

Shaping our future impacts, today

2023

Sustainability
Report

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CLP’s 2023 reporting suite

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CLP’s Climate Vision 2050: Powering an orderly transition



Annual Report

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Welcome

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Welcome to CLP's 2023 Sustainability Report

The year 2023 was a time of gradual recovery from the shocks of COVID-19. Yet turbulence continued in the form of an unsettled economic outlook, complex global trade relationships, and geopolitical tensions in Ukraine and the Middle East.

These uncertainties have highlighted the importance of preparedness for disruptions and the need to seize opportunities that could arise in the short, medium or long term. On a positive note, the energy sector received some good news as international fuel prices softened from their peak, alleviating fuel cost pressures. Energy transition has remained a key item on the global agenda with governments being urged to translate their commitments to carbon-neutrality by the mid-21st century into actions.

In the third year of adopting the double materiality approach, CLP continued to assess its business sustainability from both the financial and impact perspectives. In re-examining its material topics, CLP took further steps by developing a systematic portfolio of its sustainability-related impacts, risks and opportunities (IROs) described at a higher level of granularity than previously. In particular, the approach to define, assess and address these risks and opportunities were largely adopted from the latest International Financial Reporting Standards (IFRS) S1 – General Requirements for Disclosure of Sustainability-related Financial Information issued in June 2023. This transparent and up-to-date assessment of its sustainability-related IROs, when combined with appropriate management measures, enables CLP to ensure that its strategy is purpose-aligned and adaptable in an ever-changing business landscape.

On this basis, financially material topics and associated risks and opportunities that could reasonably be expected to affect the Company's prospects are discussed in the Annual Report, while impact material topics relating to positive or negative impacts on people, the environment and the economy are covered in this Sustainability Report.

In light of growing concern for nature conservation, CLP dedicates a chapter in this report to discussing nature-related topics and with reference to the final recommendations of the Task Force on Nature-related Financial Disclosures (TNFD) published in September 2023. CLP has continued to adopt a stakeholder-centric approach, highlighting how CLP manages the interests of its customers, people, partners and the wider community from their perspectives.

In 2023, CLP also conducted a review of its Climate Vision 2050, with the aim of further accelerating its transition to a net-zero future. Climate-related disclosures are integrated into the latest edition of the CLP's Climate Vision 2050: Powering an orderly transition and in the Annual Report, in which the disclosures make reference to ISSB's IFRS S2 Climate-related Disclosures.

This report aims to provide insightful and informative perspectives, offering a balanced view of CLP's sustainability efforts. Feedback on this report is welcome and can be shared through CLP's [online survey form](#) or via email at srfeedback@clp.com.hk.





Chairman and CEO's message



“In 2023, the world’s first post-pandemic year, we saw a global recovery amid economic and geopolitical uncertainties. In this environment, it is important to keep in mind some of the lessons we learned from the COVID-19 years – namely, the importance of building resilience, and of being ready to turn challenges into opportunities that will create lasting, positive impacts.”

The Honourable Sir Michael Kadoorie, Chairman, and T.K. Chiang, Chief Executive Officer

CLP is standing at the threshold of a transformative era. As we move into 2024, we remain resolute in our mission for an orderly transition to a net-zero future, while ensuring we maintain a secure and reliable energy supply. We also remain committed to empowering a future-ready workforce, and to delivering cutting-edge energy solutions that will meet the evolving needs of our customers and drive positive change in the communities where we operate.

Transitioning to net zero

Decarbonisation stands as the foremost priority for our business and Climate Vision 2050, our blueprint for achieving net-zero greenhouse gas emissions (GHG) by mid-century, remains the cornerstone of our strategy. In 2023, we embarked on a review to make sure that this blueprint stays aligned with developments in the business as well as the external risks and uncertainties we face.

We have decided to strengthen our 2030 GHG emissions intensity target to more closely align with the international

climate goal of limiting global warming to 1.5°C while also taking into account our operating context. This reflects our efforts to increase our pace of transition between now and 2030. We also pledged to maintain our prior targets and commitments including phasing out coal before 2040. Our strategy is in line with the declaration from the COP28 international climate talks to transition away from fossil fuels.

In 2023, we further lowered our GHG emissions intensity and continued to expand our renewable energy portfolio. By 2030, we envision a CLP Group portfolio which entails around 60% of non-carbon power generation and energy storage, reducing coal down to approximately 20%, subject to market and regulatory developments. This will be a significant shift for CLP.

EnergyAustralia announced its inaugural Climate Transition Action Plan (CTAP) in August 2023, including a new commitment to work with partners to expand its renewable portfolio with up to 3GW to be committed or operational by 2030. In India, Apraava Energy's Scope 1 and 2 GHG emissions

intensity reduction target was validated by the Science Based Targets initiative (SBTi), aligning with the goal of limiting global warming to 1.5°C above pre-industrial levels.

In line with the latest developments at COP28, we also recognise the indispensable role of nuclear energy in fulfilling the objective of aligning with a 1.5°C pathway. Looking ahead, we will continue to engage Government and explore the import of more nuclear and renewable energy for the Hong Kong grid.

Tapping into growth opportunities

As the energy sector undergoes transformative changes, we are embracing innovation and adopting advanced technologies to meet the evolving energy needs of our customers and the wider community. In Hong Kong, we were pleased with the Hong Kong SAR Government's approval of our five-year Development Plan, a milestone agreement that fortifies our commitment to meeting the energy demands essential for the city's long-term development. In the plan, we have committed ourselves to a range of investments designed to bolster economic growth, support ongoing decarbonisation and reinforce Hong Kong's position as a smart, vibrant and resilient city.

We are also accelerating the provision of a wide range of integrated Energy-as-a-Service (EaaS) solutions to customers in Hong Kong and the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). CLP achieved a milestone in corporate partnerships by signing a strategic cooperation framework agreement with Shui On Xintiandi, in which CLP will supply renewable energy from Yangzhou Gongdao Solar Power Station to Shui On's Nanjing International Finance Center commercial and office complex through a 10-year power purchase agreement. It marked CLP's first medium to long-term agreement of its kind in Mainland China.

Ensuring a secure energy supply

In our role as an engine powering the community and the economy, CLP is committed to ensuring a secure and reliable energy supply. In Hong Kong, we have made strategic investments in additional capacity at our Black Point Power Station and in the city's first offshore LNG terminal, helping to secure a competitively priced gas supply for our transition away from coal.

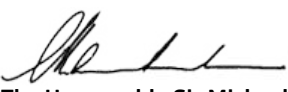
In Australia, the 350MW Wooreen Energy Storage System was approved by Victoria's State Government in 2023, which will contribute to securing the area's energy supply with additional renewable energy prior to the retirement of Yallourn Power Station.

As extreme weather events are becoming more frequent and severe because of global warming, CLP remains focused on strengthening our generation and transmission network reliability and resilience. We have also taken the opportunity to review our climate resilience as part of CLP's Climate Vision 2050 update. Our efforts in assessing and adapting to climate-related physical risks have been cascaded from the Group level to our individual assets.

Empowering a future-ready workforce

In response to the changing business environment, it is critical for us to upskill and reskill our people so that we are ready for change. We also need to ensure a strong pipeline of talent to meet our needs. As part of our holistic approach in talent development, we invest tremendous resources to support the professional growth of our people and generate the interest of students and young people in pursuing careers in power engineering. We have an established, long-term strategy to cultivate in them a powerful sense of belonging, trust and cooperation combined with the leadership skills to carry our business forward.

As we reflect on the year 2023, we are proud of the progress we have made as a company and of the unwavering commitment we have shown to creating positive impacts. Looking ahead, the principal priority for our business is decarbonisation. The journey towards energy transition demands bold action. We are aware of the challenges that lie before us and will capitalise on the emerging opportunities. Guided by our updated Climate Vision 2050, we will continue to work tirelessly to shape a future where sustainable energy and a thriving community go hand in hand.



The Honourable Sir Michael Kadoorie
Chairman



T.K. Chiang
Chief Executive Officer

Hong Kong, 26 February 2024

Sustainability-related targets and performance

Sub-Category	Targets	Performance in 2023
Governance		
Corruption	Zero convicted cases of corruption reported to Audit and Risk Committee	On track
Diversity and inclusion	Maintain Board diversity > 30% for female Directors representation with a target of	33%
People		
Diversity and inclusion	Achieve gender balance in leadership positions by 2030	29% (↑ 7% vs 2016 baseline)
	Achieve 30% of engineers to be female by 2030	13% (↑ 4% vs 2016 baseline)
	Ensure equal pay for work of equal value is maintained in all CLP businesses	On track
Environment		
Air emissions	Nitrogen oxide: ↓ 50% by 2030	↓ 29% vs. 2021 baseline
	Sulphur dioxide: ↓ 55% by 2030	↓ 23% vs. 2021 baseline
	Particulate matters: ↓ 90% by 2030	↓ 12% vs. 2021 baseline
Waste	Waste products ¹ : ↓ 70% by 2030	↓ 71% vs. 2021 baseline
Water	Freshwater consumption: ↓ 85% by 2030	↓ 71% vs. 2021 baseline
Climate Change		
	GHG emission intensity ² : ↓ 59% to 0.26kg CO ₂ e/kWh by 2030	↓ 14% vs. 2019 baseline
	Absolute Scope 3 (Category 11) GHG emissions ³ ↓ 28% by 2030	↓ 27% vs. 2019 baseline
	Maintain commitment to phase out coal-based assets before 2040	On track
	Achieve net-zero GHG emissions across our value chain by 2050	On track
Customer		
Digitalisation	Achieve 100% smart meters installation for CLP Power's residential and small-to-medium enterprise (SME) customers by 2025	Around 80% of all smart meters were connected for CLP Power's residential and SME customers in Hong Kong

1 Waste products include total waste produced from operation & maintenance activities and by-products produced by the coal-fired power plants.
2 Numbers include Scope 1, Scope 2 and Scope 3 Category 3 emissions (direct emissions from generation of purchased electricity that is sold to CLP's customers).
3 Emissions from the combustion of natural gas supplied to customers.



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Reporting frameworks and content indices

CLP recognises that different methodologies are used globally to measure the sustainability performance of organisations. This report references several reporting guidelines and frameworks to ensure comparability, an approach aligned with international best practice.

The International Sustainability Standards Board (ISSB)'s International Financial Reporting Standards (IFRS) S1 General Requirements for Disclosure of Sustainability-related Financial Information

In June 2022, the investor-focused sustainability disclosure organisation the Climate Disclosure Standard Board (CDSB) and the Value Reporting Foundation (VRF) (created from the merger of the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB)) were consolidated into the IFRS Foundation, to support the development of new ISSB standards. In June 2023, the ISSB under IFRS issued two inaugural Sustainability Disclosure Standards, IFRS S1 – General Requirements for Disclosure of Sustainability-related Financial Information, and IFRS S2 – Climate-related Disclosures. These standards have already been endorsed by the International Organisation of Securities Commissions (IOSCO) and have received strong support from a number of jurisdictions, including Australia, China, Canada, Japan, Hong Kong, Malaysia, New Zealand, Nigeria, Singapore, and the UK. They are expected to inform and accelerate the development of sustainability-related regulatory initiatives globally.

In response to these new IFRS standards, CLP in its 2023 Annual Report has disclosed information about sustainability-related risks and opportunities that could reasonably be expected to affect the Company's prospects. CLP is further making sustainability a core part of its corporate thinking and business strategy by integrating the materiality assessment process into its governance and risk management procedures, as well as disclosing its strategies and metrics in relation to significant sustainability issues.

For its 2023 Annual and Sustainability Reports, CLP has also referenced the [Integrated Thinking Principles](#) and the [SASB Standards](#) for Electric Utilities & Power Generators.

Download the IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information Content Index

Download the SASB Content Index for Electric Utilities & Power Generators

The ISSB's IFRS S2 Climate-related Disclosures

The ISSB's new IFRS S2 standards build on existing frameworks and incorporate various leading initiatives such as Integrated Reporting (IR), the Sustainability Accounting Standards Board (SASB), the Climate Disclosure Standards Board (CDSB), and the recommendations by the Task Force on Climate-Related Financial Disclosures (TCFD).

CLP referenced the ISSB's Climate-related Disclosures Prototype in its 2021 Climate-related Disclosures Report, and the IFRS S2 Exposure Draft in its 2022 edition. In 2023, CLP has continued to enhance its climate-related disclosures by making reference to the IFRS S2 standards when describing its responses to relevant climate-related risks and opportunities, and providing annual updates and quantitative metrics in its Annual Report. By integrating its Climate-related Disclosures Report into the Annual Report, CLP is further aligning itself with the integrated reporting principle. In addition, a comprehensive climate transition plan titled CLP's Climate Vision 2050: Powering an orderly transition is published at the same time in March 2024.

In October 2023, the Task Force on Climate-related Financial Disclosures (TCFD) announced that it had disbanded, having fulfilled its remit. The Financial Stability Board (FSB) has asked the IFRS Foundation to assume responsibility for monitoring companies' progress in climate-related disclosures.

Download the IFRS S2 Climate-related Disclosure Content Index

The Global Reporting Initiative (GRI)

The GRI is an international independent organisation that provides a set of widely-used standards for sustainability reporting. CLP's reports have made reference to the GRI Standards since 2007.

This report has been prepared in accordance with [GRI Universal Standards 2021](#). It also reports on matters relevant to the GRI G4 Electric Utilities Sector Disclosures, covering aspects of its sustainability performance that are meaningful and relevant to the electric utility sector.

Download the GRI Content Index


The Environmental, Social and Governance (ESG) Reporting Guide of the Stock Exchange of Hong Kong

Companies listed on the Hong Kong Stock Exchange (the Exchange) are required to meet the Exchange's [ESG Reporting Guide](#) disclosure obligations for financial years beginning from 1 July 2020 onwards. The Guide was updated in 2019 after extensive consultation conducted by the Exchange.

CLP's Annual and Sustainability Reports adopted the updated disclosure obligations from the 2019 reporting cycle onwards. In particular, the materiality assessment process outlined under the mandatory disclosure requirements has been applied to prioritise CLP's response to the "comply or explain" provisions of the Environmental and Social Aspects of the ESG Reporting Guide.

The ISSB was formed in November 2021 and consultation on the first two ISSB standards took place in 2022, prompting the Exchange to consider aligning Hong Kong's ESG reporting requirements with these widely supported international standards. The Exchange plans to enhance climate-related disclosures under the ESG framework by introducing mandatory disclosures that are consistent with the requirements of IFRS S2.

In April 2023, the Exchange published a consultation paper seeking market feedback on its proposals to enhance climate-related disclosures. In November 2023, the Exchange postponed the implementation date of the Listing Rule amendments to 1 January 2025, subject to finalising the Listing Rule amendments.

Download the HKEx ESG Reporting Guide Content Index


Task Force on Nature-related Financial Disclosures (TNFD)

The TNFD develops voluntary, consistent nature-related financial risk disclosure recommendations for use by companies when providing information to investors, lenders, insurers and other stakeholders. It has issued 14 recommendations on assessing nature-related risks and opportunities in an organisation's governance, strategy, risk and impact management, metrics and targets. Its recommendations include 10 core global disclosure indicators and metrics related to dependencies and impacts on nature, as well as core disclosure metrics for organisation-level risk and opportunity assessment. CLP makes reference to the TNFD's recommendations in disclosing its assessment of nature-based risk and of its impact on nature in the chapter [Respecting Nature](#).

Other guidance documents developed for the TNFD have also been referenced, including the sector-specific guidance for the power and utilities sector specifying the potential financial impact of nature-related risks. Another reference that has been used is the *Roadmap to Nature Positive: Foundations for the energy system*, published by the World Business Council for Sustainable Development (WBCSD) in September 2023. CLP is actively participating in the WBCSD's Roadmap to Nature Positive for the Energy System working group.

Greenhouse gas (GHG) emissions data

CLP's GHG emissions are reported with reference to the World Resources Institute (WRI)/WBCSD [GHG Protocol](#), the Intergovernmental Panel on Climate Change's [Guidelines for National Greenhouse Gas Inventories \(2006\)](#), the [International Standard for GHG Emissions ISO 14064](#) and relevant local statutory guidelines where applicable.

In 2007, CLP developed the first version of the Group-wide GHG reporting guideline, which referenced some of the guidelines above. This reporting guideline is reviewed at least every three years. In 2019, CLP enhanced its GHG disclosure to include the disclosure of Scope 3 emissions.

Read more on the GHG Accounting Methodology


Reporting scope and data verification

This report covers the CLP Group's sustainability performance for the calendar year ending 31 December 2023. It is published at the same time as the CLP 2023 Annual Report. The CLP 2023 Sustainability and Annual Reports were published in March 2024, in tandem with the 2024 edition of CLP's Climate Vision 2050.

GRI reference: 2-2, 2-3, 2-4

CLP reviews its reporting scope regularly to ensure that the material impact of the Group's overall portfolio is covered. Any assets that were operating and later sold during the year have been included in the reporting scope. In 2023, assets added to the reporting scope included the Bobai wind farm, Hong Kong LNG Terminal Limited (HKLTL), Darlington Point Energy Storage, and Riverina Energy Storage System II. With the change in ownership of Apraava, Apraava's non-financial data on operational control basis has been removed from CLP Holding's accounts from 2023, while those on equity basis continues to account for the data according to CLP's equity share in the asset. This is adjusted to align with other joint ventures, on the condition that the same level of transparency and disclosure is maintained in Apraava's public disclosures. A separate standalone Apraava data table with key non-financial data metrics can be found in the Section [ESG data table](#).

In 2023, the following data points have been adjusted:

- **Health, Safety and Environment (HSE):** To enhance the credibility of data quality, one of the existing environmental metrics, mercury as an air pollutant, is now independently assured.
- **CLP Group's GHG emissions intensity on an equity / equity plus long-term capacity and energy purchase basis:** This metric refers to the ratio of the equity and purchase portion of GHG emissions to the equivalent portion of the power sent out from CLP Group's generation and energy storage portfolio where CLP has an equity interest and long-term purchase arrangements. Starting from 2023, the scope expands to cover spot purchases, including electricity purchased from the National Electricity Market in Australia and electricity sent to the grid in Hong Kong (i.e. through the Feed-In-Tariff Scheme or from other renewable energy assets).

GRI Reference: 2-5

KPMG has provided limited assurance on a selected set of ESG data in this report, in accordance with:

- The International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements other than Audits or Reviews of Historical Financial Information; and
- In respect of GHG emissions, the International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements.

Download 2023 Independent Assurance Statement



Below are the Group's boundary definitions for each of the main categories of data included in this report. Please refer to [CLP's 2023 Annual Report](#) for more details on the entities included in the consolidated financial statements.

Finance	Selected financial figures are extracted from the Annual Report and the consolidated financial statements of CLP Holdings Limited and its subsidiaries (the Group). For a detailed description of the financial reporting scope, please refer to the Material Accounting Policies - Consolidation and Equity Accounting on pages 221-222 of the 2023 Annual Report.
GHG emissions <i>CLP Group's total CO₂e emissions (on an equity basis)</i>	Includes the Group's generation and energy storage portfolio, transmission and distribution, retail and other business activities where relevant, covering GHG emissions from Scope 1, 2 and 3. Scope 1 CO₂e Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines and fuel storage facilities that are: - Owned by CLP, where assets are included on an equity basis (i.e. data is calculated according to CLP's equity share in the asset); and - In operation during the reporting year. Scope 2 CO₂e Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines, fuel storage facilities and offices that are: - Owned or rented by CLP, with assets and offices included on an equity basis (i.e. data is calculated according to CLP's equity share in the asset); and - In operation during the reporting year. Scope 3 CO₂e Includes indirect emissions (not included in Scope 2) that occur in the value chain of CLP. It includes emissions from the Scope 3 categories relevant to CLP (see the GHG Accounting Methodology for details).
GHG emissions <i>CLP Group's generation and energy storage portfolio (CO₂/CO₂e on an equity/ equity plus long-term capacity and energy purchase basis)</i>	Data is consolidated on an equity basis with two variations: Equity basis includes assets in the Group's generation and energy storage portfolio that are: - Owned by CLP, where assets are included on an equity basis (i.e. data is calculated according to CLP's equity share in the asset); and - In operation during the reporting year. Equity plus long-term capacity and energy purchase basis adds on to (1) by including assets in the Group's generation and energy storage portfolio whose capacity and energy are purchased by CLP to meet customer demand, and where: - The purchase agreement duration is at least five years; and - Capacity or energy purchase is no less than 10MW.

GHG emissions CLP Group's generation and energy storage portfolio (CO₂/CO₂e on an operational control basis)	Includes the Group's generation and energy storage portfolio, coal mines or fuel storage facilities that are: - Majority owned by CLP or under CLP's operational control, defined as entities that have full authority to implement CLP's operating policies; - In operation during the reporting year; and - Having a material impact on the environment. Unless otherwise stated, 100% of the performance data for in-scope assets is reported without adjustments based on CLP's equity share.
GHG emissions intensity of CLP Group's generation and energy storage portfolio (on an equity/ equity plus long-term capacity and energy purchase basis)	1. Equity basis: The GHG emissions intensity of the portfolio owned by CLP. This is the ratio of the equity portion of GHG emissions to the equivalent portion of the power sent out from CLP Group's generation and energy storage portfolio where CLP has an equity interest. This includes Scope 1 and Scope 2 emissions. Equity basis includes the assets in the Group's generation and energy storage portfolio that are: - Owned by CLP, where assets are included on an equity basis (i.e. data is calculated according to CLP's equity share in the asset); and - In operation during the reporting year. 2. Equity plus long-term capacity and energy purchase basis: The GHG emissions intensity of electricity supplied to CLP's customers (i.e. portfolio owned by CLP and purchased electricity that is sold to CLP's customers) is the ratio of the GHG emissions to the equivalent portion of the power sent out from CLP Group's generation and energy storage portfolio where CLP has an equity interest and long-term purchase arrangements. This includes Scope 1, Scope 2 and Scope 3 emissions (part of Category 3: direct emissions from generation of purchased electricity that is sold to CLP's customers). Equity plus long-term capacity and energy purchase basis includes the assets in the Group's generation and energy storage portfolio which are: - Owned by CLP, where assets are included on an equity basis (i.e. data is calculated according to CLP's equity share in the asset) and in operation during the reporting year; - The Group's generation and energy storage portfolio whose capacity and energy are purchased by CLP to meet customer demand, and where: - The purchase agreement duration is at least five years; and - Capacity or energy purchase is no less than 10MW. In addition, spot purchases including electricity purchased from the National Electricity Market in Australia and electricity sent to the grid in Hong Kong (i.e. via the Feed-In-Tariff Scheme or from other renewable energy assets) are also included.

