Trainees upon graduation.
- A number of **scholarships** are offered every year to outstanding engineering students at The University of Hong Kong (HKU), The Hong Kong Polytechnic University (PolyU), The Chinese University of Hong Kong (CUHK), The Hong Kong University of Science and Technology (HKUST), and City University of Hong Kong (CityU), as well as students who are studying electrical and mechanical engineering at the Vocational Training Council (VTC). Some of the scholarship awardees will join the CLP Internship Programme to experience the work life of engineers.
- CLP Engineering Studies Award** provides sponsorship and mentorship to outstanding engineering students for their final year studies and to identify them early to join CLP as Graduate Trainees upon their graduation.



- CLP also supported VTC to establish the **CLP Power Engineering Laboratory** at Haking Wong Campus of the Hong Kong Institute of Vocational Education in 2021. The laboratory is equipped with advanced smart grid and high voltage training facilities, including Real Time Digital Simulator and Power Hardware in-the-loop testing platform, where power engineering students would benefit in learning the latest industry technologies. The laboratory also provides a training venue for public to obtain Grade H Registered Electrical Worker qualification accredited by EMSD.
- Since 2015, CLP has supported the VTC to develop and deliver an Applied Learning Course for Electrical and Energy Engineering, enabling senior secondary students to understand fundamental theories and practical application of relevant subjects through diversified learning activities. We have also offered a scholarship scheme and internship opportunities for the students.



- CLP supported City University of Hong Kong in establishing a **CLP Power Chair Professorship in Nuclear Engineering**, which is the first of its kind among Hong Kong's higher education institutions with the aim to promote research excellence in the nuclear energy discipline, and to nurture more young engineering talents.

### Tsinghua University's First "Undergraduate Practice Training Base" in Hong Kong

- CLP Holdings Limited signed a strategic cooperation agreement with Tsinghua University in June 2025 to launch a new programme, offering Tsinghua University undergraduates opportunities to pursue internships in Hong Kong. This makes CLP **Tsinghua University's first "Undergraduate Practice Training Base" in Hong Kong**. Under the new agreement, 10 undergraduates from Tsinghua University's Ziqiang College will go to Hong Kong each summer starting in 2026 for four-week internships at CLP, gaining exposure to cutting edge fields such as advanced power systems, low-carbon energy technology, artificial intelligence and information technology.
- CLP's partnership with Tsinghua University began in 2009 when CLP contributed funding to establish the **"Tsinghua-CLP Education Fund"** to support Tsinghua University's Department of Electrical Engineering through scholarships, research grants and applied learning initiatives. Approximately 500 outstanding undergraduates and postgraduates have benefitted from the scholarships to date.
- Link to reference information: [CLP Training and Internship Programme](#)



# 12 CLP IN THE CHINESE MAINLAND

## Background



Huaiji Hydro Power Station, Guangdong

- CLP entered the Chinese Mainland's energy market in 1979 when it started providing electricity to Guangdong.
- CLP is one of the largest external investors in the energy sector in the Chinese Mainland, focusing on clean energy generation. CLP also takes the role of a developer, investor, project manager and operator. Our business includes renewable energy such as wind, solar and hydro, as well as nuclear, coal and energy storage.
- Currently CLP has over 50 projects in the Chinese Mainland, covering 14 provinces, autonomous regions and municipalities in eastern China (Jiangsu and Shanghai), southern China (Guangdong and Guangxi), south-western China (Guizhou, Yunnan and Sichuan), northern China (Shandong, Hebei, Tianjin and Inner Mongolia), north-eastern China (Jilin and Liaoning) and north-western China (Gansu).
- Link to reference information:  
[CLP in the Chinese Mainland](#)

## Our Operations

### Renewable Energy

- CLP has undertaken to support the country's dual carbon goals through continued development of renewable energy projects, including wind, solar and hydro.
- CLP Xicun Solar Power Station in Yunnan and CLP Huai'an Solar Power Station in Jiangsu adopt agrivoltaic model. By combining agricultural activities (plantation of honeysuckle flowers, fruits and vegetables in the solar farms respectively) with solar generation, the projects bring about multiple benefits including maximising land use, creating jobs for local residents and fueling the community with clean energy.



- CLP Sihong Solar Power Station, Yangzhou Gongdao Solar Power Station and Huai'an Nanzha Solar Power Station in Jiangsu adopt aquavoltaic model and use surrounding abundant local water supply to develop fish farms underneath the photovoltaic panels, breeding crabs, crayfish and mandarin fish etc. The results have been positive and have provided job opportunities and income for residents.
- Yixing Solar Power Station Phase I & II in Jiangsu with total installed capacity of 140MW marks CLP's largest solar project in operation in the Chinese Mainland. The project adopts both agrivoltaic and aquavoltaic models, achieving integrated land utilisation for multiplied returns by combining agriculture, animal husbandry and fisheries.
- Qian'an Wind Farm in Jilin province, at 199MW, is the largest wind farm in operation in CLP Group's wind portfolio and the first CLP project of its kind equipped with a battery energy storage system.
- As of June 2025, we had stakes in over 50 non-carbon energy projects in various parts of the country, with equity capacity of close to 8,000MW. The installed capacity of non-carbon energy accounts for over 70% of its total generation capacity in the Chinese Mainland.
- CLP is committed to providing green energy solutions by supplying the Power Purchase Agreement (PPA) and Green Electricity Certificate (GEC) to businesses and providing comprehensive support to customers in the pursuit of sustainability and environmental, social and governance (ESG) objectives.



Qian'an III Wind Farm, Jilin



The aquavoltaic project at Yangzhou Gongdao Solar Power Station, Jiangsu

## Pumped Storage Power Station

- Guangzhou Pumped Storage Power Station was constructed in two phases and has a total installed capacity of 2,400MW.
- CLP wholly owns the Hong Kong Pumped Storage Development Company Limited (PSDC), which provides it with the contractual rights to use 600MW, equivalent to 50% of the power generation capacity of Guangzhou Pumped Storage Power Station Phase 1 until the year 2034.
- CLP uses this contractual pumped storage capacity to support the operation of the power systems in Hong Kong and maintain a reliable electricity supply.



Guangzhou Pumped Storage Power Station

## Nuclear Power Stations

- CLP's first major expansion beyond Hong Kong was our joint venture with China General Nuclear Power Corporation to develop, build and operate the Daya Bay Nuclear Power Station (Daya Bay).
- Daya Bay is one of the earliest and largest joint ventures since the reform and opening up of the Chinese Mainland and remains one of the most successful.
- Operation began in 1994 and the two pressurised water reactor (PWR) generating units now produce around 15 billion kWh of electricity per year, of which 80% is exported to Hong Kong at present.
- The acquisition of a 17% equity interest in Yangjiang Nuclear Power Co., Ltd. from CGN Power Co., Ltd. was completed in December 2017. Yangjiang Nuclear Power Station has added over 1,100MW (on a 17% equity basis) of non-carbon emitting generation capacity to CLP's portfolio. Yangjiang Nuclear Power Station is connected to the Guangdong power grid and supplies its full capacity to the electricity market in Guangdong.
- Yangjiang Nuclear Power Station comprises six pressurised water reactors with 1,086MW each adopting advanced CPR1000 technology. The power station has maintained safe operating record since its commercial operation.



Daya Bay Nuclear Power Station

- Link to reference information:  
[Nuclear Energy – A Sustainable Choice for Powering the Future](#)
- See also Chapter 6 on [Cleaner Fuel Mix for Electricity Generation](#).



Yangjiang Nuclear Power Station

## Coal-fired Power Plants

- CLP currently only holds minority stakes in coal-fired assets located in Hebei, Tianjin, Liaoning, Inner Mongolia and Beijing in the Chinese Mainland.