GHG emissions intensity of electricity sold <i>CLP Power Hong Kong Limited (CLP Power)</i>	Includes power generation assets involved with the delivery of electricity to CLP Power customers, where: • The CO₂ and CO₂e emissions are from generation assets owned or controlled by CLP Power/ CAPCO in Hong Kong only (i.e. excluding nuclear power generation, which does not result in significant carbon emissions); and • The kWh is from the total electricity sales for CLP Power.
Environment <i>Resource use, air emissions and environmental compliance</i>	Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines and fuel storage facilities that are: • Majority owned by CLP or under CLP's operational control, defined as entities that have full authority to implement CLP's operating policies; • In operation during the reporting year; and • Having a material impact on the environment. Unless otherwise stated, 100% of the performance data for in-scope assets is reported without adjustments based on CLP's equity share.
Asset management <i>Energy sent out, fuel use (on an operational control basis)</i>	Data is consolidated on an operational control basis. It includes those assets in the Group's generation and energy storage portfolio that are: • Majority owned by CLP or under CLP's operational control, defined as entities that have full authority to implement CLP's operating policies; and • In operation during the reporting year. Unless otherwise stated, 100% of the performance data for in-scope assets is reported without adjustments based on CLP's equity share.
Asset management <i>Generation and energy storage capacity, energy sent out</i>	Data is consolidated on an equity basis with two variations: 1. Equity basis: includes assets in the Group's generation and energy storage portfolio that are: – Owned by CLP, where assets are included on an equity basis (i.e.data is calculated according to CLP's equity share in the asset); and – Under construction (for generation and energy storage capacity only) or in operation during the reporting year. 2. Equity plus long-term capacity and energy purchase basis adds on to (1) by including assets in the Group's generation and energy storage portfolio whose capacity and energy are purchased by CLP to meet customer demand, and where: – The purchase agreement duration is at least five years; and – Capacity or energy purchase is no less than 10MW.

People	Includes people employed by CLP entities and their subsidiaries. This also includes CLP employees who are assigned to work in joint ventures, joint operations or associates.
Safety	Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines, fuel storage facilities and offices that are: • Majority owned by CLP or under CLP's operational control, defined as entities that have full authority to implement CLP's operating policies; and • Under construction or in operation during the reporting year. Unless otherwise stated, 100% of the performance data for in-scope assets is reported without adjustments based on CLP's equity share.
Governance	Includes breaches of the Code of Conduct and convicted cases of corruption associated with people employed by CLP entities and their subsidiaries. This also includes cases associated with CLP employees who are assigned to work in joint ventures, joint operations or associates.



Approach to Sustainability

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Governance

Good corporate governance and risk management form the bedrock of a sustainable business and underpin its long-term success. The Group is continuously striving to embed good corporate governance practices in its day-to-day operations through the implementation of its Value Framework.

Corporate governance framework and code

CLP has a robust corporate governance framework that promotes and safeguards the interests of its shareholders and other stakeholders. It is committed to maintaining a rigorous framework of corporate governance that upholds the Group’s credibility and reputation.

GRI reference: 2-9, 2-12, 2-15, 2-23, 2-24

CLP’s corporate governance structure consists of a [CLP Code on Corporate Governance](#), a Corporate Governance Framework, and a comprehensive set of procedures, systems, policies and guidelines.

The CLP Code was updated in early 2023 to reflect the new requirements under the Corporate Governance Code Appendix C1 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the Exchange). While embracing the requirements of the Exchange’s Corporate Governance Code, the CLP Code goes beyond it by building on CLP’s own standards and past experience.

The Board is CLP’s highest governance body, and is responsible for directing and supervising all its affairs in a responsible and effective manner. Some of its responsibilities are delegated to five [Board Committees](#). The two committees most involved in sustainability-related matters are the Sustainability Committee and the Audit & Risk Committee.

Find out more about Sustainability Governance in this report

Download the CLP Code on Corporate Governance

How CLP Holdings approaches corporate governance

CLP Code on Corporate Governance	- Commitment of the Board and Senior Management to good standards of corporate governance - Sets out common principles that must be adhered to across the Group
Corporate Governance Framework	- Identifies all key participants in good governance - Guides CLP to uphold the Company’s values and conduct affairs with different stakeholders in an ethical, transparent and accountable manner - Defines the framework and process for monitoring the management of the Group - Sets out common principles that must be adhered to across the Group
Specific policies at Group or business unit level	- Provides guidance on appropriate conduct in day-to-day work - Must meet local regulatory requirements or local stakeholder expectations
Systems and standards, supported by procedures and manuals	Internal mandatory requirements that guide day-to-day operations and practices
Standard practices and guidelines	- Provides details for system/ standard implementation, or voluntary guidance on managing emerging issues and risks - The voluntary guideline adopts a precautionary approach, particularly for environmental aspects, helping CLP to prepare for new regulations

The CLP Corporate Governance Report in the Annual Report discloses the Company's governance performance in detail. Below are the highlights from 2023.

- **Board Succession** - Announced the succession plans for the CEO transition and appointed an Independent Non-Executive Director (INED) whose skills, experience and background are well aligned with the Board's focus on organisational talent capability;
- **Board Committees Refresh** - Refreshed the composition of CLP Holdings Board Committees;
- **Implementing Findings from Board Review** - Implemented two key initiatives from the 2022 External Board Review findings including introduction of Management Briefing sessions for the Board, and updates of the CLP Holdings Board Committee Chairs to the CLP Holdings Board at Board meetings; and
- **Governance Oversight and Key Announcements** - Exercised oversight of a number of material developments and announced these to the market contemporaneously, including CEO transition, key developments for the Hong Kong Scheme of Control Business and profit warning.

Read the Corporate Governance Report in the 2023 Annual Report

The [Human Resources and Remuneration Committee Report](#) covers CLP's Remuneration Policy, including the non-financial metrics considered for executives' remuneration.

Sustainability governance

GRI reference: 2-9, 2-12, 2-13, 2-14, 2-23

CLP’s strong governance framework ensures that the sustainability issues it faces are incorporated into its corporate agenda and business strategy. The [CLP Board](#) has overall responsibility for CLP’s sustainability reporting and performance. Sustainability governance has been embedded in the corporate governance structure

throughout the Group, from Board-level committees to management-level Group functions and business units.

Two of the Board Committees, the Sustainability Committee and the Audit & Risk Committee, have separate but complementary roles in sustainability management. These two committees are supported by the Sustainability Executive Committee and coordinated by the Group Sustainability Department.



Sustainability Committee

The primary role of the CLP Board-level Sustainability Committee (SusCom) is to oversee the management of the Group’s sustainability issues.

Ensuring that the Committee maintains a balanced view and is updated on the sustainability issues, the Committee was briefed by a leading external expert on the Path to Net Zero and also by management on the reflections and key takeaways from COP28.

In January 2024, the terms of reference of the Committee were revised to reflect the focus of the Committee that has evolved over time and its nature as a Non-executive Directors committee with oversight of management’s work on sustainability. The Committee endorsed key changes to the terms of reference which included updating the Committee membership, expanding the responsibilities of the Committee, updating the CLP Group-level sustainability-related frameworks and increasing the frequency of Committee meetings. The Committee’s responsibilities expand to include:

- Reviewing CLP’s long-term corporate strategy from the perspectives of the Group’s sustainability risks

and opportunities, goals, targets, material topics and performance;

- Reviewing and recommending sustainability-related disclosures in the Annual Report, in addition to the Sustainability Report, for approval by the Board; and
- Monitoring compliance with any applicable laws and regulations regarding sustainability-related disclosures in the jurisdictions where CLP operates.

The Committee is now led by an independent Chairman and is required to consist of at least five members being Non-executive Directors, with at least three Independent Non-executive Directors . The frequency of Committee meetings has increased from a minimum of twice a year to three times a year.

[Download the Terms of Reference of the Sustainability Committee](#)

Overview of work conducted by the Sustainability Committee between 2023 and the date of this Report

	2023			2024	
	Feb	Jun	Nov	Jan	Feb
Climate Change-related Matters	✓	✓		✓	✓
Other Sustainability Matters – risks, opportunities and emerging issues		✓	✓	✓	
Sustainability Reporting/Indices performance	✓		✓		✓
Sustainability Governance			✓	✓	
Health, Safety, Security and Environment				✓	
Community, Charitable and Environmental Partnerships and Initiatives	✓				✓

The Committee will continue its focus on longer-term emerging sustainability issues concerning the Group, in particular on climate change. It is well aware of the Group’s stakeholders’ increasing focus on climate-related issues.

Read the full Sustainability Committee Report in the 2023 Annual Report

Audit & Risk Committee

A key responsibility of the Audit & Risk Committee (ARC) is to maintain oversight of CLP’s financial control, risk management and internal control processes, ensuring that adequate systems are in place and are being followed.

Download the Terms of Reference of the Audit & Risk Committee

Risks are managed at both the strategic and operational levels, in ways that support the long-term sustainability of CLP’s growth objectives and the operational needs of the current business.

The ARC is also responsible for ensuring appropriate data assurance of the ESG data in the Sustainability Report. Independent oversight is maintained through an assurance of the accuracy of metrics and reporting, following appropriate accounting principles and reporting practices, in addition to the robust internal control system. CLP’s independent non-financial auditor is responsible for key ESG data assurance, and their findings and observations are presented to management and the Board through the ARC.

Read the full Audit & Risk Committee Report in the 2023 Annual Report

Sustainability Executive Committee

The Sustainability Executive Committee (SEC) has the strategic responsibility of assessing and managing sustainability issues.

The SEC is chaired by the Chief Executive Officer (CEO) as part of that role’s executive-level responsibility for economic, environmental and social matters. Set up in 2016, the SEC comprises the corporate senior management team of:

- Mr T. K. Chiang (CEO) (since October 2023), in place of Mr Richard Lancaster (former CEO), Chairman, and member of the Sustainability Committee;
- Mr Nicolas Tissot (Chief Financial Officer);
- Mr Derek Parkin (Chief Operating Officer);
- Mr David Simmonds (Chief Strategy, Sustainability and Governance Officer);
- Ms Quince Chong (Chief Corporate Development Officer);
- Ms Eileen Burnett-Kant (Chief Human Resources Officer); and
- Mr Hendrik Rosenthal (Director – Group Sustainability).

Full biographies of Group Executive Committee members are set out on the Group’s website

The SEC steers the sustainability strategy of the Group and approves relevant deliverables. The CEO and CFO also hold management responsibilities for the assurance of ESG data, and jointly sign off the General Representation Letter connected with the assurance process.

In 2023, the SEC convened six times and served as a platform for the executive team to initiate or develop strategic sustainability projects, receive updates on ongoing initiatives, and engage in strategic discussions on emerging issues.

Key actions in 2023 are summarised below:

- Provided direction to CLP's Climate Vision 2050 review, including the revision of Group-wide targets, in light of the latest developments of the business plan;
- Reviewed the guidance on climate-related terminology to ensure the consistent communication of CLP's climate strategy and initiatives across the Group, and to avoid 'greenwashing' risks;
- Monitored feedback received on EnergyAustralia's Climate Transition Action Plan published in August 2023;
- Reviewed CLP's response to public consultations, including the consultation by the Glasgow Financial Alliance for Net Zero (GFANZ) in relation to its new voluntary guidance for financial institutions;
- Maintained oversight of the Company's public disclosures on sustainability issues, including in the CLP Annual Report and Sustainability Report;
- Monitored the evolving international ESG reporting standards, including the IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and the IFRS S2 Climate-related Disclosures, and the Task Force on Nature-related Financial Disclosures (TNFD), and assessed their implications for the Company's own disclosures.
- Provided direction for the Company's response to various ESG disclosure standards, including the proposal by the Stock Exchange of Hong Kong to mandate climate-related disclosures in issuers' ESG reports under Appendix 27 of the Exchange's Listing Rules and Guidance;
- Reviewed the material topics identified in the materiality assessment and determined the impact material topics and financially material topics to be featured in the Sustainability Report and the Annual Report respectively;
- Monitored investor feedback during ESG roadshows and identified areas for improvement in the light of investors' expectations relating to ESG performance and reporting;
- Reviewed the performance of ESG indices results and trends of increasing demands for robust management of social issues, and disclosure of the financial impact of ESG issues;
- Reviewed proposed data management solutions and their delivery strategy, including the Data Analytic

Platform, to support Group-level data integration and reporting capabilities;

- Reviewed the scope of sustainability data assurance;
- Reviewed the updated procedure on accounting for avoided GHG emissions; and
- Reviewed and endorsed CLP's Nature and Biodiversity Action Plan, including a Group-level location-based biodiversity assessment.

Group Sustainability Department

The Director-led Group Sustainability Department regularly reports to and seeks guidance from the Sustainability Committee and the SEC.

The Department is responsible for managing the implementation of the Group's climate change strategy. This includes reporting and reviewing progress on the implementation of CLP's Climate Vision 2050 and IFRS standards, maintaining oversights of the development of carbon markets across CLP's markets and the Group's involvement in these markets, as well as monitoring changes in stakeholder expectations and assessing their implications for the Company.

The Department works to embed sustainability into existing operational practices and to inform the development of CLP's business strategy and planning processes. It monitors sustainability issues and updates the Sustainability Committee and the SEC on emerging risks and opportunities. It also leads corporate sustainability reporting and identifies areas for improving operational performance.

The Department is committed to developing its ESG data reporting and performance management capacity and sharing its experience across organisations, sectors and countries. It supports and organises sustainability-related events and works closely with different stakeholder groups. For instance, the Department hosts Sustainability Forums and conducts regular meetings with Group functions and Business Units across regions to facilitate the sharing of experience and insights into advancing sustainability.

Risk management

CLP’s risk management framework promotes a judicious risk culture, empowering the Company to capitalise on opportunities while securing its long-term growth and success.

Risk management framework

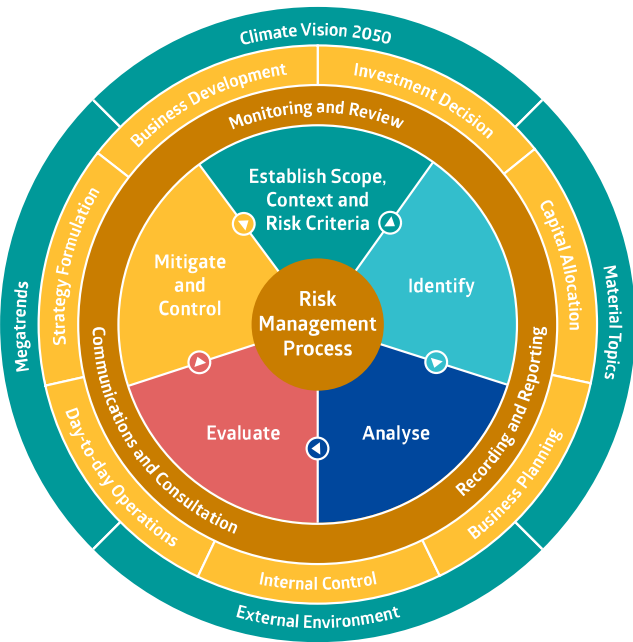
In line with international standards and best practices, CLP defines “risk” as the effect of uncertainty on objectives. The effect can be positive, negative, or both, and can result in opportunities and threats. CLP aims to identify risks early so that threats can be understood, managed, mitigated, transferred or avoided, and opportunities can be enhanced and captured where appropriate. This requires a proactive approach and an effective Group-wide risk management framework.

GRI reference: 2-23, 205-1

CLP’s risk management framework comprises four key elements:

1. Risk management philosophy;
2. Risk appetite;
3. Risk governance structure; and
4. Risk management process.

CLP’s Risk Management Process



Risk management process

Based on these four key elements, CLP’s risk management process forms an integral part of its business and decision-making processes, including strategy formulation, business development, business planning, capital allocation, investment decisions, internal control and day-to-day operations. This is achieved through various means including communication and consultation, monitoring and review, as well as recording and reporting. The Board oversees this process through the Audit & Risk Committee.

Underpinned by a robust risk management process, CLP maintains a vigilant approach in monitoring the evolving external environment and megatrends, which may have significant implications for CLP’s business and markets. For more detailed information, please refer to the [Materiality assessment](#) section.

Furthermore, CLP’s risk management process takes into account the identified **material topics** which are determined through comprehensive annual materiality assessments. The assessment enables CLP to assess and respond to the sustainability matters that are most likely to impact CLP’s business and stakeholders. In addition, **Climate Vision 2050** is also an integral part of CLP’s broader climate strategy, which covers key considerations around scenario analysis and long-term climate risks and opportunities identification, among others. It guides CLP in managing these issues.

CLP reviews how sustainability issues are impacting the business and its stakeholders through an annual materiality assessment process, which uncovers emerging sustainability risks and opportunities for consideration in the risk review and business planning processes. Below is a list of selected top tier risks with sustainability drivers identified:

Group Top Tier Risks with sustainability drivers	Related Material Topics and Sustainability-related Risk & Opportunity Drivers					
	 Transition to net zero	 Energy growth opportunities	 Energy security and reliability	 A safe, future-ready workforce	 Business resilience	 Community stewardship
Major HSE incidents				●		
Cyber security attack – OT systems					●	
Cyber security attack – IT systems					●	
Major projects delay / cost overrun			●			
Major failure – generation assets			●		●	
Climate-related physical risk					●	
Coal supply shortage – Australia			●		●	
Wholesale price volatility – Australia					●	
Tariff adjustment challenge – Hong Kong	●		●			●
Gas supply security – Hong Kong			●		●	
Regulatory changes – Hong Kong	●	●	●		●	
Regulatory changes – Mainland China	●	●			●	
Regulatory changes – Australia	●	●			●	
Regulatory compliance – Australia					●	●
Geopolitical and sanctions risk			●			
Climate-related transition risk	●				●	
Availability of competitive funding	●					
Digital transformation		●		●	●	
Organisation capability development				●		

Stakeholder management

CLP is dedicated to fostering open, transparent, regular and timely communication with its stakeholders, demonstrating willingness to address their concerns, and building trust and confidence. This commitment is delivered through the implementation of the CLP Stakeholder Engagement Framework.

Strategies and procedures

CLP's Stakeholder Engagement Framework provides open and transparent channels for stakeholder input, along with a review and consideration process that responds to concerns about CLP's business in a timely manner.

GRI reference: 2-12, 2-16, 2-25, 2-29, 207-3, 413-1

Each business unit develops its own project-specific engagement plan according to their needs, based on the framework steps below.

- Establishing engagement scope and aligning with business objectives**
- Mapping issues and concerns**
- Identifying relevant stakeholders:** CLP engages with a diverse range of stakeholders, each with distinct attributes, concerns and interests. Key stakeholder groups for each project are identified and prioritised based on the issues mapped, how stakeholders will be impacted, and the nature of their influence on the business.
- Developing a communications and engagement plan:** CLP uses a wide range of easily accessible public engagement channels, both formal and informal. These channels include surveys, focus groups, briefings, visits, events, roadshows and online channels, where stakeholders can express their concerns, interests or provide feedback throughout the year. Drawing on past experience, the channels for each project are selected based on the project's nature and the most effective means of reaching the identified stakeholders.

- Conducting engagement activities**
- Capturing feedback and reporting on outcomes:** CLP seeks to address stakeholders' views and concerns while identifying areas for improvement. To do so, various measures are employed, including capturing stakeholder feedback, assessing the outcomes of CLP's stakeholder engagement efforts, monitoring and analysing media coverage; tracking brand perception ratings; and evaluating public and industry recognition and awards.



CLP's stakeholder engagement channels

As one of the largest investor-owned power businesses in Asia, CLP serves a diverse range of stakeholders. Drawing on CLP’s active and constructive dialogue with different stakeholders, this section presents the key concerns expressed by stakeholders in 2023.

GRI reference: 2-12, 2-25, 2-29

The Company is committed to responding to stakeholder concerns about the business in a timely manner. Concerns vary depending on location and context and therefore require

different actions or responses. General complaints about the Company are typically handled by the customer relations team. On the other hand, the Company ensures transparency by disclosing its financial and non-financial performance through the Group website, the Annual and Interim Reports and the Sustainability Report.

The following table summarises key stakeholders, their main areas of interest during the year, and how they were engaged with.

Stakeholders	Areas of Interest in 2023	Key Engagement Channels
 Capital providers (including lenders, investors and shareholders)	- Financial and operational performance and strategic direction - Impact of macroeconomic events and impact of interest rate hikes on financing costs, liquidity, financing strategies and risk management - Impact of incidents or natural disasters on the company's operations and insurance coverage - Cash flow, financial and debt management, capital structure, dividend policy, dividend prospects, and credit ratings - Progress of decarbonisation and CLP's Climate Vision 2050 - Approach to phasing out coal and replacement strategy - Capital allocation, growth prospects, and business opportunities - Adoption of new technologies to achieve net zero 2024-28 Development Plan for Hong Kong Scheme of Control business and 2023 Interim Review - EnergyAustralia's financial and operational performance and Australian market conditions - Pace of renewable energy investments in Mainland China and exposure to geopolitical tensions - Growth in Apraava Energy with the partnership with CDPQ - Nature, human rights and just transition	- Annual General Meeting - Annual and Interim Results Analyst Briefings and webcasts - Corporate reports - CLP Investor Relations App - Climate Action Finance Report - Announcements, circulars, presentations and media releases - Direct engagement in form of bank and investor meetings, conferences, site visits, briefing calls and non-deal roadshows - Investor Relations mailbox - Outreach engagement following the release of 2024-28 Development Plan for Hong Kong Scheme of Control business
 Customers (including customers, electricity boards and grid companies)	- Energy prices, tariff adjustment and tariff rebate schemes - Energy efficiency, demand side management and renewable energy offerings to customers - Energy reliability and availability - Customer experience - Customer privacy	- Working groups, e.g. Customer Consultative Group, local customer advisory committees and small and medium enterprise (SME) consultative groups - Customer Service Centres, Customer Interaction Centre and online service portals - Customer satisfaction surveys, feedback forms and personalised communications through account managers - Participation in government schemes

Stakeholders	Areas of Interest in 2023	Key Engagement Channels
 Our people <i>(including employees and contractors)</i>	- Performance in health and safety - Employees' health and wellbeing - Competitive remuneration and benefits - Career development opportunities - Gender diversity and equal opportunity	- Employee engagement and safety culture surveys - Feedback channels (including online forms, suggestion boxes, townhall meetings, focus groups, regular roadshows) - Employee newsletters, broadcasts, intranet, internal webinars - Discussion with trade union representatives in locations where collective bargaining power is recognised
 Partners <i>(including governments, regulators, suppliers and contractors)</i>	- Hong Kong – Scheme of Control Agreement, tariffs, environmental performance, reliability and safety and long-term decarbonisation strategy - Mainland China – decarbonisation strategy, renewable energy projects development, carbon emissions, safety, reliability and emergency readiness - Australia – System stability and reliability; reserve capacity roles and investment in renewables; transmission planning and deployment; customer hardship, cost of living and retail tariffs; environmental, sustainability and carbon frameworks, policies and plans including modern slavery. - India – National Action Plan on Climate Change (NAPCC), Power Purchase Agreements (PPA) and tariffs - Contractors' safety - Contractors' supply chain management	- Regular working group meetings, communications and performance reporting - Written responses to public consultations and direct liaison with governments, regulators and relevant parties - Engagements and site visits for understanding CLP's decarbonisation strategies - Face-to-face meetings and visitations by top management to deepen strategic long-term partnerships for pursuing mutual growth and development - Regular supplier management meetings and engagements - Safety workshops to engage contractors to uplift their safety awareness and capability - Periodical supplier performance evaluations - Regular risk and resilience review of key suppliers' supply chain risks
 Community <i>(including community groups, legislators, NGOs, industry and professional organisations, and academia)</i>	- Community engagement and investment programmes related to education, empowerment of women, healthcare access, poverty alleviation, social inclusion, diversity and eliminating energy poverty - Upward mobility opportunities, particularly for young people - Carbon neutrality by 2050, future fuel mix and electricity market development - Supply reliability, responses to incidents, fuel cost and tariff level - Responses to social incidents and public sentiment and CLP's role as a corporate citizen - Assistance to people in need and to different community sectors in addressing emerging social needs - Progress on key green infrastructure projects - Energy efficiency and conservation, popularisation of electric vehicles and development of the green economy - Sustainable energy solutions to meet climate challenges and opportunities arisen in transition to net zero	- Working committees, advisory committees, panels and meetings - Community investment programmes and volunteering services - Awards and scholarships - Seminars, lectures, workshops and online classes - Promotion through mass media and social media (including educational videos) - One-on-one meetings and visitations - Engagements and site visits for understanding CLP's decarbonisation strategies - Senior management's participation in speaking forums, briefings and engagement events to articulate CLP's thought leadership on its climate vision

Materiality assessment process

The materiality assessment process is the foundation of CLP’s best practice sustainability management and reporting, enabling it to integrate sustainability into its business strategy and create long-term value for stakeholders.

Overview of the assessment approach

A materiality assessment helps to contextualise sustainability-related impacts, risks and opportunities, and decide how these should be disclosed in CLP’s reports. By combining both internal and external stakeholder views with extensive megatrend analysis, CLP determines the sustainability material topics that are most financially material to its business and to stakeholders from an impact perspective.

GRI reference: 2-12, 3-1, 3-2

Global standards for best practice in assessing materiality have continued to evolve in line with broader changes in sustainability disclosure standards. Most notable are the new standards, IFRS S1 and IFRS S2, published by the International Sustainability Standards Board (ISSB) in June 2023, which provide additional clarity on how to assess financial materiality. Similarly, the GRI Sustainability Reporting Standards upgraded the materiality assessment methodology in 2021.

In 2023, CLP considered the latest best practice advice from standard setters, including the following, amongst others:

- The ISSB’s IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information, published in June 2023;
- GRI 3: Material Topics 2021; and
- [Applying Enterprise Risk Management to Environment, Social and Governance-related Risk Guidelines](#), published by the Committee of Sponsoring Organisations of the Treadway Commission (COSO) and the WBCSD in October 2018.



Enhancing the double materiality approach

Since 2018, CLP's materiality assessments consider how megatrends could impact the sustainability of the Company's business strategy in the medium to long term. In 2021, CLP proactively embraced the concept of double materiality to support its sustainability risk management and to inform the sustainability-related content of its annual suite of reports. This approach means that CLP's Annual Report covers financially material sustainability topics that could reasonably

be expected to affect the Company's prospects, while the Sustainability Report includes sustainability topics that have a material impact on people, the environment and the economy.

In 2023, CLP continued to identify and assess potential sustainability impacts, risks and opportunities, and further align its reporting with the IFRS S1 standard. Its assessment process enables CLP to identify areas of material topic, and to understand how sustainability-related risks and opportunities can be integrated into the Group's strategic planning and risk management processes.

Double materiality approach

Financial risks and opportunities		Stakeholder Impacts
Sustainability-related risks or opportunities which may reasonably be expected to affect the business's cash flows, access to finance or cost of capital in the short, medium and long term.	What does it mean to CLP?	Significant positive or negative impacts on people, the environment and the economy. These affect the business's contribution to sustainable development.
Provides sustainability-specific inputs into strategic decision-making to mitigate risk and maximise returns for shareholders.	How does it help?	Sets priority areas for managing CLP's impacts and approach to sustainability.
Capital providers, investors, lenders and creditors who expect CLP to generate sustainable returns.	Who is it for?	A diverse range of stakeholders who want to understand CLP impacts and contributions to sustainable development.
Sustainability-related financial disclosure including material information about these risks and opportunities to investors. Information is material if omitting, misstating or obscuring it could reasonably be expected to influence investment decisions.	What to disclose?	Multi-stakeholder disclosure including its contribution to sustainable development objectives and any other impacts of interest to key stakeholder groups.
CLP's 2023 Annual Report Delivering Our Sustainability Agenda Chapter	Where to look for information?	CLP's 2023 Sustainability Report Our Sustainability Agenda Chapter

The double materiality approach has streamlined the disclosures in the Annual Report and Sustainability Report. The sustainability agenda and associated CLP responses are summarised in *The Materiality Matrix* section of this report and the *Delivering Our Sustainability Agenda* chapter of the Annual Report.

Read more in the Delivering Our Sustainability Agenda chapter in CLP's 2023 Annual Report

Read more in the Our sustainability agenda section

Read more in the Overview of Delivering Our Sustainability Agenda chapter in CLP's 2023 Annual Report

Read more in the Materiality matrix section

The assessment process in 2023

GRI reference: 2-12, 3-1

In 2023, CLP undertook the Year 3 assessment approach. For the first time, CLP has appointed a non-financial auditor to perform limited assurance over its materiality assessment process in accordance with the

International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information. By setting an example, CLP demonstrates its commitment to transparency and accountability in its materiality assessment process and ensures the integrity and credibility of its sustainability reporting.



Conduct stakeholder interviews

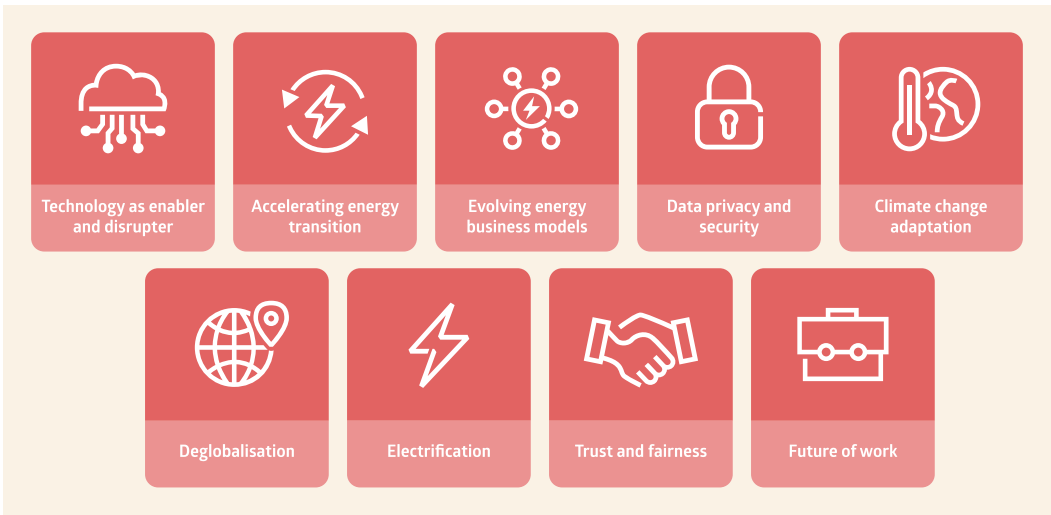
Megatrends are large, transformative global forces that define the future by having a far-reaching impact on business, economies, industries, societies and individuals. In 2023, CLP reviewed its earlier megatrend analysis through management interview and confirmed that the nine megatrends identified in 2021 remain relevant to CLP and its underlying strategic objectives.

In relation to these megatrends, senior management from various Group functions and Business Units were

interviewed in 2023. The interviews explored the strengths, weaknesses, opportunities, and threats associated with each identified megatrend.

In addition, CLP reviewed its risk registers, internal strategy papers, company policies, and international reporting standards to help it identify impacts, risk and opportunities conceivably material to CLP’s current and future prospects. The process undertaken was evidence-based.

The megatrends impacting CLP



Identify impacts, risks and opportunities

To identify sustainability-related impacts, risks and opportunities (IROs), CLP conducted a comprehensive analysis of various internal and external sources. These included CLP strategy and risk documentation, interviews collating views

from a broad range of internal stakeholders from CLP’s middle and senior management, a review on megatrends to reflect CLP’s current operating context, and a review of the latest reporting standards. CLP identified a total of 69 IROs, and grouped them under the nine megatrends most likely to affect CLP’s current business and operating environment.

‘**Impact materiality**’ refers to significant positive or negative impacts on people, the economy and the environment, including impacts on human rights, based on the GRI definition. ‘**Financial materiality**’ refers to sustainability-related risks or opportunities that could reasonably be expected to affect the Group’s cash flows, access to finance or cost of capital in the short, medium and long term, as per the IFRS S1 standard. Sustainability-related financial disclosure refers to disclosing material information about these risks and opportunities to investors. Information is material if omitting, misstating or obscuring it could reasonably be expected to influence investment decisions.

Assess and validate impacts, risks and opportunities

CLP continued to apply the assessment methodology by considering the severity and likelihood of risk, and the benefit and likelihood of opportunities. Each impact, risk and opportunity was assessed as either negative or positive, actual or potential (based on the latest GRI 3: Material Topics 2021 guidance). In 2023, additional considerations such as time horizon (short-term, medium-term and long-term) and position in the value chain (upstream, own operation and downstream) were introduced in accordance with the IFRS S1 standard.

To finalise the assessment phase, the **significance** of each negative impact or financial risk was evaluated for its severity and likelihood. The methodology incorporated the latest GRI guidance, the ISO 31000 Risk Management Standard, and CLP’s existing Group Risk Management Framework. A similar methodology was devised to assess the **significance** of each positive impact and financial opportunity, considering the benefit and likelihood of each opportunity.

After evaluating for magnitude/severity and likelihood, 49 IROs were assessed as ‘High’ or ‘Extreme’ and therefore material. Among them, 26 were sustainability-related financial risks (18) and opportunities (8), and 23 were stakeholder impacts (10 negative, 13 positive). All material topics have both stakeholder impact and financial implications for the Group. The summary of prioritised sustainability-related impacts, risks and opportunities discloses 51 IROs with 49 high or extreme IROs, as well as 2 medium IROs.

It is important to note that CLP’s methodology for assessing sustainability-related materiality aligns with and informs future sustainability-related strategy and reporting. In addition, this materiality assessment and the risk management processes have been more closely integrated. CLP’s risk management process takes into account the identified material topics which are determined through comprehensive annual materiality assessments.

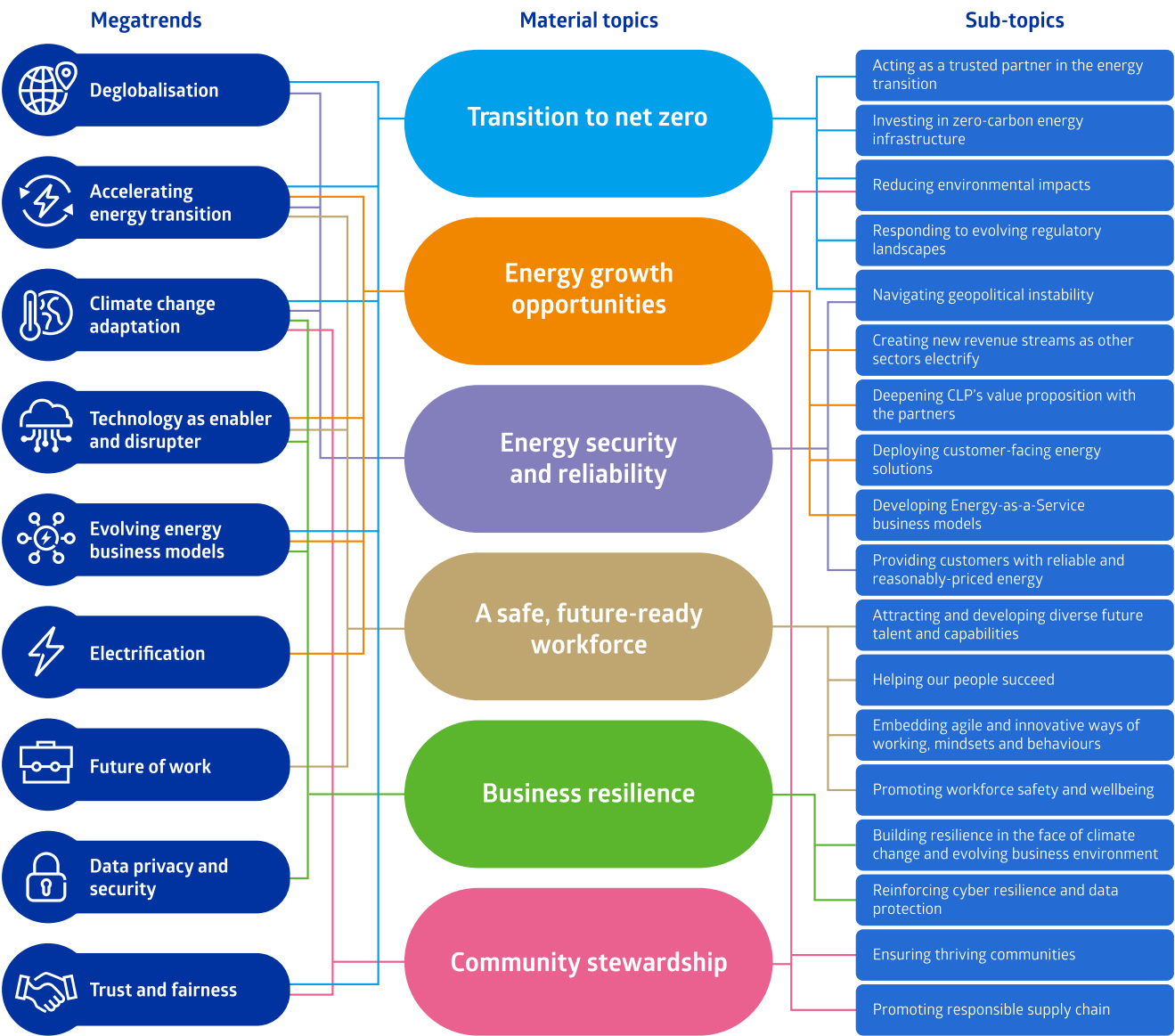
The assessment process was carried out by a working group of internal and external materiality experts, with participation from CLP’s Group Sustainability, Group Risk Management, Investor Relations and Corporate Affairs teams. The assessment outcomes were refined and validated by the Sustainability Executive Committee and endorsed by the CLP Holdings Sustainability Committee.



The materiality matrix

The materiality assessment results are summarised in the materiality matrix below, showing the relationships between megatrends, material topics and relevant sub-topics. The IFRS S1 disclosure requirements, including time horizon and position of the value chain, were incorporated in the results for the first time.

GRI reference: 3-2



For optimal user experience in navigating CLP's financially and impact material topics and sub-topics, please view the interactive materiality matrix online

Summary of prioritised sustainability-related impacts, risks and opportunities

CLP actively manages and responds to the sustainability-related impacts, risks and opportunities summarised in the table below. The latest materiality assessment results also inform the Group's business strategy and integrate into the broader risk management process.

Material Topic	Sub-topic	Megatrend	Impacts, risks and opportunities
Transition to net zero	Acting as a trusted partner in the clean energy transition		Financial opportunity: Carbon markets will play a key role in the decarbonisation of hard-to-abate sectors of the economy and in achieving in our collective net-zero ambition. Development of a pipeline of carbon offsets would represent both a commercial opportunity and a useful asset for CLP's own net zero ambitions.
			Financial risk: Failure to meet investor expectations that CLP acts in line with environmental regulations and in the best interests of the community and the environment may risk CLP's reputation with investors and become a barrier to raising capital.
			Financial risk: Potential changes in energy market regulations may constrain CLP's financial resources and weaken its ability to invest in zero carbon energy and new business models, undermining its competitiveness, reputation and investability.
	Investing in zero-carbon energy infrastructure		Financial opportunity: Over the life of the assets, the cost of nuclear power generation is comparable with that of fossil-fuel electricity generation. By renewing/expanding its nuclear energy infrastructure, CLP could lower the cost of energy production, while also supporting decarbonisation.
			Financial opportunity: Investments into battery projects to meet energy storage requirements of renewable energy systems, at both household (for rooftop solar) and industrial (>100MW) scales.
			Financial opportunity: War in Ukraine has brought energy security to the fore, which could lead to a faster development of renewables to replace gas in some markets. CLP can benefit from its investment in renewables and firming capacity to support long-term decarbonisation while maintaining energy security.
			Positive impact: Investment in the development of a circular economy around existing and future energy infrastructure (e.g. the recycling/remanufacture of wind turbine blades), including the development of active targets to drive transformation.
			Positive impact: Leverage growing public support (in Hong Kong and overseas) for nuclear energy as part of a sustainable energy mix, including an extension of existing plants' life (e.g. at Daya Bay) or investment in new nuclear power plants to support the development of a larger share of zero-carbon electricity for customers.
			Negative impact: Cost associated with phasing out coal-fired power plants could impact investment in renewable energy and delay progress in achieving the decarbonisation goals set out in CLP's Climate Vision 2050.

1 Time horizon is defined as 0-1 year as short-term; 1-5 years as medium-term; and 5+ years as long-term, to align with CLP's operating environment. For example, business and financial planning, risk management and climate pattern changes.

	Upstream	Own operations	Downstream	Short-term	Medium-term	Long-term
Value chain	Time horizon¹	CLP's Response				Relevant stakeholders
		CLP's current approach is to use credible carbon offsets as a last resort to offset value chain emissions, but only after having reached a decarbonisation rate aligned with a 1.5°C pathway. The Group remains focused on reducing direct emissions from its operations by transitioning to lower-carbon technologies.				Capital providers, Partners
		CLP continued to engage capital providers on the Group's efforts on decarbonisation. In 2023, CLP completed its financing activities in a timely and orderly manner to support the business's continued growth and development.				Capital providers, Partners
		CLP works closely with policymakers in its operating markets to support their objectives through business activities designed to meet local circumstances.				Capital providers, Partners
		Guangdong Daya Bay Nuclear Power Station, in which CLP has a 25% equity interest, meets around one-third of the electricity demand of CLP Power's customers in Hong Kong. CLP also has a 17% equity interest in Yangjiang Nuclear Power Station and continues to explore further opportunities to invest in the sector.				Capital providers, Customers, Partners
		CLP is planning battery projects in Hong Kong, Mainland China and Australia as energy storage is key to bolstering supply reliability.				Partners
		CLP has continued to focus on investments in the development of renewable energy, transmission systems and energy storage systems in its markets including Hong Kong, Mainland China, Australia and India.				Capital providers, Customers, Partners
		CLP is dedicated to driving the transition towards a circular economy, recognising its ability to address waste and pollution problems, and tackling climate change and biodiversity loss. In pursuit of this goal, CLP engages and partners with stakeholders to further explore the integration of circularity principles into its operations and supply chain.				Capital providers, Partners
		For the past 30 years, CLP has been an investor and off-taker of nuclear energy. In 2023, nuclear energy constituted 32% of CLP's fuel mix in Hong Kong, with natural gas accounting for 49% and coal for 19%. CLP will maintain ongoing discussions with government and industry players to explore the possibility of importing more nuclear energy through regional cooperation.				Customers, Partners
		CLP actively engages in research partnerships and collaborates with leading utility companies, international organisations and research institutes to support the Group's decarbonisation plan.				Capital providers

CLP actively manages and responds to the sustainability-related impacts, risks and opportunities summarised in the table below. The latest materiality assessment results also inform the Group's business strategy and integrate into the broader risk management process.

Material Topic	Sub-topic	Megatrend	Impacts, risks and opportunities
Transition to net zero (continued)	Reducing environmental impacts		Positive impact: Achieving CLP's proposed phase-out of coal-fired power plants by 2040 will reduce operational GHG emissions and air pollution.
			Negative impact: A potential delay in the closure of CLP's coal-fired plants could impact the Group's ability to meet carbon reduction targets.
			Negative impact: Any future underinvestment in commercially viable renewable energy technologies could impact CLP's ability to decrease GHG emissions and impede progress toward the goals in CLP's Climate Vision 2050.
	Responding to evolving regulatory landscapes		Financial risk: Evolving net-zero policies internationally may push CLP to accelerate its coal-fired power plant closures, forcing it to bear the transition costs (such as revenue, decommissioning and transition costs) ahead of schedule.
			Financial risk: Failing to respond to regulatory changes in different geographies means CLP could face legal and regulatory sanction, a diminishment in government trust and thus reduced prospects for partnership, and a potential loss of market share.
	Navigating geopolitical instability		Financial risk: : International capital flows in and out of open economies such as Hong Kong may be sensitive to geopolitical developments, potentially affecting CLP's ability to raise capital and its share price and requiring the Group to further diversify its financing channels.
Energy growth opportunities	Creating new revenue streams as other sectors electrify		Financial opportunity: CLP's support of the electrification of the economy will help it retain and attract customers (e.g. EV owners and EV fleet operators) and establish it as an enabler of the Hong Kong Government's net zero plans.
			Positive impact: COP28 has called for a global effort to triple renewable energy capacity globally and double the global average annual rate of energy efficiency improvements by 2030. This presents CLP with opportunities to expand into new business lines and establish joint ventures in adjacent sectors, such as road transport (e.g. EV charging infrastructure), and energy services.
	Deepening CLP's value proposition with partners		Financial risk: Without timely investments in decarbonisation infrastructure and technology, CLP's growth potential in core markets will be limited. CLP's advantage as an integrated utility in Hong Kong may be difficult to replicate in other energy markets with different regulations.

1 Time horizon is defined as 0-1 year as short-term; 1-5 years as medium-term; and 5+ years as long-term, to align with CLP's operating environment. For example, business and financial planning, risk management and climate pattern changes.

	Upstream	Own operations	Downstream	Short-term	Medium-term	Long-term
Value chain	Time horizon¹	CLP's Response			Relevant stakeholders	
		CLP maintains its commitment to phase out coal-based assets before 2040 and cease the development of new coal-fired power plants in CLP's portfolio. In Hong Kong, coal-fired generation units at Castle Peak A Power Station are being gradually retired, while the new 600MW combined-cycle gas turbine D2 generation unit at Black Point Power Station will assist in maintaining a dependable, low-carbon power supply alongside the 550MW D1 unit.			Capital providers, Customers	
		For Hong Kong, CLP Power continues to engage relevant stakeholders and carefully plan for its engineering design and execution to ensure a timely delivery of combined-cycle gas turbine D2 generation unit at Black Point, Hong Kong Offshore LNG Terminal, Clean Energy Transmission Network and Advanced Metering Infrastructure. The closure of other coal-fired plants in the CLP portfolio is in progress and progress is closely monitored.			Capital providers	
		Investment in research and development is a key approach to identify viable energy solutions to accelerate the energy transition and minimise environmental impacts. CLP continues to collaborate with different parties to assess the feasibility and capability of new opportunities.			Capital providers	
		CLP continues to contribute to discussions with policymakers in its operating regions on climate policies and monitor related regulatory developments.			Capital providers, Partners	
		CLP is accelerating the pace of decarbonisation in line with its Climate Vision 2050, which was recently revised with a strengthened GHG emissions intensity target for 2030.			Capital providers, Customers, Partners	
		CLP maintained good access to diversified, sustainable sources of cost-effective funding throughout a year of economic uncertainty and interest rate volatility, as the Group's strong financial position continues to provide solid foundations for decarbonisation investments.			Capital providers	
		CLPe is expanding its partnerships in EV charging in the Greater Bay Area including Hong Kong. EnergyAustralia is also increasing the scope of its services to cater to rising demand for EV charging infrastructure.			Customers	
		CLP has been exploring new business opportunities in energy services, including EV charging infrastructure. For example, CLPe and AVIS Hong Kong announced the launch of Hong Kong's first Electric Vehicles-as-a-Service in 2023, offering cost-effective options for businesses to switch to green motoring and helping Hong Kong to achieve its goal of zero vehicle emissions.			Customers, Partners	
		CLP's investments in low-carbon energy infrastructure and business models are generating growth opportunities across its markets.			Capital providers, Customers	

CLP actively manages and responds to the sustainability-related impacts, risks and opportunities summarised in the table below. The latest materiality assessment results also inform the Group's business strategy and integrate into the broader risk management process.

Material Topic	Sub-topic	Megatrend	Impacts, risks and opportunities
Energy growth opportunities (continued)	Deploying customer-facing energy solutions		Financial opportunity: The provision of expertise, products and services including smart grid technology, to enhance customers' energy efficiency may enhance CLP's market share and raise revenues through new, innovative product/service lines.
			Financial opportunity: New customer-facing energy solutions (e.g. micro-grids and smart meters) and Energy-as-a-Service business models may potentially be developed into scalable and profitable businesses for CLP.
	Developing Energy-as-a-Service business models		Financial risk: CLP's digitalisation agenda could be derailed by cost and time over-runs, an inability to scale, disruptions caused by imperfect implementation, and/or failure to meet customer expectations.
Energy security and reliability	Providing customers with reliable and reasonably-priced energy		Financial risk: With energy affordability a continued concern for Hong Kong customers and the Government, CLP may face negative sentiment and regulatory uncertainty in the longer-term.
			Positive impact: CLP can provide expertise and access to products and services (e.g., smart meters, PV panels) to help customers use energy more efficiently, helping them save money and lowering emissions.
			Negative impact: A failure to communicate with customers ahead of disruptions caused by extreme weather may undermine CLP's reputation as a reliable energy provider, resulting in a loss of trust.
	Navigating geopolitical instability		Financial risk: Deglobalisation and geopolitical tensions could result in restrictions on trade with the Mainland. These could impact CLP's ability to procure semiconductors and other critical technologies, as well as capital, commodities, talent and other drivers of business continuity and success.
			Financial risk: Geopolitical tensions could impact CLP's operating environment. Potential impacts include supply chain disruptions, increased business costs, currency fluctuations and adverse changes in international trade policies.
			Financial risk: A lapse in the security of fuel supply in some markets could tarnish CLP's reputation due to deteriorated supply reliability and could lead to a significant loss in revenue hurting CLP's financial performance.
A safe, future-ready workforce	Attracting and developing diverse future talent and capabilities		Financial risk: Failing to develop the talent and ways of working required for a digitally enabled, low-carbon future will hamper CLP's ability to meet its strategic objectives and expand capabilities in new areas.
			Positive impact: Training provided to upskill employees enhances CLP's human capital and contributes to employee satisfaction, which correlates strongly with improved performance.

1 Time horizon is defined as 0-1 year as short-term; 1-5 years as medium-term; and 5+ years as long-term, to align with CLP's operating environment. For example, business and financial planning, risk management and climate pattern changes.

		Upstream	Own operations	Downstream	Short-term	Medium-term	Long-term
Value chain	Time horizon¹	CLP's Response				Relevant stakeholders	
		CLP China, CLPe, EnergyAustralia and Apraava Energy are offering a widening range of energy services and solutions to help customers to decarbonise, generating new business opportunities.				Capital providers, Customers	
		Outside of Hong Kong, CLP keeps pace with evolving demand by providing smart energy services that cater to customers' increasing appetite for low-carbon energy solutions.				Customers, Partners	
		Continued investments in digitalisation are enabling the Group to offer more technology-enabled services to support customers to decarbonise, while enhancing operational efficiencies.				Customers	
		CLP Power mitigated the impact of fuel cost volatility and eased the tariff pressure on customers in 2023 through a series of measures, including enhancing the efficiency of generation and making the most of existing gas reserves.				Customers	
		As an example to help customers improve energy efficiency in Hong Kong, CLP Power has connected 2.23 million smart meters for around 80% of its residential and small-to-medium enterprise customers and aims to finish installing smart meters for these customers by 2025.				Customers	
		For example, in Hong Kong CLP Power ensures effective communication with customers during power outages and provides an online form for customers to report power outages conveniently.				Customers	
		CLP relies on its diversified procurement strategy to avoid the worst of the impact of ongoing geopolitical uncertainty.				Partners	
		To maintain supply chain resilience, CLP maintains a sufficient inventory level and access to multiple supply sources, while forging close collaboration with suppliers.				Partners	
		CLP adopts a diversified fuel mix, optimising its procurement contracting processes, balancing the use of term and spot contracts and maintaining multiple fuel sources so as not to be reliant on a single source or supplier.				Capital providers, Customers, Partners	
		CLP further strengthened the recruitment of people with talent and expertise in engineering, digital technologies and customer service in Hong Kong and Mainland China in 2023.				Capital providers, Our people	
		To foster collaboration and expand opportunities for employees' career development and industry skill enhancement, CLP has strengthened partnerships with institutions in Hong Kong, Mainland China and overseas through various partnership programmes via the CLP Power Academy.				Our people	

CLP actively manages and responds to the sustainability-related impacts, risks and opportunities summarised in the table below. The latest materiality assessment results also inform the Group's business strategy and integrate into the broader risk management process.

Material Topic	Sub-topic	Megatrend	Impacts, risks and opportunities
A safe, future-ready workforce (continued)	Attracting and developing diverse future talent and capabilities (continued)		Negative impact: Younger employees with the skills required to facilitate CLP's opportunities in digitisation and the low-carbon energy transition may have different expectations compared to previous generations, which requires CLP to hire and train executives with the contemporary leadership skills to manage them effectively.
	Helping our people succeed		Positive impact: People policies that acknowledge different life stages and offer employees greater flexibility can increase social mobility, remove barriers to career progression, and enhance productivity and morale.
			Negative impact: As CLP decarbonises its operations, a 'just transition' for its employees — through retraining, repurposing or a supported transition into new roles — will be essential. Failure to do so may negatively impact their economic and personal wellbeing, and those of their dependents.
	Embedding agile and innovative ways of working, mindsets and behaviours		Financial risk: A lack of organisational agility and entrepreneurial culture may limit CLP's ability to explore emerging energy solutions and new business models, and to compete against disruptive new market entrants.
			Positive impact: CLP can continue to shift from a hierarchical culture to one that encourages new ideas and debate as part of corporate decision-making, with the aim of enhancing an accountable, collaborative, inclusive and safe-to-speak-up culture.
			Negative impact: Intensive competition, skills shortages, and changing employee preferences on the relative attractiveness of the utilities sector could make it harder for CLP to attract and retain top talent in areas requiring specialised expertise, such as nuclear and renewable energy.
	Promoting workforce safety and wellbeing		Financial risk: High safety incident rates or fatalities could lead to legal liabilities and reputational harm.
			Positive impact: CLP can leverage AI to improve network diagnostics and deploy robotics to enhance the safety and efficiency of maintenance operations, helping make operations safer for employees.
			Negative impact: Failing to provide a safe working environment could undermine the physical and mental wellbeing, safety and wellbeing of employees and contractors.

1 Time horizon is defined as 0-1 year as short-term; 1-5 years as medium-term; and 5+ years as long-term, to align with CLP's operating environment. For example, business and financial planning, risk management and climate pattern changes.

	Upstream	Own operations	Downstream	Short-term	Medium-term	Long-term
Value chain	Time horizon¹	CLP's Response				Relevant stakeholders
		CLP stepped-up efforts to expose high-potential team members to energy transition developments, with study tours now embedded in every development programme and over 100 team members participating in 2023. CLP also introduced a Digital Graduate Programme and expanded opportunities for graduates and interns.				Our people
		CLP is committed to developing an engaged and high-performing workforce, providing flexible working arrangements and benefits to support employees through all life stages. CLP commenced implementing a refreshed approach to performance management, aimed at enhancing feedback to team members to support their development and increasing performance differentiation.				Our people
		CLP supports all its people to succeed and thrive in the period of change brought about by the energy transition. EnergyAustralia established a programme to prepare for the announced 2028 closure of Yallourn, including redeployment of head office team members to business-based roles to support decarbonisation projects and digital initiatives.				Our people
		CLP updated its system of leadership competencies in 2023 to reflect the capabilities and behaviours required to succeed in the evolving business environment.				Capital providers, Customers, Our people
		CLP continues to make progress on its multi-year “new ways of working” journey through a comprehensive refresh of its values and behaviours to guide team members to drive business success. To enable more digitalised and efficient ways of working, business processes continue to be streamlined and modernised.				Our people
		Graduate and internship opportunities were expanded, including introduction of a Digital Graduate Programme in Hong Kong.				Our people
		CLP further strengthened workplace safety in 2023 based on its multi-year health, safety and environment improvement strategy, a comprehensive blueprint that emphasises the importance of a proactive approach to make work processes safer.				Partners, Our people
		At EnergyAustralia, the data team utilised Artificial Intelligence (AI) to troll through approximately 2.5 million calls, unearthing a new data source that enables the Company to analyse these calls. The analysis revealed that over half of these calls contained profanity and mistreatment towards staff. This revelation ignited a substantial effort to bolster support for employees.				Our people
		To help CLP's people integrate wellbeing into work, CLP organised a series of “Wellbeing as a Leadership Skill” workshops, covering wellbeing, demands and resources, resilience and various tools for leaders to support their teams. Also, CLP provided an online digital wellbeing platform for employees to support and arouse awareness of individual health. Additionally, CLP has commenced identifying psychosocial risk factors within the business units, to help address and support a psychologically safe work environment. The principles of human and organisational performance further bolster this approach.				Our people

CLP actively manages and responds to the sustainability-related impacts, risks and opportunities summarised in the table below. The latest materiality assessment results also inform the Group's business strategy and integrate into the broader risk management process.

Material Topic	Sub-topic	Megatrend	Impacts, risks and opportunities
Business resilience	Building resilience in the face of climate change and evolving business environment		Financial opportunity: AI and data analytic tools may be deployed to improve CLP's data collection and analysis from across its operations, enabling better tracking of ESG-relevant data, such as energy consumption, waste management, employee wellbeing and community engagement, and supporting better decision-making and compliance with relevant regulation and policies.
			Financial risk: The potential changes to regulation and decentralisation of energy generation and transmission could impact CLP's future revenue streams.
			Financial risk: Physical risks to CLP's physical infrastructure and operations resulting from climate change, including extreme temperatures, extreme weather events, increased rainfall, drought, flooding, and bushfires.
			Financial risk: CLP's hydro power plants located in areas of high water stress may experience lower performance during periods of low rainfall.
			Positive impact: CLP's capabilities in building high-quality energy infrastructure could help communities adapt to a hotter climate and support a more climate-resilient energy grid system.
	Reinforcing cyber resilience and data protection		Financial risk: A major cyber-security breach could present a serious risk to CLP's financial position and reputation.
			Positive impact: CLP's investment in cybersecurity protections (including operational technology security protocols, and specialised staff) can protect the data security of customers and the power network they rely on.
			Negative impact: A successful cyber-attack on one of CLP's Operational Technologies (OT) systems, or to a lesser extent its IT system, could affect power plant operations, causing outages and disruption that adversely impact customers and communities.

1 Time horizon is defined as 0-1 year as short-term; 1-5 years as medium-term; and 5+ years as long-term, to align with CLP's operating environment. For example, business and financial planning, risk management and climate pattern changes.

	Upstream Own operations Downstream	Short-term Medium-term Long-term	
Value chain	Time horizon¹	CLP's Response	Relevant stakeholders
		CLP continued to upgrade its data analytics and AI capabilities as part of the Group's ongoing digitalisation efforts.	Customers, Partners, Our people
		CLP continued to engage stakeholders including policymakers to build increased understanding of its business. The Group is accelerating the development of new energy services and business models to diversify from a traditional energy utility.	Customers, Partners
		CLP continues to strengthen planning and mitigation measures to cope with the heightened risks of extreme weather events.	Customers, Partners
		Drought conditions in Yunnan province led to a reduction in output from Dali Yang_er Hydropower Station, contributing to a HK\$115 million impairment charge for the plant in 2023.	Capital providers, Customers
		To ensure a reliable, reasonably priced and sustainable supply of energy, CLP must address the challenges that natural resource constraints and extreme weather conditions pose to its physical assets. CLP conducted asset-level physical climate risk assessments and continues to develop adaptation measures to enhance the resilience of individual assets in each region.	Community
		CLP enhanced cybersecurity governance in 2023 and set up a new security operations centre in Hong Kong to step up risk monitoring and strengthen response to incidents.	Customers, Partners
		Group Security took the opportunity to upgrade its Security Operations Centre, enhance the cyber security monitoring service for Operational Technology, and improve external support with a new Managed Security Service Provider. These changes collectively represent a significant uplift in CLP's cyber security posture.	Customers
		CLP operates in an ever-evolving cyber security threat landscape. In response, Group Security established a Cyber Security Governance and Risk Management function that is helping the wider Group to take responsibility for cyber security risk management and be accountable for their decisions. CLP continually monitors its IT systems and networks and stays alert to potential threats to its OT systems. If suspicious activity is discovered in the OT network environments, immediate action is taken to investigate it and, if necessary, isolate the threat and initiate recovery action.	Customers

CLP actively manages and responds to the sustainability-related impacts, risks and opportunities summarised in the table below. The latest materiality assessment results also inform the Group's business strategy and integrate into the broader risk management process.

Material Topic	Sub-topic	Megatrend	Impacts, risks and opportunities
Community stewardship	Ensuring thriving communities		Positive impact: CLP continues to serve local communities through long-standing engagement and investment programmes related to education, empowerment of women, healthcare access, poverty alleviation, social inclusion, diversity and eliminating energy poverty.
			Positive impact: CLP provides assistance to people and different community sectors to support the provision of affordable energy.
			Negative impact:: Failing to provide a 'just transition' for coal-fired power plant employees may result in negative economic, health and social impacts for workers, their families and their communities.
	Promoting responsible supply chains		Negative impact: Failure to identify and act on poor labour standards and human rights practices in CLP's operations and especially supply chains could result in physical and psychological harm to workers, and/or violations of their labour rights.
	Reducing environmental impacts		Financial risk: Failing to manage pollutants, including high emissions associated with nitrogen oxides (NOx), sulphur oxides (SOx), particulate matter (PM), lead and mercury in densely populated areas could result in regulatory penalties and public health concerns.

1 Time horizon is defined as 0-1 year as short-term; 1-5 years as medium-term; and 5+ years as long-term, to align with CLP's operating environment. For example, business and financial planning, risk management and climate pattern changes.

For details of CLP's response to financial opportunities and risks, please read *Delivering Our Sustainability Agenda* chapter of *Annual Report 2023*


For details of CLP's responses to positive and negative impacts, please read *Sustainability Agenda* chapter of this report


	Upstream	Own operations	Downstream	Short-term	Medium-term	Long-term
Value chain	Time horizon¹	CLP's Response			Relevant stakeholders	
		CLP has a long tradition of serving its local communities through wide-ranging engagement and funding programmes. In 2023, CLP Power in Hong Kong allocated HK\$20 million to subsidise families living in transitional housing to purchase energy-efficient appliances and HK\$5 million to rewire subdivided units for the installation of individual electricity meters to improve the tenants' home safety and quality of life.			Community	
		In 2023, the CLP Fuel Cost Subsidy Programme in Hong Kong provided HK\$110 million of electricity subsidies to 150,000 underprivileged households, including 50,000 tenants of subdivided flats. The subsidies are a part of the community support programme with an allocation of over HK\$200 million from the CLP Community Energy Saving Fund.			Community	
		To ensure thoughtful planning and support to CLP's staff and community throughout the closure of Yallourn Power Station, EnergyAustralia supported staff through re-employment initiatives, while the community is engaged in envisioning the future of the site. Current rehabilitation efforts are carried out in collaboration with a local NGO, landcare and government groups.			Community	
		CLP is seeking to implement the responsible, safe and ethical procurement of labour, products and services. In 2023, CLP Commercial and Supply Chain Management (CSCM) established a Supply Chain Sustainability management framework as the first phase of implementing the Sustainable Procurement three-year roadmap. In accordance with this Supply Chain Sustainability management framework, CLP will start building supplier profiles towards the alignment with the Supplier Code of Conduct (SCoC).			Partners, Our people	
		CLP set new mid- and long-term targets in 2023 for reductions in air emissions, water use and waste generation, as part of a comprehensive environmental strategy that encompasses every aspect of operations.			Capital providers, Partners, Community	



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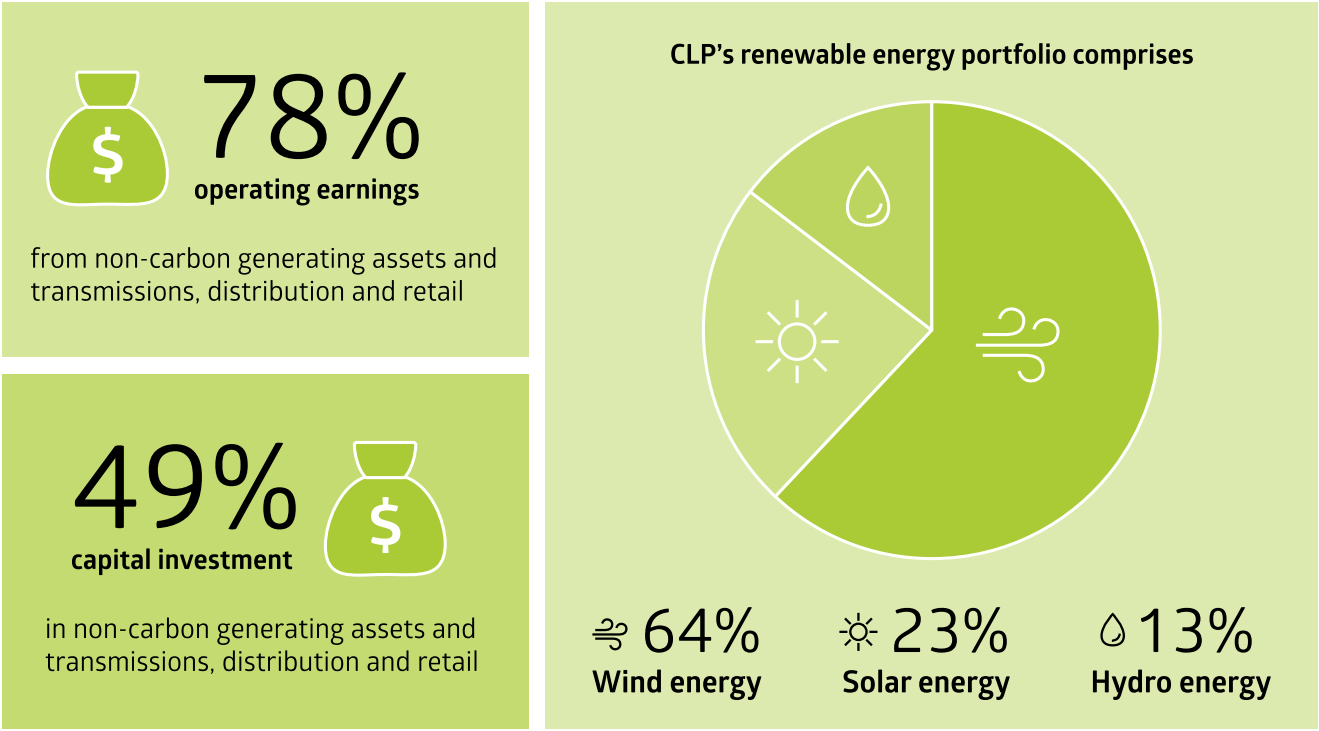
Transition to net zero

CLP is decarbonising its existing asset base, investing in electricity infrastructure, ensuring the delivery of reliable and reasonably priced energy, and acting as a trusted partner for customers, communities, governments and investors in the transition to a just and fair energy future.



Investing in zero-carbon energy infrastructure

The continued scaling of existing infrastructure and the deployment of new energy assets is necessary to respond to rising electricity demand. CLP’s investments will ensure that future electrification will draw on efficient, zero-carbon sources. There are opportunities for further investment, such as nuclear energy, to make the energy infrastructure zero-carbon and more efficient.



As CLP progressively phases out its coal-fired power generation assets, the Company is directing investment towards zero-carbon streams of business, including renewable energy and energy services. In 2023, CLP continued to expand its renewable energy portfolio in Mainland China. Commercial operations began at the 50MW Xundian II wind farm in Yunnan province and the 73.7MW Gongdao solar plant in Jiangsu province, and construction commenced for the 150MW Bobai wind farm. These additional renewable assets are enabling customers to access a zero-carbon energy supply and are supporting the issuance of Green Electricity Certificates (GECs).

In India, Apraava Energy continued to build its renewable energy portfolios, securing preliminary grid connectivity for 300MW capacity at the Bijapur Grid Substation from the Aski wind project, and 250MW capacity from a solar power project organised by the National Hydroelectric Power Corporation (NHPC). Its 251MW Sidhpur wind farm in Gujarat state continues to progress, with an expected commission date in the first quarter of 2024. Apraava Energy has also entered into agreements to develop transmission lines and substation infrastructure that will support 20GW of renewable energy capacity in Rajasthan State in northern India.

In Australia, EnergyAustralia announced its decarbonisation strategy and ambition with the launch of its Climate Transition Action Plan (CTAP) in August 2023. The major zero-carbon investment commitment is to expand the renewables generation and storage portfolio up to 3GW. As part of this commitment, EnergyAustralia signed new 10-year off-take agreements for energy storage services that allow market control over 90MW/180MWh of Edify Energy's batteries in New South Wales. These commenced operation in October 2023.

In addition, EnergyAustralia has stated that it will lower the total emissions level of Mount Piper by running it as a reserve or backup for renewables generation. It will retire the Yallourn power station and brown coal mine in mid-2028, resulting in a reduction of EnergyAustralia's Scope 1 total emissions by over 60% on 2019–20 levels in 2028–2029.

Further information on EnergyAustralia's Climate Transition Action Plan can be found on the EnergyAustralia website.

CLP continues its efforts in expanding the renewable energy portfolio. In 2023, the Group's renewable energy portfolio, including equity capacity and long-term capacity and energy purchase arrangements, increased to 3,732MW, compared to 3,611MW in 2022 mainly due to the addition of the Bobai wind project. The renewable energy portfolio now sits at 64% wind energy, 23% solar and 13% hydro. While CLP has made strategic investments to reduce the carbon intensity of its baseload power generation, the Group's operating earnings from non-carbon assets have been growing in the last few years.

In expanding its renewable energy portfolio to address climate change, CLP recognises the importance of nuclear energy. COP28's 'Global Stocktake' agreement recognised nuclear energy technology as one of the technologies that needs to be accelerated to achieve the goals of the Paris Agreement. This inclusion of nuclear energy marks a major reversal in the treatment of nuclear energy in the COP process. CLP has investments in two nuclear power stations in Guangdong province namely Daya Bay Nuclear Power Station and Yangjiang Nuclear Power Station. Around 80% of Daya Bay's electricity output is supplied to Hong Kong, meeting a quarter of Hong Kong's electricity needs. This move aims to support the development of low-carbon energy in Mainland China and Hong Kong. In 2023, nuclear energy accounted for 32% of CLP's fuel mix (natural gas 49%, coal 19%) in Hong Kong. To meet Hong Kong's 2035 decarbonisation target, CLP will explore import of more nuclear energy and renewable energy in a manner that is acceptable to the community.

CLP's investment in innovation aims to identify viable energy solutions for accelerating the low carbon transition and minimising environmental impacts. Through the Group Ventures & Research function, CLP is engaging in research partnerships and collaborating with leading utility companies, international organisations and research institutes. CLP also works closely with local Hong Kong universities on cutting-edge technology research projects. The CLP Research Fellowship Programme brings together research teams from two local universities to work on research into transport electrification and customers' energy consumption patterns. By working together with academic experts and industry leaders, CLP can leverage collective expertise and resources to drive innovation and find sustainable solutions to energy challenges.

As part of CLP's efforts in reducing GHG emissions, CLP continue to look for ways to improve the energy efficiency of its offices. For example, CLP's new Hong Kong Head office, due to open by the end of 2024, will incorporate energy-efficient and environmental design, including provision of electric vehicle (EV) chargers in all office parking spaces, rooftop photovoltaic (PV) panels and automatic curtain control system, etc. Located in the recently developed Kai Tak area, the office will also make use of the Government's district cooling service. The centralised system utilises sea water to produce chilled water at the central plants and then distributes the chilled water to consumer buildings in the area. This is expected to reduce CLP's energy use and GHG footprint.

Reducing environmental impacts

Degradation of natural resources and ecosystems has significant impacts on the environment, human societies and economies. CLP is working to reduce its environmental impacts in the areas in which it operates, especially in relation to water, biodiversity and air pollution. It is also undertaking prudent management of the phase-out of coal-fired power plants, to meet tightening environmental regulations and increasing investor and societal expectations.

Conducted a biodiversity sensitive area analysis with reference to the **Taskforce on Nature-related Financial Disclosures (TNFD) Recommendations**


Hong Kong's

1st

offshore LNG Terminal, which supports energy transition and air quality improvement, started operation in July 2023

As a company with a long history of serving the community, CLP is committed to minimising the impact of its operations on the environment and is actively integrating the concepts of circular economy and biodiversity conservation into its operations and supply chain. This year, CLP conducted a biodiversity sensitive area analysis among its operational control assets with reference to the Taskforce on Nature-related Financial Disclosures (TNFD) Recommendations, as a starting point for forming a holistic nature-related strategy. In revising its Climate Vision 2050, CLP has recognised opportunities to significantly reduce air emissions as it phases out its coal-fired assets. To accelerate progress towards its medium- and long-term goals, CLP has revamped its group-wide air emission targets covering nitrogen oxides (NO_x), sulphur dioxide (SO₂) and particulate matters (PM).

Under CLP's Climate Vision 2050, one of the goals is on progressively phasing out coal for power generation by 2040. In Hong Kong, CLP Power and Hongkong Electric Co., Ltd. (HK Electric) joined hands to develop an offshore liquefied natural gas (LNG) terminal in Hong Kong waters utilising floating

storage and regasification unit (FSRU) technology. This offshore LNG terminal entered service and received its first LNG cargo in July 2023. This new piece of infrastructure enhances the security of natural gas supply for Hong Kong's energy transition. Natural gas is not only a lower-carbon fuel option than coal but also generates fewer air pollutants in the combustion process, the LNG terminal will contribute to the improvement of Hong Kong's air quality.

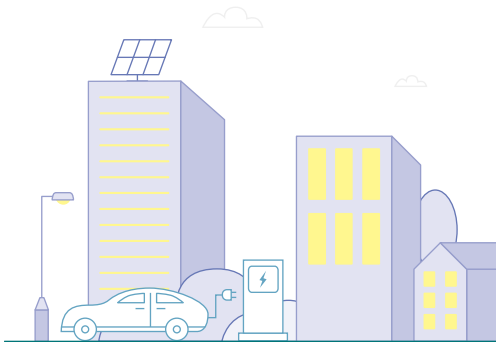
As part of its emission reduction plan, CLP has been implementing various air emission control measures with advanced emissions reduction technology in its fossil fuel plants such as deploying the new 600MW combined-cycle gas turbine D2 generation unit at Black Point Power Station as well as using a combination of Electrostatic Precipitator (ESP) and Fabric Filter to further reduce PM emissions at Jhajjar Power Station.

For details of the above initiatives, please refer to the [Respecting Nature](#) section.



Energy growth opportunities

Different regulatory environments across CLP’s markets affect growth opportunities locally. In Mainland China, especially in the Greater Bay Area (GBA), opportunities are significant due to the region’s large population and its proximity to CLP’s home market of Hong Kong. This offers prospects for mutually beneficial joint venture partnerships with State Owned Enterprises. CLP is working with public and private sector partners to accelerate the energy transition in line with government objectives, scale up electricity generation to meet rising demand as other sectors electrify, and introduce new energy products and services that meet customer needs.

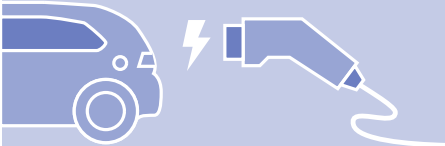


Creating new revenue streams as other sectors electrify

Electricity demand is set to increase significantly as more industry sectors electrify. CLP is enabling the transition to a low carbon economy by scaling up its zero-carbon electricity generation to meet demand and support the net zero plans of Hong Kong and other markets. In addition, electrification presents opportunities to expand into new business lines in adjacent sectors such as transport, as well as other parts of the energy value chain including electric vehicle charging.



Invested in venture portfolio companies such as R&B and Neuron and **developed customer products for energy efficiency**



Launched Hong Kong's 1st Electric Vehicles-as-a-Service
in partnership with AVIS Hong Kong

Since 2018, connected smart meters for around **80% of CLP Power's residential and small-to-medium enterprise (SME) customers**



As the energy market evolves to become more customer-centric, CLP is changing through innovation and the adoption of new technologies, bringing cleaner and smarter power to its customers. For example, to further promote and facilitate the adoption of eMobility, CLPe and AVIS Hong Kong (AVIS) announced the launch of Hong Kong's first Electric Vehicle-as-a-Service in May 2023. This one-stop solution combines an EV rental service and a charging service, offering cost-effective options for businesses looking to switch to green motoring and helping Hong Kong achieve its goal of zero vehicle emissions.

CLP Power continued to provide free EV charging services in 2023 to encourage the expansion of green motoring in Hong Kong. In 2023, CLP continued to enhance its charging infrastructure within CLP premises to support greater EV adoption in its fleet.

In addition, since 2018, CLP Power has connected 2.23 million smart meters for around 80% of its residential and SME customers aiming to promote low-carbon living and further improve the safety and dependability of the power supply. In order to minimise energy use during hot summer days when demand is highest, CLP Power has been extending an invitation to residential customers with smart meters to slightly reduce their consumption since 2020. This summer, approximately 950,000 families were invited to participate in the peak demand management programme. Approximately 70% of these households saved 410,000 kWh of electricity over a four-hour peak time, which is equivalent to a reduction of 160 tonnes of carbon emissions.

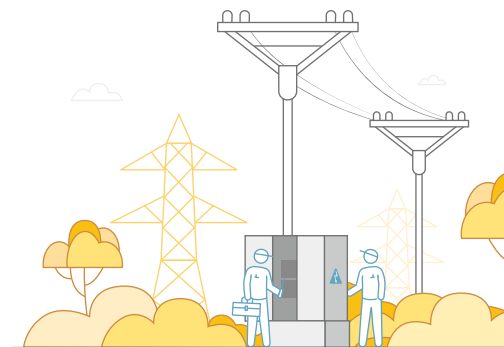
CLP’s Group Ventures & Research Department integrates the Group’s venture investing, ecosystems activity and research capabilities into a single team. For example, CLP’s venture

portfolio company R&B has unlocked a new business line for CLPe. R&B's AI-powered energy management solution has helped customers such as The Hong Kong University of Science and Technology and Caritas Medical Centre, providing them with greater insights into and control over their energy usage. Similarly, Neuron, another portfolio company, is being considered as a product offering by CLPe to customers, through focusing on the development and application of the best available technologies for the built environment with an emphasis on efficiency and sustainability principles.



Energy security and reliability

Energy security and reliability have been impacted by an uncertain geopolitical environment and supply chain disruptions over recent years. Higher fuel prices have resulted in assets running at reduced capacity, which has increased costs for CLP and its customers alike. The Group must balance two vital and sometimes competing objectives: providing customers with reliable and affordable energy while continuing to make rapid progress with its decarbonisation objectives.



Providing customers with reliable and reasonably-priced energy

While customers' expectations around technology and sustainability continue to shift, their need for efficient, reliable and reasonably-priced energy remains constant. CLP is striving to mitigate the impacts of the current global energy crisis on consumer prices in the short term and maintain reliability while navigating the accelerating energy transition over the longer term.

Provided world-class supply reliability of over

99.9999%

in Hong Kong




Approved

376MW




distributed renewable energy (RE) systems connected to CLP's grid via the Feed-in Tariff Scheme, with rates ranging from HK\$2.5 to HK\$4 per unit of electricity




Implemented coordination systems and a typhoon response protocol for extreme weather conditions

CLP Power has worked closely with the Hong Kong SAR Government to promote the development of renewable energy under the Scheme of Control (SoC) Agreement to which a Feed-in Tariff (FiT) Scheme was added in 2018. The scheme is applicable to electricity produced by solar and wind power systems with a generation capacity of up to 1MW. Under the scheme, CLP Power will purchase electricity produced by an approved renewable energy system once it is successfully connected to the Company's power grid. A smart meter is

installed to record the amount of electricity generated by the renewable energy system. CLP Power then offers a FiT rate ranging from HK\$2.5 to HK\$4 per unit of electricity. By the end of 2023, 376MW of renewable energy was approved under the Scheme, amounting to the annual electricity usage of 89,700 residential customers. This FiT Scheme, offering attractive financial incentives, is further promoting the adoption of renewable energy by customers.

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To ensure the reliability of power supply, especially during extreme weather conditions, CLP Power continuously evaluates and improves its emergency preparedness protocols. It has implemented coordination systems and a typhoon response protocol with regular drills on handling incidents during extreme weather events. One initiative has been to bolster the transmission tower structures and foundations for 400kV overhead lines to withstand super typhoons with wind gusts of up to 300 km/h. In addition, CLP Power has implemented an Emergency Restoration System that allows for the quick construction of temporary masts

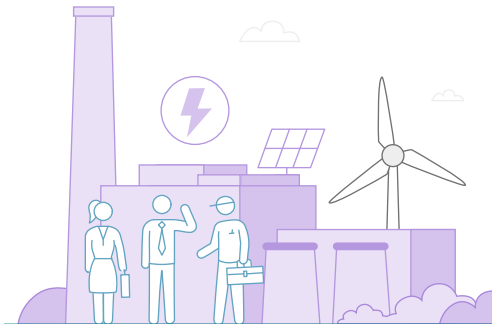
in the event of tower damage, reducing the amount of time it takes to restore power after tower damage to just two weeks. Furthermore, CLP Power has upgraded mitigation measures at flood-prone transmission substations and distribution substations to minimise the impact of flooding.

This has resulted in improved supply failure detection and a reduction in repair time. CLP Power also ensures effective communication with customers by disseminating information through various channels, close communication with relevant stakeholders and providing an online form for customers to report power outages conveniently.



A safe, future-ready workforce

CLP’s long-term success relies on its capability to attract, develop and retain a workforce that is safe and healthy, diverse and inclusive, skilled for the future, and well-supported to fulfil the customer demands of today, and that can adapt rapidly to the social and technological changes brought by energy transition. Workplace safety, wellbeing and flexibility are top priorities. So too is the attraction, development and retention of diverse talent, with a focus on the skills needed to advance CLP’s critical decarbonisation and digitalisation agendas.



Attracting and developing diverse future talent and capabilities

CLP’s ability to transition to a zero-carbon, digitally enabled future requires systematic organisational development and adoption of the capabilities required to compete effectively in key markets. The Group is focused on ensuring adequate talent supply; attracting and retaining a diverse, multi-generational workforce; developing new skills and capabilities and sharing talent effectively across the portfolio of businesses; developing leaders with the resilience, agility, stakeholder management and change leadership skills to position the Group for growth; and fostering an open and agile organisation and work culture. These efforts are underpinned by ensuring that work practices are fair, ethical and remain fit for purpose at a time of accelerating social and regulatory change.



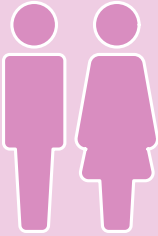
Introduced a Digital Graduate Programme

to expand graduate and internship opportunities

Recognising the challenge of increased competition for talent in all the Group’s markets, diversified strategies were applied including expanded efforts to develop talent supply at all levels, investment in talent acquisition capabilities and targeted retention initiatives. Graduate and internship opportunities were expanded, including introduction of a Digital Graduate Programme in Hong Kong. Collaborations with institutions in Hong Kong, Mainland China and overseas increased to promote CLP careers, and to create more opportunities for industry skills development through the CLP Power Academy.

Established an employee-led Gender Equity affinity group

for awareness-building and peer support



CLP stepped-up efforts to expose high-potential team members to energy transition developments, with study tours now embedded in every development programme and over 100 team members participating in 2023 after COVID-19 border restrictions were lifted. Diversity and inclusion initiatives were expanded to include the establishment of an employee-led Gender Equity Affinity Group for awareness-building and peer support. Work continued to embed new leadership competencies across core markets, with refreshed management training programmes commenced.

Helping our people succeed

CLP is committed to developing an engaged and high-performing workforce, and to supporting all its people to succeed and thrive in this period of change brought about by energy transition. This is achieved through a long-term focus on maintaining strong working relationships with employees and their representatives, providing flexible working arrangements and benefits to support employees through all life stages, strengthening their wellbeing and resilience, and providing support and re-skilling to employees whose jobs are affected by the transition to net zero or other business restructuring.

In core markets, CLP commenced implementing a refreshed approach to performance management, aimed at enhancing feedback to team members to support their development and increasing performance differentiation. Across all markets, CLP helped employees through retraining or providing supported transition into new roles. This included continued execution of EnergyAustralia’s structured programme to prepare for the announced closure of Yallourn in 2028, as well as redeployment of head office team members to business-based roles supporting decarbonisation projects and digital initiatives.

In Yallourn, a partnership with a local offshore wind farm in the Gippsland region has been established to enable redeployment of employees whose skills may be transferable to wind farms and continuous engagement with the workforce and communities impacted by the closure is underway through regular forums and meetings. Across the Group, more flexible work options and renovations to work environments were implemented to address employees’ needs at different life stages.

Embedding agile and innovative ways of working, mindsets and behaviours

Critical to CLP’s ability to respond to a changing energy market and to the social and geopolitical uncertainties that continue to reshape its business landscape are implementing and embedding new ways of working, mindsets and behaviours, that are more efficient and commercial, while maintaining deeply held CLP values, good engagement and workplace relations, and a culture of operational excellence and safety.

CLP continues to make progress on its multi-year “new ways of working” journey through a comprehensive refresh of its values and behaviours. This refresh was launched in early 2024 to guide team members to drive business success. To enable more digitalised and efficient ways of working, business processes continue to be streamlined and

modernised. CLP further refined its fit-for-purpose Operating Model in Hong Kong and Mainland China to locate execution capabilities closer to customers, while enhancing governance and oversight of business performance. Design thinking and digital capabilities programmes continued to be hosted to enhance skills and agile thinking.

Promoting workplace safety and wellbeing

CLP is committed to providing a safe workplace environment for its employees and contractors.

Organised a
year-round series of

“Wellbeing as a Leadership Skill” workshops



To help CLP's people integrate wellbeing into work, CLP organised a year-round series of "Wellbeing as a Leadership Skill" workshops, covering wellbeing, demands and resources, resilience and various tools for leaders to support their teams. The workshops also offered leaders a chance to reflect on their own wellbeing and understand how this plays a part in creating a satisfying, healthy and psychologically safe workplace.

Provided an online digital wellbeing platform, Virgin Pulse,



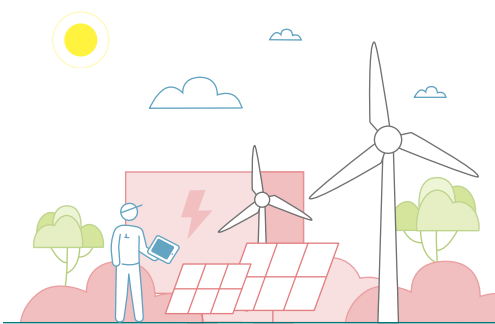
to support employees' physical and mental wellbeing

CLP has also provided its employees with an online digital wellbeing platform, Virgin Pulse, to support their physical and mental wellbeing. In 2023, there was an increase in the number of employees signing up for the platform, with around 40% of employees in Hong Kong now being members. In addition, CLP launched a Fitbit programme to raise employees' awareness of their individual health and fitness levels.



Business resilience

The accelerating pace of environmental, technological, regulatory and social changes has reinforced the importance of business resilience. CLP recognises the strategic value of anticipating, withstanding and learning from disruptive events, especially in response to the growing threats posed by climate change and cybercrime.

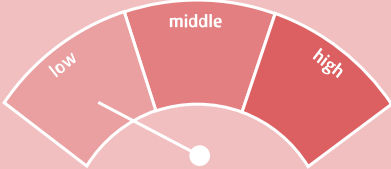


Building resilience in the face of climate change and an evolving business environment

To ensure a reliable, reasonably-priced and sustainable supply of energy, CLP must address the challenges that natural resource constraints and extreme weather conditions pose to its physical assets. While investment is needed to manage physical climate risks, adaptation practices which can better track and analyse ESG-related data also present opportunities to build a more climate-resilient energy grid system, bringing benefits for both CLP and local communities.

Refreshed the scenario analysis with three updated climate scenarios

for developing climate strategy

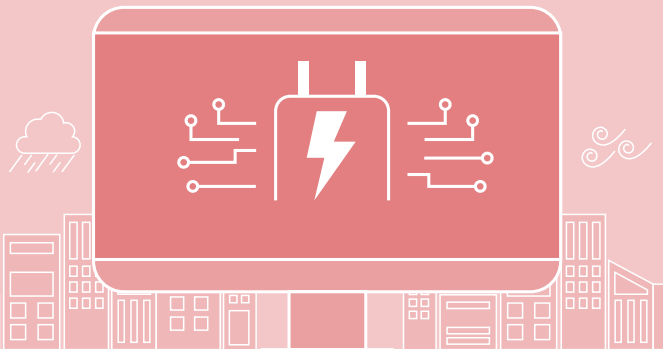


Conducted asset-level physical climate risk assessments

to build resilience of individual assets

Adopted various measures and technologies

to maintain reliable electricity supply during extreme weather conditions



Building resilience against climate change is a prominent part of CLP's [Climate Vision 2050](#). To prepare for and respond to future shocks, CLP has put in place a strong governance and risk management foundation that fully integrates climate and sustainability-related risks into its Group-wide risk management system, with the oversight of Board and senior management. To navigate uncertainties relating to climate change, CLP has conducted climate risk assessment based on three climate scenarios which were reviewed in 2023, including a high-emission scenario, low-emission scenario and a deferred transition scenario – based on which physical and

transition climate risks have been evaluated. Furthermore, CLP completed a project with an external carbon consultancy firm to develop a methodology for assessing the 'Implied Temperature Rise (ITR)' of CLP's decarbonisation target in 2023. This methodology allows electric utilities to better understand their transition risks by quantifying the level of alignment of their decarbonisation effort based on their sector's "carbon budget" determined by the Science Based Target Initiative (SBTi).

As the nature and extent of threats to operations and supply reliability varies across geographies, CLP has conducted asset-level physical climate risk assessments and developed adaptation measures to enhance the resilience of individual assets in each region. In Hong Kong, CLP Power has developed the Asset Management Standard on Climate Change Adaptation for its generation and network assets based on the results of the physical climate change risk assessment and climate change adaptation study conducted in 2022. In the face of increasingly frequent extreme weather conditions, CLP Power has adopted various measures and technologies in recent years to enhance the resilience of its transmission networks and its emergency preparedness. For details, please refer to the [Providing customers with reliable and reasonably priced energy](#) section.

In Mainland China, CLP China conducted a comprehensive review of the risks faced by its renewable energy assets and its existing risk mitigation measures to ensure the effectiveness of its risk management practices. The equipment of the new assets is designed with an ability to withstand extreme weather conditions, while the existing assets have been upgraded to enhance their resilience level. Emergency preparedness plans, covering evacuation procedures, backup power sources and communication protocols, are in place for responding to various types of extreme weather events.

In India, Apraava Energy has conducted climate risk assessments for its current sites as well as for proposed sites using a Physical Climate Risk Screening tool which helps forecast weather patterns at certain geographic locations. It has also informed concerned stakeholders about the relevant climate-related risks for their supply chain planning. Insurance coverage has been arranged for all Apraava Energy sites to mitigate the adverse consequences of extreme weather events.

In Australia, an extensive, site-specific physical risk assessment was undertaken in 2023. Using a range of climate scenarios, risks to individual assets and staff safety and well-being were quantified out to 2050. This included factors such as wildfires, coastal flooding, extreme precipitation and inland flooding, extreme heat, extreme cold, landslides, water stress and drought. Findings were incorporated into EnergyAustralia's broader Enterprise-level Risk Scenarios with additional site-specific measures developed to further mitigate the physical risks associated with extreme climate change.

CLP's Climate Vision 2050: Powering an orderly transition provides more information on the Group's climate transition plan

Reinforcing cyber resilience and data protection

CLP operates in an ever-evolving cyber security threat landscape. It is therefore important that the business has appropriate measures in place to address these threats. Cyber security risks to CLP, its investments and business interests are business risks, and they are therefore managed in line with CLP's established Risk Management Framework.

In 2023, Group Security established a Cyber Security Governance and Risk Management function which is helping the wider Group take responsibility for cyber security risk management and decision-making. Additionally, Group Security, in general, supports CLP in securing its assets to a level commensurate with the individual business's risk appetite, to ensure that any security breaches have a minimal impact.

Group Security refreshed its security standards during the year. These define individual and organisational obligations and guide the business in implementing good security practices. Where relevant, employees, subcontractors and third parties are required to comply with CLP's policies and standards, and its philosophy of risk management is now integrated into these documents.

Now operating within CLP Digital, Group Security has taken the opportunity to upgrade its Security Operations Centre, enhance the cyber security monitoring service for Operational Technology, and improve external support with a new Managed Security Service Provider. These changes collectively represent a significant uplift in CLP's cyber security posture.



Community stewardship

CLP recognises its obligations to meet evolving stakeholder expectations around the positive role businesses should play in society. This includes demonstrating leadership in its decarbonisation ambitions, investing in green energy solutions that support the electrification of society, and transparently reporting on its ESG performance. Environmental stewardship extends to actively managing CLP’s dependencies and impacts on nature. Employee and supplier wellbeing is another priority. The Group recognises the importance of ensuring ethical human rights practices in its value chain, as well as of supporting employees and communities impacted by the closure of its fossil fuel assets.



Ensuring thriving communities

CLP has a long tradition of serving its local communities through wide-ranging engagement and investment programmes. These include the provision of financial assistance – such as subsidised energy – to people and community sectors in need, and of ongoing support for those impacted by the phase-out of its coal-fired power plants and other structural changes to the energy system.

CLP Power announced

> HK **\$200** million

in community support programmes,

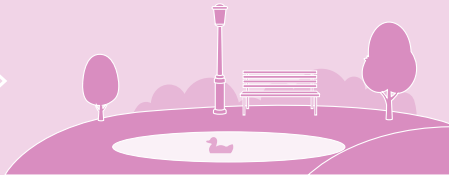
with HK\$110 million to provide fuel cost subsidies for people in need



In 2023, CLP Power provided further assistance to low-income families via a range of support initiatives. The CLP Fuel Cost Subsidy Programme provided HK\$110 million in subsidies to 150,000 underprivileged households, including 50,000 tenants of subdivided units to alleviate their electricity bills brought by the increase in fuel cost. The subsidies are a part of the community support programmes in 2023 with an allocation of over HK\$200 million from the Community Energy Saving Fund. Additional initiatives include a HK\$20 million scheme to subsidise families living in transitional housing to purchase energy-efficient appliances, and a HK\$5 million project to rewire subdivided units so that individual electricity meters can be installed.

After its closure,

the site of the Yallourn coal mine is to be transformed into a recreational hub

CLP’s commitment to community is also demonstrated in its approach to ensure a just energy transition. EnergyAustralia has set a clear path for the closure of Yallourn Power Station in mid-2028, providing seven years’ notice to enable thoughtful planning and support to staff and the local community. Staff are being supported through re-employment initiatives, while the community has been engaged to envision the future of the site. Current rehabilitation efforts are being carried out in collaboration with a local NGO and government groups. The transformation of the coal mine into a recreational hub, a lake, native bushlands and walking paths will revitalise the region at the social and economic levels while preserving local cultural heritage.

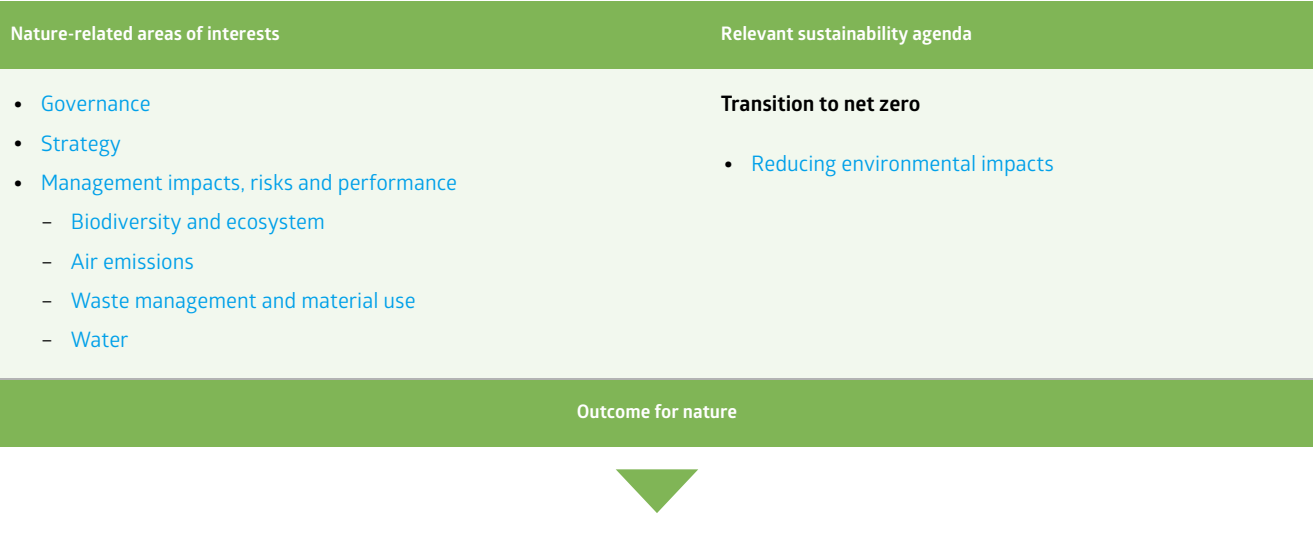


Respecting Nature

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Introduction

Overview

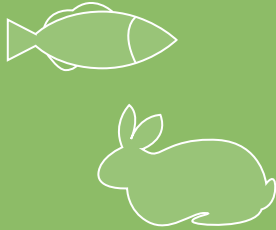




Obtained

zero

Waste Certification at Jhajjar Power Station by diverting over 90% of waste from landfill



Conducted a group-wide study to **identify priority sites in proximity to key biodiversity sensitive areas**



Established working groups

to review, implement and communicate circular economy and nature-related initiatives across the CLP Group



Upgraded the Continuous Emissions Monitoring System (CEMS) at Yallourn Power Station

Completed the installation of an advanced water treatment system to recycle process water at Castle Peak Power Station



Background

CLP is continuously striving to manage and reduce environmental impacts in its operations. With biodiversity and ecosystems declining globally, respecting and protecting nature is critical. Companies like CLP are currently at a pivotal stage in understanding the connections between biodiversity and climate change, the nature systems that provide ecosystem services, and the impacts and financial implications that nature loss has on their operations.

Nature was also a key priority in the COP28 Presidency's Action Agenda, highlighting new opportunities for scaling up nature and climate action, including developing nature-based offset solutions such as high-quality forest carbon credits and other policy and financial enablers.

In this Section, CLP is disclosing nature-related topics in accordance with the Task Force on Nature-related Financial Disclosures (TNFD), outlining CLP's commitments to responsible practices in biodiversity, the circular economy and environmental discharges. The TNFD framework is helping to deepen CLP's understanding of the areas of focus and the metrics that need to be assessed in order to better manage the Group's relationship with nature. CLP is disclosing how it assesses nature-related risks and opportunities in its governance, strategy, risk and impact management, as well as relevant metrics and targets.

Governance

Our approach

CLP embraces a robust governance structure, with top management committed to managing nature-related impacts, risks and opportunities effectively. The Group has established clear roles and responsibilities, as well as decision-making processes, to ensure accountability and transparency in these areas. This is enabling CLP to proactively identify, assess and manage the risks and opportunities around biodiversity conservation, circular economy, and environmental discharges.

Nature-related commitments

CLP strives to preserve and enhance natural resources and promote biodiversity.

CLP recognises its critical role in minimising environmental impacts. Its care for the environment is stated clearly in the Group’s Health, Safety and Environment (HSE) Policy, which requires CLP to:

- Protect the environment, including preventing pollution and minimising the risk of environmental incidents;
- Strive to use resources including water and energy efficiently, and minimise emissions, discharges and waste; and
- Minimise any adverse impacts of its operations on biodiversity by protecting endangered fauna and flora and promoting ecological conservation.

Learn more about CLP Group HSE Policy

One of CLP’s environmental responsibilities is the conservation of biodiversity. Recognising rising biodiversity loss globally, CLP is maintaining its goal of “no net loss of biodiversity”. Through various initiatives, the Group has demonstrated its dedication to safeguarding habitat quality and preserving the biodiversity of specific ecosystems in the regions where it operates.

Governance of nature-related issues

Sustainability is integrated into CLP’s business strategy and corporate governance. This includes oversight and governance of nature-related issues, and CLP’s commitment to protecting the environment.

This approach ensures that nature, along with other sustainability issues are part of the corporate agenda. As part of overall sustainability management, the Board-level Sustainability Committee (SusCom) has oversight of nature-related impacts, risks and opportunities and has a role in evaluating the adequacy and effectiveness of the CLP’s Health, Safety, Security and Environment (HSSE) Framework, supported by the Sustainability Executive Committee (SEC) and the CLP Group HSSE Executive Committee.

Board and management oversight

The SusCom and SEC holds the primary responsibility of overseeing the management of the Group’s sustainability matters, including nature-related topics. For details of their roles and responsibilities as well as the key nature-related agenda discussed in 2023, please refer to the [Sustainability Governance](#) sections.

Under the Board’s oversight, the CLP Group CEO has ultimate accountability for reporting the performance and governance of HSE management to the SusCom, while delegating the authority for day-to-day decision-making on HSE governance and assurance issues across CLP to the Group COO. Also chaired by the CEO, the CLP Group HSSE Executive Committee appoints senior executives to review and evaluate CLP’s overall governance, strategy, performance and assurance in Health, Safety, Security & Environment. In 2023, a nature-related agenda, including the Group’s revised medium- and long-term environmental targets considering nature dependencies and impact drivers, was endorsed by HSSE Executive Committee.

Development and implementation of nature-related strategies, policies and goals

The Environment Team of the Group HSE Department is responsible for providing expert advice on environmental issues and impacts, ensuring timely reporting, and coordinating the implementation of the Environmental Pillar of the Group HSE Improvement Strategy. It is also responsible for defining appropriate environmental standards for operations, driving continuous improvement and promoting a positive engagement culture. During execution, it works closely with different business units to ensure that relevant environmental standards and policies are

properly adopted and the improvement strategies are being effectively implemented and embedded across CLP. Through coordinating with different business units, it drives continual improvement of the ISO 14001 environmental management system in ways that go beyond compliance, and to enhance existing environmental evaluation criteria throughout the value chain for procurement and tender specifications.

Various working groups have also been established to manage environmental and nature-related initiatives, led by the Environment Team of the Group HSE Department and supported by relevant functional teams and regions. Their work includes conducting reviews on nature-related frameworks, undertaking the first stage of group-level TNFD nature assessments, developing and implementing circular economy strategies and plans, and setting out medium- and long-term environmental targets.

Monitoring and compliance of emissions and other nature-related regulations

CLP's business processes and practices support its endeavours to maintain full compliance with applicable emissions and other nature-related laws and regulations in the jurisdictions in which it operates.

SASB reference: IF-EU-140a.2; GRI reference: 2-27, 201-1, 306-3 (2016)

Established processes are in place to ensure understanding of relevant emissions and other nature-related laws and regulations for new investments, as well as updates to existing regulations and emerging legislation in this field. Where compliance with new laws and regulations requires a transition period, CLP, where appropriate, works transparently with regulators as it establishes the business practises and makes the investments necessary to satisfy the new requirements.

CLP closely monitors developments in emissions and other nature-related regulatory requirements. A summary of the new and/or amended laws and regulations that emerged in 2023 that had or may have a significant impact on CLP's business units are listed below.

Hong Kong	The emission allowances of CLP's power plants have been progressively tightened over time through the Technical Memorandums (TM) of the Air Pollution Control Ordinance. Since 2022, a new set of emission caps has required CLP Power to further reduce the emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x) and Respiratory Suspended Particulates (RSP) by 12% to 27% compared with the 2021 levels. CLP Power achieved full compliance in 2023.
India	- The Environment (Utilisation of Crop residue by Thermal Power Plants) Rules 2023 was issued on 11 July 2023 with penalty for non-compliance expected to commence from 2024-2025. Jhajjar Power Station has issued tenders to procure biomass pellets to comply with the 5% blending requirements. However, it is currently co-firing at 2% due to issues with supply of biomass pellets and technical constraints in co-firing at such large quantities. While Jhajjar Power Station has taken concrete steps and continues to work towards compliance with the Rules, as an abundance of caution Jhajjar Power Station has written to the relevant authority as it works towards compliance. - The Central Electricity Authority (Flexible Operation of Coal based Thermal Power Generating Units) Regulations 2023 was issued on 25 January 2023 with compliance required by 25 January 2024. These Regulations are applicable to Jhajjar Power Station, and Apraava Energy will determine the necessary modifications and investments required for Jhajjar Power Station to be compliant. - The Energy Conservation (Amendment) Act 2022 and the Carbon Credit Scheme were enacted in 2023. Jhajjar Power Station stands to face additional compliance requirements in light of the amendment and Apraava Energy continues to monitor the updates of the additional compliance requirements.

Taiwan	- The Taiwan Environmental Protection Administration (EPA) made amendments to the Stationary Pollution Source Hazardous Air Pollutant Emission Standards in 2023, in relation to which the Ho-Ping Power Station is expected to have to pay an increased emission fee. - The Climate Change Response Act (which amended and replaced the Greenhouse Gas Reduction and Management Act) was promulgated on 15 February 2023. Key elements include establishing authority and responsibility among agencies, incorporating provisions on just transition, strengthening emissions control and incentive mechanisms to enable emissions reduction and introducing a carbon fee. The financial impact to Ho-Ping will be subject to the details of upcoming announcements expected on the carbon fee mechanism in 2024. Ho-Ping continues to monitor the regulatory developments.
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Emissions and other nature-related regulatory non-compliance and licence exceedances

Environmental compliance	2023	2022	2021	2020	2019
Environmental regulatory non-compliances resulting in fines or prosecutions (number) ^{1,2}	0	0	0	0	0
Environmental licence limit exceedances & other non-compliances (number) ^{1,2}	5	6	5	4	10

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.

2 Numbers include operating assets where CLP has operational control during the calendar year. Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.

In 2023, all of the five emissions and other nature-related breaches were recorded by EnergyAustralia:

- Two related to short-term carbon monoxide (CO) licence limit exceedances. One of these exceedances occurred during a low-load operation stack emission test for diesel firing at Jeeralang Power Station, while the other occurred during a recommissioning run after a summer-readiness outage at Newport Power Station. Both incidents were reported to the local Authority and no further regulatory action was taken.
 - Another breach related to a dust control issue at Yallourn Power Station. EnergyAustralia subsequently responded to the local Environment Protection Authority (EPA) by updating its Risk Management and Monitoring Programme (RMMP) for dust control. After assessing the updated RMMP, the EPA considered that appropriate mitigation measures had been taken, and the case was closed with no further actions.
- The fourth breach related to unauthorised vegetation clearing activities in the ash dam areas of Tallawarra Power Station. EnergyAustralia immediately communicated with the local EPA to explain the cause and apologise by demonstrating a good record of environmental performance and a strong commitment to biodiversity and community engagement. No EPA actions were incurred.
 - The final breach related to the brine conditioned ash and salts emplaced in the Ash Repository at Mount Piper Power Station over an authorised maximum height. EnergyAustralia has developed mitigation measures to relocate the overheight materials and raise awareness through training and visual markers. The incident was reported to the local EPA and no further regulatory actions were incurred.

Strategy

Our approach

As part of the Environmental Pillar of the Group’s Health, Safety and Environment (HSE) Improvement Strategy, CLP sets out a nature-related strategy which aims to develop a more systematic and global perspective on nature and circular economy, going beyond compliance with existing environmental regulations. It entails obtaining a more thorough understanding of the relationship between nature and business as well as developing a systematic management approach that considers the Group’s dependencies and impact drivers, and will ultimately cover its value chain. By embracing this enhanced approach to nature, CLP aims to effectively address the increasing interest from investors and stakeholders regarding how businesses are integrating nature into corporate strategy.

Focus areas for nature-related strategy

CLP’s nature-related strategy emphasises three areas, including biodiversity conservation, circular economy transition and the reduction of environmental discharges. It aims at ensuring these critical nature-related issues are well incorporated into CLP’s governance, risk management and decision-making processes.

Biodiversity 	Biodiversity conservation creates positive impacts on local economies, particularly for critical industries that rely on certain ecological processes. CLP strives to preserve natural resources with a goal of “no net loss of biodiversity”. To manage this topic holistically, CLP is in the process of adopting nature-related frameworks, such as the Taskforce on Nature-related Financial Disclosures (TNFD) framework. Read more in the Biodiversity and ecosystem section.
Circular Economy 	CLP is dedicated to driving the transition towards a circular economy, recognising its ability to address waste and pollution problems, and tackle climate change and biodiversity loss. In pursuit of this goal, CLP actively engages and partners with stakeholders to integrate circular economy principles throughout its operations and supply chain. Read more in the Waste management and material use section.
Reducing Pollution 	CLP strives to comply with regulatory requirements and minimise its environmental impacts by managing its air emissions, water use and waste generated during operations on a beyond compliance basis. Read more in the Air emissions , Water and Waste management and material use sections.

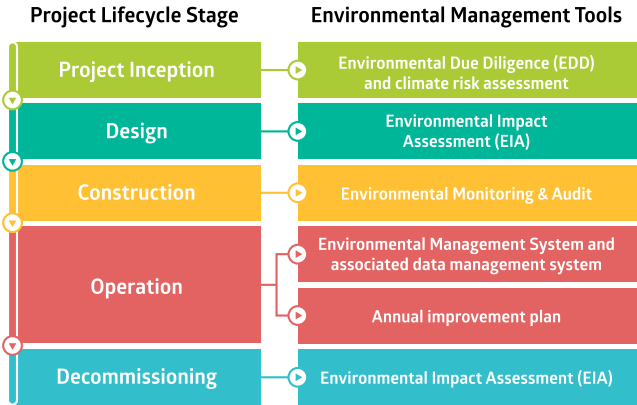
Project cycle framework for environmental management and assessment

Underpinned by the Group HSE Policy, the CLP Group Health, Safety and Environment Management System (HSEMS) sets out various environmental management tools and processes to identify and manage significant environmental impacts and risks arising from new investments, project planning and operations.

GRI reference: 2-23

To strengthen the management of nature-related topics in its HSEMS, CLP completed a review of nature-related frameworks (including TNFD) and CLP’s own practices on nature in late 2022.

The environmental management tools and processes across the project lifecycle include:



Learn more about CLP's HSEMS

- Environmental Due Diligence (EDD) and climate risk assessment**
 At the project design and planning stage, CLP conducts Pre-investment Environmental Risk Assessment which includes EDD to identify potential environmental risks, liabilities and impacts. A climate risk assessment tool is also used to identify potential climate-related risks to which the proposed project may be exposed. These due diligence processes enable early evaluation of operational and business risks associated with the proposed project, and are followed by further analysis and stakeholder engagement exercises to mitigate the risks if appropriate.
- Environmental Impact Assessment (EIA)**
 EIA is a crucial step in ensuring all relevant environmental impacts, such as air quality and biodiversity, have been properly considered and addressed by effective mitigation measures. CLP has processes in place to fulfil the EIA requirements and recommendations stipulated by local regulators, and follows these same requirements in countries where regulations are not as stringent.

Read about how environmental issues are considered in new projects

- Environmental Management System (EMS)**
 Over the years, CLP has diligently managed its environmental impacts in line with international best practices. For example, under the HSEMS, all power generation assets of which CLP has operational or joint operational control are required to achieve third-party certification to international ISO 14001:2015 Environmental Management Systems standard within two years from the commencement of operation or acquisition. In 2023, all assets in this category had successfully certified their EMS to the ISO 14001: 2015 standard.
- Data management system**
 Digital technology in data management is deployed to ensure data integrity and measure progress against targets, as well as to facilitate follow-up actions for each asset. In addition to CLP's customised Group Operations Information System (GOIS), CLP has been implementing a customised environmental data management system, named "EMIS" and "MonitorPro" in Hong Kong and Australia respectively. The tool is designed to safeguard environmental data, automate trend analysis and data reporting, and support compliance and risk management.
- To enhance the digitalisation of greenhouse gas (GHG) accounting, CLP also commenced a GHG emission profile project on a digital platform designed to measure, track and manage GHG emissions and environmental impacts. This platform streamlines data collection, analysis and reporting for enhanced transparency and data governance. The pilot test was completed in July 2023, and historical data migration and configuration is now underway.

For details of how these environmental management tools and processes are applied to specific environmental aspects, please refer to the [Managing impacts, risks and performance](#) section.

Conducting biodiversity sensitive area analysis

As the first step in CLP’s efforts to strengthening group-wide nature and biodiversity strategies, CLP conducted a biodiversity sensitive area analysis which serves as an initial assessment to locate key biodiversity-sensitive areas and identify nature-related impact drivers and dependencies



As an initial assessment, this current analysis focused on the first two stages and was completed at the end of 2023. At the “Locate” stage, all existing sites of CLP’s operations and assets were assessed using the Integrated Biodiversity Assessment Tool (IBAT) which contains a database of global biodiversity-sensitive areas and threatened species. The assessment enabled CLP to determine the priority locations which are close to key biodiversity-sensitive areas for further analysis.

At the “Evaluate” stage, CLP identified a list of potential dependencies and impact drivers on nature across its own operations and assigned each of them a materiality rating for prioritisation. The exercise made reference to the World Business Council for Sustainable Development (WBCSD) guideline, the database of Natural Capital Opportunities, Risks and Exposure (ENCORE) tool as well as the World Resource Institute’s Aqueduct Water Risk Atlas particularly for water-related aspects. Based on the dependencies and impact drivers prioritised, a preliminary list of potential nature-related risks and opportunities was derived, providing an overall picture of potential nature-related issues that CLP could potentially focus on.

stemming from the interactions of its business activities on natural capital.

Making reference to the integrated LEAP approach and the tools recommended by the TNFD, the analysis facilitates a shift in CLP’s approach to nature from a compliance to a risk and opportunity management perspective.

Outcome and way forward

Riding on the results of this biodiversity sensitive area analysis, CLP will strengthen risk management and explore potential material topics related to nature and biodiversity for which corporate-level targets and commitments may be set to address their associated risks and opportunities. In addition, CLP will refine the list of prioritised dependencies and impact drivers by iterating the assessment for thermal and renewable assets for selecting priority locations. The analysis will focus on the material site-specific nature-related dependencies and impact drivers and proceed to the “Assess” stage of the LEAP approach. The associated risks and opportunities will be reviewed to help CLP prioritise actions to avoid and reduce negative impacts and promote opportunities to recover the state of nature.

In addition, the assessment also facilitated the identification of key areas for improvement between CLP’s current environmental management processes and the recommendations of TNFD. The key areas of improvement identified will be included in review of Group’s 2025-2027 HSE Improvement Strategy. Looking ahead, CLP will

- Strengthen the EDD process with consideration of applying appropriate tools to locate key biodiversity sensitive areas;
- Conduct a site-level nature-related assessment; and
- Review appropriate metrics for disclosures after the site-level assessment.

Integrating circular economy principles into operations

CLP formed a Circular Economy Steering Committee, chaired by Senior Director - Group HSE, in 2023 to drive the development and implementation of circular economy initiatives across business functions.

A circular economy review study was conducted to review CLP business processes against circular economy principles from a project life cycle perspective and identify areas of improvement.

CLP also reviewed the environmental target-setting process to better align with the Group's circular economy strategy and refined waste reduction and recycling targets. For details, please refer to the [Waste management and material use](#) section.

To develop internal expertise and foster inter-departmental collaboration about the circular economy, training and communication sessions were conducted among project, procurement and operation teams from different business units. The aim is to integrate circular economy principles and approaches into CLP's operation and procurement practices.

Setting beyond compliance goals to reduce environmental discharges

For the purpose of driving CLP's performance beyond regulatory compliance, CLP reviewed its environmental target-setting methodology to enhance performance analysis in terms of reducing environmental discharges.

The updated targets focus on the percentage reduction of emissions sulphur dioxide (SO₂), nitrogen oxides (NO_x) and total particulate matter (total PM), freshwater consumption and total waste produced taking into consideration the Group's wider decarbonisation strategy, calibrated to reflect the decline of coal-fired power in CLP's asset portfolio, and affirm the Group's commitment to ongoing improvement in environmental performance. These new targets cover all CLP's operational control assets, and the target years are set as 2025 and 2030 against a baseline year of 2021 in order to track CLP's progress towards its medium- and long-term goals. For details, please refer to the [Air emissions](#), [Water](#) and [Waste management and material use](#) sections.

Managing impacts, risks and performance

Our approach

Based on the environmental management tools and processes described in the “Strategy” section, impacts, risks and performance are managed throughout the project cycle.

The following sections provide a more detailed review of how CLP manages individual nature-related issues that are material. CLP has also developed goals and targets that go beyond compliance to drive continual improvement, and performance indicators to monitor the progress and effectiveness of its nature-related strategies, plans and programmes.

Biodiversity and ecosystem

CLP is actively contributing to nature preservation and habitat restoration activities while seeking to mitigate its impacts on biodiversity and ecosystem services in the vicinity of its operations, with the Group’s goal of “no net loss of biodiversity”. Based on the levels of regulatory controls on biodiversity, CLP sets site-specific targets and initiates ecological compensation programmes where necessary.

GRI reference: 304-1, 304-2, 304-4

Process and procedures

As part of the EDD, the responsible project team evaluates relevant biodiversity risks, focusing on the important biodiversity areas in the vicinity. It will be supported by a qualified consultant depending on the level of complexity.

The CLP Biodiversity Impact Assessment Guideline applies to power generation, transmission and distribution, mines and other power-related projects. It provides a framework for undertaking a systemic assessment of biodiversity impacts, and guidance on managing biodiversity risks. For example, the Guideline enables CLP to flag any new operations that could affect the IUCN Red List of Threatened Species and the relevant country’s national conservation list of threatened species well ahead of any investment decision.

The biodiversity impact assessment also observes local legislative requirements and references the [International Finance Corporation Sustainability Framework](#). It involves

describing the baseline conditions, evaluating the magnitude and significance of project impacts, and investigating options for mitigation. The assessment only contemplates offsets after considering options for avoidance, minimisation and restoration or rehabilitation.

Mitigation measures will be developed based on the findings and recommendations from the EDD and EIA to address adverse impacts related to biodiversity and ecosystem identified. These adverse impacts will be monitored and controlled under the environmental management system (EMS) during the operation phase and will be reviewed on a regular basis.

Initiatives and progress

There is no one-size-fits-all approach to managing biodiversity impacts. CLP considers varying factors such as the location and the level of development in the vicinity of a project as part of its ongoing efforts in biodiversity conservation and land remediation.

GRI reference: 304-3, EU13

Biodiversity enhancement programmes in 2023 included:

- Aquaculture and fisheries conservation**

CLP Power supports marine conservation and fisheries enhancement projects through the [Marine Conservation Enhancement Fund](#) (MCEF) and the [Fisheries Enhancement Fund](#) (FEF) set up by the Hong Kong Offshore LNG Terminal Project in Hong Kong in 2020. To date, approximately HK\$50.0 million has been granted to support 44 projects under MCEF, and HK\$36.8 million to support 19 projects under FEF. Projects funded by MCEF focus on marine conservation, habitat restoration and rehabilitation, as well as education and ecotourism. The initiatives supported by FEF include fisheries education and tourism, enhancement of fisheries resources and sustainable fishery development. A sharing session was organised in 2023 for FEF at which representatives of fisheries organisations, academia and green groups shared insights into aquaculture and fisheries conservation projects. The exchange also served as a platform for exploring potential partnerships and collaborations.

- Combating desertification**
 Recognising the threats to wildlife caused by desertification and land degradation, CLP China has carried out annual tree planting activities at the Jinchang Solar Farm in the Gobi Desert and participated in tree planting programmes organised by the local government in order to develop windbreaks and keep the sand bed steady. In 2023, about 150 trees of various species, including *Sophora japonica* and *Amygdalus triloba*, were planted at the Xipo shelterbelt near the Jinchang Solar Power Station in support of a local government initiative. Similar tree planting activities were carried out at other Mainland China assets, such as Lingyuan.
 - Habitat restoration programme in Australia**
 As part of its Tallawarra B new gas-fired power station construction project, EnergyAustralia has established a detailed Fauna and Flora management plan for maintaining the populations of local species and enhancing local biodiversity developed with local ecologists and indigenous community groups. One outcome was an approved Vegetation Offset Plan, involving compensatory planting of about 2,000 local species for native vegetation removed for construction. The management plan has also protected a nearby nesting area for ospreys. In addition, EnergyAustralia has voluntarily continued the Swamp Oak Forest Endangered Ecological Community (EEC) bush regeneration works, which involve the removal of woody weeds and lantana. With power generation and mining set to cease at Yallourn in 2028, EnergyAustralia has begun developing rehabilitation and remediation plans for both the Yallourn Power Station and the mine. The goal is to repurpose the site to provide local amenities for community development, including conservation and recreation areas. Some 22.8 hectares of land at the mine was rehabilitated in 2023 through the sowing of native seed and pasture grass to help stabilise exposed landforms.
- Repurposing and regeneration of nature in China**
 CLP China seeks opportunities to restore degraded landscapes when expanding its renewable portfolio. For example, at the abandoned mine site on which the Meizhou Solar Farm was built, CLP China has revegetated the photovoltaic fields with plants such as miscanthus and mountain beans to stabilise the soil and control water runoff. As the plants can grow rapidly in the rainy seasons, grass-proof cloth has been applied to keep the plants at an optimal height so that the vegetation does not cover the photovoltaic panels. CLP China's innovative efforts in transforming the mine sites have been recognised by the local Government and media.
 - Maintaining the ecological balance of the river for operation of the Hydro Power Station in China**
 To alleviate the adverse impacts of the Jiangbian Hydro Power Station on fish and other aquatic species in the Jiulong River, CLP China has invested about RMB 20 million since 2010 in building a fish stocking station, utilising technical support from Sichuan Agricultural University. Since the first stocking in 2011, 390,000 fish fry of three species have been released, helping maintain the ecological balance of the Jiulong River Basin. In addition, during the construction and operation of the Jiangbian and Dali Yang'er Hydro Power Stations, the ecological discharges have been kept strictly in accordance with local environmental protection authority requirements and the mitigation measures stipulated in the EIA report, resulting in healthy growth and reproduction of aquatic organisms downstream of the power plants' dam.
 - Promotion of nature and biodiversity**
 In 2023, a Go Green Programme with the theme "Cherish Nature" was launched to enhance awareness of nature and biodiversity conservation among CLP's Hong Kong staff. The programme comprised an online educational series, with episodes introducing biodiversity concepts and the habitats of different local species in Hong Kong.

Air emissions

CLP strives to reduce the air pollutants emitted from its operations while expanding its renewable and nuclear energy portfolio. Achieving further emission reductions from existing fossil fuel power stations remains a high priority.

Process and procedures

For new projects, CLP assesses risks related to air emissions through an EDD and carries out an EIA at the project design and construction stage. CLP is also conscious of the air emission level of its fossil fuel power stations in operation. The associated environmental risks and impacts are properly managed by a robust EMS.

According to the CLP Group HSEMS, the coal-fired and gas-fired power plants under CLP's operational control are required to operate within CLP's prescribed limits on SO₂, NO_x and total PM, or they must fully comply with local regulations, whichever is more stringent. The air emissions (NO_x, SO₂ and total PM) from the coal-fired and combined cycle gas turbine power stations under its operational control are monitored by continuous emissions monitoring systems. CLP is also cognisant of the increasing focus on mercury emissions from coal-fired power plants and has monitored and reported mercury quantities from its coal-fired power plants since 2021.

In addition to incorporating state-of-the-art air emissions mitigation measures into its plant management, CLP has also designed new gas-fired power stations with advanced

generation technologies. These new technologies produce electricity more efficiently, thus assisting in further lowering air pollutants and GHG emissions.

Initiatives and progress

CLP is dedicated to managing its fuel mix and applying various mitigation measures to combat climate change and improve the air quality of the regions where it operates.

SASB reference: If-EU-120a.1; GRI reference: 305-7

Coal-fired power plants, such as Yallourn, Mount Piper and Castle Peak Power Stations, are the main contributors to the Group's air emissions, and the emissions metrics are heavily influenced by the performance of these plants. CLP has remained committed to improving air quality in the areas where it operates, and proceeding along the path towards decarbonisation. In 2023, CLP reviewed the target-setting process and refined its emissions targets to reflect the upcoming retirement of CLP's fossil fuel plants. CLP has set group-wide medium- and long-term emissions targets for the years 2025 and 2030 in terms of percentage reduction of emission quantities for NO_x, SO₂ and PM against the base year of 2021 with the ultimate target of zero emissions. The emission targets scope covers all power plants under operational control.

The 2023 results related to the emission targets and progress are shown in the following table:

Nature metrics	Pollution Reduction	2023 Results	2023 Progress	Target Range by end 2025	Target by end 2030
Emissions (Impact driver)	NO _x emissions	-29%	In line	-20% to -30%	-50%
	SO ₂ emissions	-23%	In line	-15% to -20%	-55%
	PM emissions	-12%	In line	-10% to -15%	-90%

In 2023, CLP cut emissions of NO_x, SO₂ and PM by 29%, 23% and 12% respectively compared with the baseline year of 2021 which was in line with the emission target setting and even ahead of the target set for SO₂.

Further to the divestment of a majority stake in Fangchenggeng coal-fired Power Station in Mainland China and excluding India's assets, particularly the coal-fired plant Jhajjar, the overall emissions quantities were significantly reduced.

With CLP’s strategy of fuel diversification and through continually maintaining the effectiveness of emission control facilities, emissions can be further reduced.

Key initiatives and programmes in 2023 included:

- Advanced air emission control systems**
 CLP has been implementing various air emission control measures with advanced emissions reduction technology in its fossil fuel plants. In Hong Kong, CLP Power continued to optimise its fuel mix and deploy advanced technology to ensure its compliance with pollution control requirements. A second additional gas-fired generation unit, D2, is expected to go into service at Black Point Power Station in 2024, with controls in place to reduce NO_x emissions through selective catalytic reduction technology. The technology has already helped reduce emissions in the power station’s D1 unit. In India, in addition to Flue Gas Desulphurisation (FGD) deployed at Jhajjar Power Station to reduce SO₂, PM and mercury (Hg) emissions, a combination of Electrostatic Precipitator (ESP) and Fabric Filter is being used to further reduce PM emissions. Furthermore, a combination of low NO_x burners and the Separated Over Fire Air System (SOFA) is being used to further reduce NO_x emissions.
- Upgrade of emissions monitoring systems**
 CLP continuously reviews its emissions monitoring system to align with industry best practices in air emissions controls. At Yallourn Power Station, the Continuous Emissions Monitoring System (CEMS) has been upgraded to enhance emissions monitoring. Yallourn activated its upgraded CEMS in 2023, covering NO_x, SO₂ and CO. In addition, real time dust monitoring stations were installed on the perimeter at Yallourn to enhance dust monitoring and control. At Mount Piper Power Station, the introduction of the Particulate Matter Continuous Emissions Monitoring

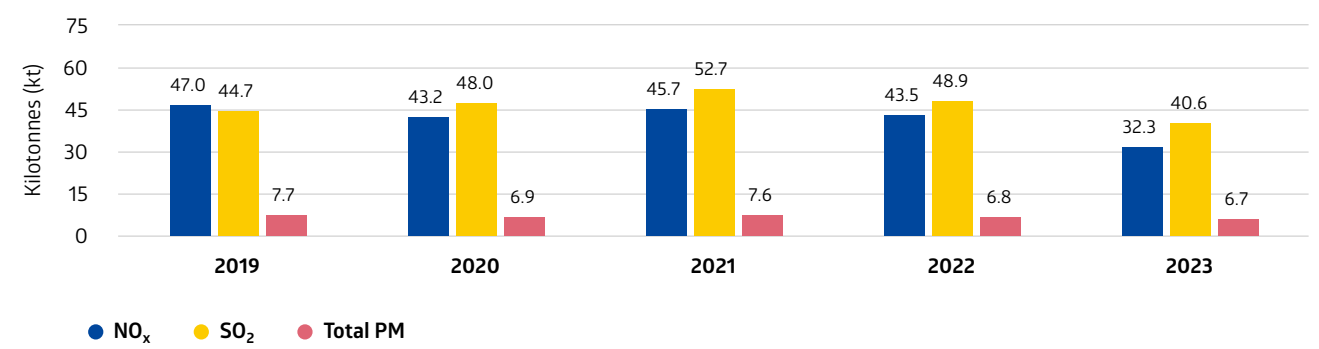
System (PM-CEMS) has enabled to the provision of real-time and accurate data for emission control and hence contributed to a reduction of dust this year.

- Educating and empowering operators on emissions monitoring and control**
 CLP understands that its operators must have the awareness and capability to control emissions and prevent emission exceedances. Further to the development of operation procedures for responding to unusually high emissions, operators in Hong Kong will be given Air Emission Licence Training every two years, including training on procedures for corrective and preventive actions if unusually high emissions occur. In Australia, similar training will be provided regularly to operators. In 2023, specific response training for operators on reacting to emission exceedance warnings were conducted in Jeeralang Power Station.
- Control of fugitive GHG emissions from electrical equipment**
 Electric utilities usually rely on sulphur hexafluoride gas (SF₆) for electrical insulation in high voltage equipment due to its excellent insulation properties. However, SF₆ is a potent GHG with very high global warming potential. CLP is endeavouring to reduce its SF₆ emissions by making its operations more efficient, undertaking maintenance measures on SF₆ equipment, and taking immediate corrective actions when any SF₆ leakage from equipment due to defects is noted. In 2023, CLP completed a field trial of non-SF₆ gas switchgears at the distribution level, and will review the results for the future development of non-SF₆ gas equipment at the distribution and transmission levels. CLP will continue to explore measures for reducing SF₆ emissions from electrical equipment, and introducing sustainable alternatives.

Group-level air emissions

i

The overall total emissions in 2023 decreased mainly due to divestment of a majority stake in Fangchenggeng coal-fired Power Station in Mainland China and excluding India’s assets, particularly the coal-fired Jhajjar Power Station.



Case Study

Improving Hong Kong's Air Quality and Supporting its Long-term Decarbonisation Target through the Hong Kong Offshore Liquefied Natural Gas (LNG) Terminal Project

The Hong Kong Offshore Liquefied Natural Gas (LNG) Terminal Project commenced operation in July 2023. The project is enhancing Hong Kong's fuel supply stability by adding new supply sources for natural gas, while also reducing power generation emissions and facilitating the city's energy transition to carbon neutrality by 2050.

The project gives Hong Kong access to more diverse sources of competitively priced LNG in the global market, enhancing the city's gas supply security.

The LNG terminal, located in the southwestern waters of Hong Kong, uses Floating Storage and Regasification Unit (FSRU) technology to regasify LNG before the natural gas is delivered to power stations through undersea pipelines.

The terminal is connected to the world's largest FSRU vessel, the Bauhinia Spirit. It has an LNG storage capacity of 263,000 cubic metres, sufficient to meet the electricity needs of 1.5 million three-member households for two months based on an average usage of 275 units of electricity a month.

Natural gas is a relatively clean fossil fuel and an important bridge transition fuel for meeting the HKSAR Government's long-term decarbonisation targets as outlined in its Climate Action Plan 2050. The amount of carbon dioxide emitted by natural gas is only around half of that given off by coal, so this initiative is helping reduce emissions from power generation by increasing the percentage of natural gas used for power generation and reducing carbon intensity in the city.



The Hong Kong Offshore Liquefied Natural Gas (LNG) Terminal.

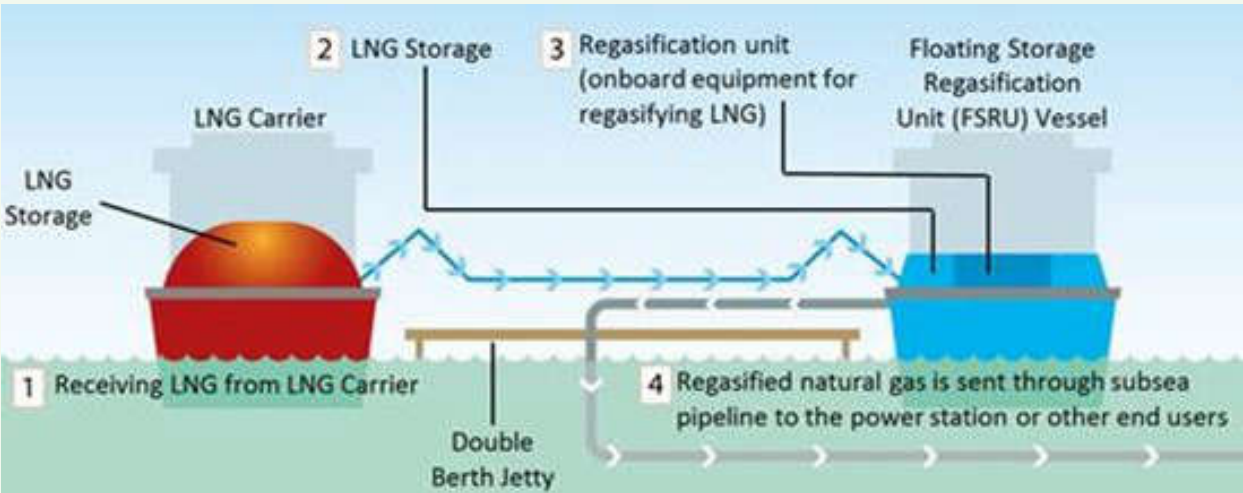


Illustration of the operation of the Hong Kong Offshore Liquefied Natural Gas (LNG) Terminal.

Waste management and material use

CLP strives to integrate circular economy principles across the project lifecycle to explore opportunities for minimising material use and waste disposal. It follows a waste management hierarchy (i.e. prevent, reduce, reuse, replace, recycle, treat and dispose) which prioritises the most preferred actions that minimise waste generation in daily operations.

SASB reference: IF-EU-150a.1 and IF-EU-150a.2; GRI reference: 301-2, 306-1, 306-2, 306-3, 306-4, 306-5

Process and procedures

Across the project lifecycle, CLP seeks to avoid using hazardous materials and replaces them with alternatives wherever possible based on the existing environmental management tools.

Through the EDD and EIA during the project design and construction stage, and the EMS during the operation stage, all hazardous and non-hazardous waste is managed properly for reducing waste and promoting recycling as well as ensuring waste disposal in accordance with local regulations. CLP prioritises waste reduction and then reuse and recycle rather than disposal following the waste management hierarchy. When hazardous waste has to be collected for recycling or disposal, it will be handled by licensed contractors in accordance with the local regulatory requirements.

The main operational by-products of CLP's coal-fired power stations are coal ash from coal combustion and gypsum from the flue gas desulphurisation process. CLP actively manages these by-products generated from coal-fired power stations according to the waste management processes and procedures outlined in the EMS. Rather than disposing of them, CLP endeavours to reuse them for construction and other applications in line with circular economy principles and in accordance with local regulations and practices.

While the quantities of solid and liquid waste generated by regular CLP operations is relatively small, projects involving demolition and construction usually increase the amount of non-hazardous solid waste which will be addressed and monitored under the EMS.

CLP is also driving behavioural changes among its employees by setting up recycling facilities at power stations and office premises, and providing e-learning courses on circular economy principles and waste management.

CLP monitors waste generation on a monthly basis by tracking the solid and liquid forms of hazardous and non-hazardous waste produced and recycled at its facilities.

All ash impoundments from CLP-owned plants (i.e. the various ash lagoons at Castle Peak Power Station in Hong Kong and Yallourn Power Station in Australia) have been reviewed and are considered as having low hazard potential and satisfactory structural integrity.

Initiatives and progress

CLP has implemented various measures to reduce waste and increase reuse and recycling during electricity generation and other operations.

It recycles its hazardous and non-hazardous solid and liquid waste where feasible, and sells by-products such as ash and gypsum for reuse in other industries.

Individual assets generate different types of waste. Coal-fired assets are the main contributors of waste, accounting for about 90% of the Group's total waste generated. The amount of waste produced and recycled is not directly related to the amount of electricity sent out, but can be affected by maintenance and construction activities as well as local waste facilities and treatment practices.

CLP set the group-wide medium- and long-term waste targets for the years 2025 and 2030 in terms of a percentage reduction of total waste produced, including by-products produced by the coal-fired power plants, against the base year of 2021. In addition, waste targets for the year 2025 of 100% were set for the recycling of Waste Electrical & Electronic Equipment (WEEE), scrap rechargeable batteries, scrap metals and inert construction waste, and for the removal of single-use plastics in catering facilities.

In 2023, total waste products from the Group's operation was reduced by 71% compared with the target-setting baseline year of 2021 which was slightly ahead of the waste target set for 2030.

The decrease was contributed by various waste management initiatives at the assets and the divestment of a majority stake in Fangchenggeng coal-fired power station in Mainland China and the exclusion of India's assets, particularly the coal-fired Jhajar Power Station.

Coal ash from coal combustion and gypsum from the flue gas desulphurisation process are still the main waste products.

The Waste Electrical and Electronic Equipment (WEEE), scrap rechargeable batteries, scrap metal and inert construction waste were fully recycled and single-use plastics used in catering facilities were also removed in 2023, based on local regulatory policies and infrastructure available for recycling. Looking ahead, CLP will continue to refine the waste management process and look for waste reduction or recycling opportunities and initiatives from a project cycle perspective, aiming to continue improving waste recovery value and enhancing the circularity of products and materials.

The waste target scope covers all CLP’s operational control assets. The 2023 results relating to the waste targets and their progress are shown in the following table:

Nature metrics	Pollution Reduction	2023 Results	2023 Progress	Target by end 2025	Target by end 2030
Waste (Impact driver)	Waste products ¹	-71%	In line	-65%	-70%
	Recycling of Waste Electrical & Electronic Equipment (WEEE)	100%	In line	100%	--
	Recycling of rechargeable batteries	100%	In line	100%	--
	Recycling of scrap metal	100%	In line	100%	--
	Recycling of inert construction waste	100%	In line	100%	--
	Removal of single-use plastics in catering facilities	100%	In line	100%	--

1 Waste products include total waste produced from operation and maintenance activities and by-products produced by the coal-fired power plants

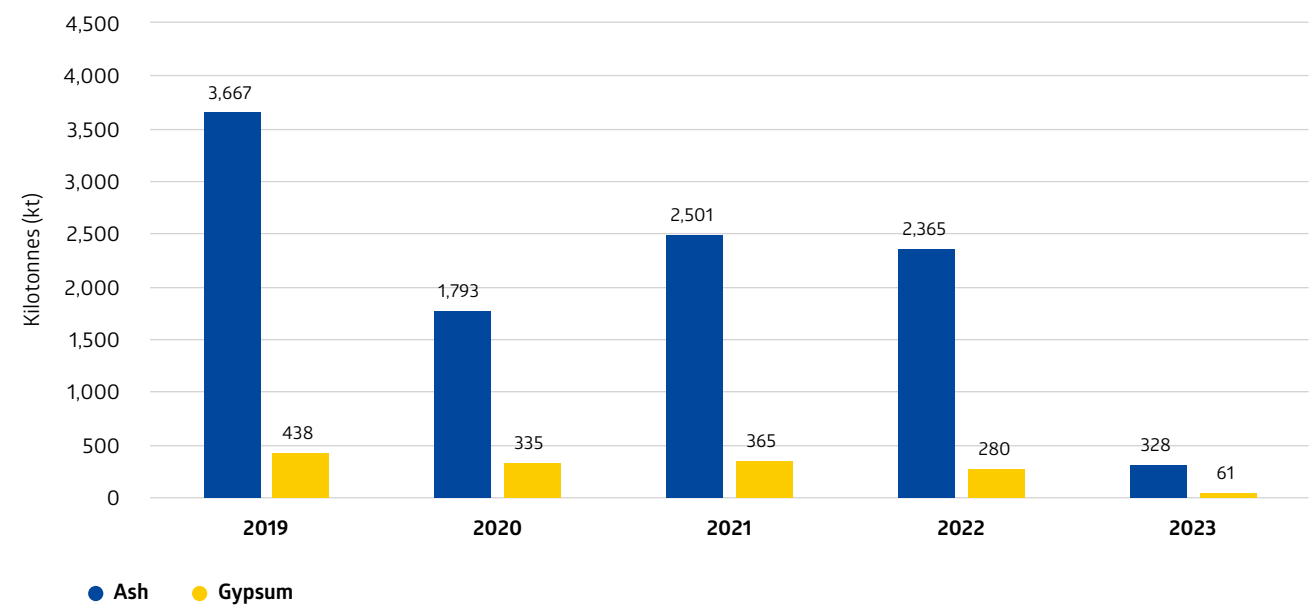
Key programmes and initiatives in 2023 included:

- Collaboration with stakeholders and partners on the initiatives to increase waste recovery in Hong Kong**
CLP Power collaborated with local recyclers in the full recycling of scrap metal, WEEE, rechargeable industrial batteries, lubricating oil and transformer oil. It also worked with the Hong Kong government to recycle yard waste from Hong Kong’s power stations, recycling about 4,000kg and 2,500kg of yard waste following the annual tree trimming exercises at Black Point Power Station and Castle Peak Power Station respectively. In addition, Castle Peak Power Station collaborated with a local chemical processing and treatment company to treat and reuse all boiler chemical cleaning solution on site in 2023. As a result, there was no disposal of any hazardous liquid waste generated from the boiler chemical clean project in 2023.
 - Beneficial Reuse of Marine Sediment in Hong Kong**
CLP Power’s Hong Kong Offshore Liquefied Natural Gas Terminal (HKOLNGT) Project collaborated with various Hong Kong government departments to reuse suitable marine sediment dredged at the project site in a soil mix suitable for mangrove planting, minimising marine sediment dumping into the sea.
 - Second Life for Used Photovoltaic Components and Batteries**
Lingyuan Solar Farm used its spent photovoltaic modules and some spent rechargeable batteries provided by Qian’an Wind Farm to set up a power supply for lighting plant areas. This initiative gave a second life to the used equipment and reduced waste, while also reducing power consumption at the plant.
 - Promoting the circular economy and engaging staff in recycling efforts in CLP Power Hong Kong**
CLP Power Hong Kong has developed recycling guidelines and established new waste recycling targets for its generation and power system business units, and encouraged staff engagement in these recycling efforts. Also, an online platform was created where internal colleagues could list used furniture and find potential reuse opportunities within different departments.

Ash and gypsum by-products recycled or sold



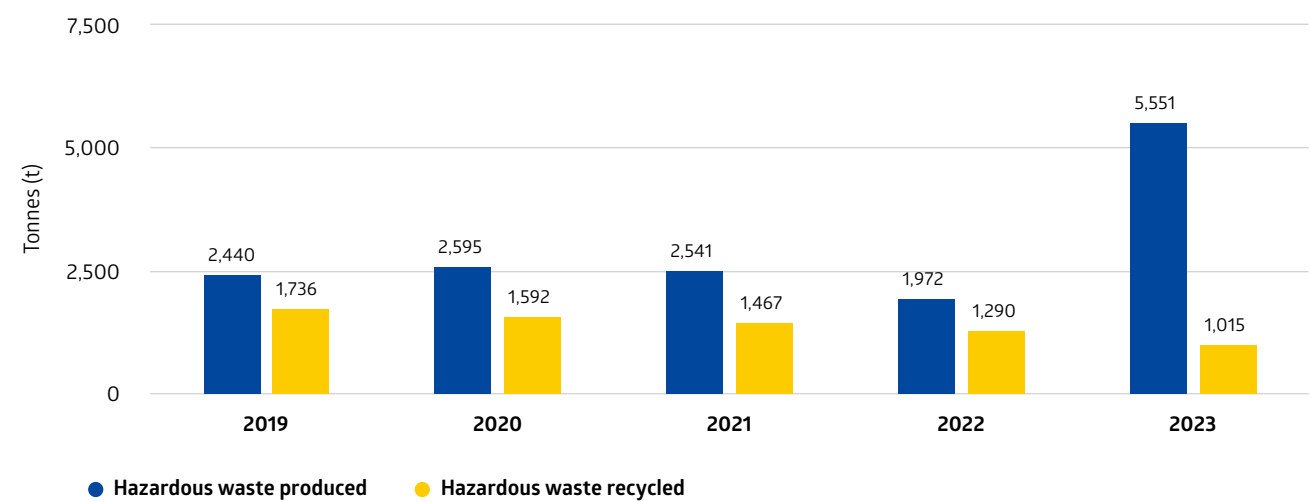
The total amount of ash and gypsum by-products recycled or sold decreased in 2023 due to the divestment of Fangchenggeng Power Station, while the ash and gypsum from Jhajjar Power Station were no longer included in the total as Apraava Energy is no longer a wholly-owned subsidiary.



Hazardous waste produced and recycled



The total amount of hazardous waste produced increased while recycling decreased was mainly caused by the disposal of hazardous wastes from a remediation Project at Yallourn Power Station.



Compared to 2022, the variation of the non-hazardous waste produced and recycled was due to normal operational fluctuation from plant activities.



Case Study

Jhajjar introduces Waste Recovery Programmes according to Circular Economy Principles

Jhajjar Power Station strives to achieve ‘Zero Waste to Landfill’ by adopting circular economy principles and implementing various reuse and recycling initiatives to minimise waste.

A key measure has involved maximising the reuse of waste generated from operations (e.g. metallic waste, rubber conveyor belts, electronic cards, and actuators) for secondary purposes on site. An expert agency was engaged to implement proper waste management measures and install material recovery facilities to enhance waste recovery. These included a Vibro-feeder, which helps in sorting waste through the use of a conveyor to separate inert materials like soil or dust from dry solid waste, and a Baler machine, a hydraulic pressing machine that compresses solid waste such as PET bottles.



Vibro-Feeder used at the Material Recovery Facility at Jhajjar Power Station.

Jhajjar is working towards paperless office status through digitalisation, implementing various digital systems such as a Management of Change System, Gate Pass Processing System, Invoice Tracking System, Vehicle Booking System and others.

Jhajjar has also striven to eliminate single-use plastic in its sites, implementing initiatives such as adding water dispensers at sites, replacing plastic bottles with glass and distributing cotton bags and steel bottles to contract staff. It has been validated by the Confederation of Indian Industry and certified as a single-use plastic free site. It has also achieved Zero Waste to Landfill certification by the Confederation of Indian Industry, indicating that it has implemented waste management practises that have resulted in over 90% of waste being diverted from landfills.



Example of material reuse in Jhajjar Power Station.

Water

The CLP Group uses seawater cooling or water recirculation processes in its generation plants to minimise water consumption and related environmental impacts.

SASB reference: IF-EU-140a.3; GRI reference: 303-1, 303-2

Process and procedures

Most water withdrawal and discharge in CLP’s operations is by fossil fuel plants using once-through seawater cooling. In this process, large quantities of seawater are used for cooling and then returned to the sea, with only a slight increase in water temperature. The total volume of water withdrawal and discharge is dependent on the total electricity generated.

CLP strives to reduce the amount of fresh water it uses for its operations. CLP’s power stations carry out a range of water conservation initiatives depending on their site conditions, operational situation and age. The amount of water which can be recycled also depends on factors such as location, power station design and local regulatory requirements.

There are two major water concerns that affect CLP. One is that water use in its power plants may impact local water quality and contribute to local water scarcity. To address this, environmental impact assessments are carried out at the planning stage of new projects, in accordance with local requirements, to ensure that any water use impacts associated with project construction and plant operation are managed and mitigated to an acceptable level.

The second concern is water security at CLP’s fossil fuel and hydropower generation assets. Four of CLP’s six fossil fuel plants under operational control use seawater for cooling. Where seawater cooling is not feasible, CLP strives to minimise its freshwater use and adopt water recirculation processes. Solar farms also use water for the cleaning of solar panels, but the amount required is comparatively small. These measures help limit the risks caused by water security issues.

CLP assesses water risks for its new projects through systematic environmental due diligence, and annually using globally recognised tools such as WRI Aqueduct. Its assessments cover parameters such as water availability,

water sensitivity, water stress mapping, potential competing use with other stakeholders, and the management strategies in each region. Where a water supply risk is identified, the Company engages with local stakeholders to understand their needs and with local water suppliers to mitigate or resolve the issue. The latest assessments across the Group indicate that current water supply regimes are stable and the overall risk of substantial impact is minimal.

The quality of CLP’s water discharges must also meet licensing and regulatory standards. Under CLP’s EMS, the adverse impacts of water discharges are identified, monitored and controlled under programmes which are reviewed on a regular basis. Specific emergency response plans have also been developed to prevent and address the spillage or leakage of pollutants. As a result of the wastewater treatment processes put in place, none of CLP’s operations has material impact on the associated water bodies.

To monitor its water-use efficiency, CLP tracks its freshwater withdrawal, discharge and intensity (based on electricity sent out). Internal targets are set each year to encourage continuous improvement in water management practices. CLP also participates in the CDP water security questionnaire. By sharing water resource management data through the survey, CLP is able to benchmark its practices against industry peers.

Initiatives and progress

CLP has taken further steps to improve water management and reduce water discharge-related impacts in its daily operations.

In 2023, CLP reviewed its environmental target-setting process and refined its water targets to reflect the upcoming retirement of CLP’s fossil fuel plants. CLP has set group-wide medium- and long-term freshwater consumption targets for the years 2025 and 2030 in terms of a percentage reduction of freshwater consumption quantities against the base year of 2021. It has set an ambitious freshwater consumption target comprising an absolute reduction of 45% to 55% by 2025, using 2021 as the baseline.

The freshwater consumption target covers all CLP’s operational control assets. The 2023 results related to the water target and the progress made are shown in the following table:

Nature metrics	Pollution Reduction	2023 Results	2023 Progress	Target Range by end 2025	Target by end 2030
Water (Dependencies)	Freshwater consumption	-71%	In line	-45 to -55%	-85%

SASB reference: IF-EU-140a.1; GRI reference: 303-3, 303-4, 303-5

In 2023, CLP reduced the freshwater consumption by 71% compared with the baseline year of 2021 which was ahead of the target set for 2025.

The decrease was contributed by various water conservation initiatives from the assets and the divestment of a majority stake in Fangchenggeng coal-fired Power Station in Mainland China and the exclusion of India’s assets, particularly the coal-fired Jhajjar Power Station.

CLP will continue to track the volume of water recycling in its power stations for continual improvement and share good practices across the Group to maximise the benefit of individual power stations' efforts.

Best practice examples of CLP’s water management are summarised below:

- **Rainwater harvest system at Hong Kong substations**
In new electricity substations in Hong Kong, rainwater harvest systems including water recycling tanks and automatic drip irrigation systems will be installed to reduce freshwater consumption where feasible.
- **Upgrading the water treatment plant on circular economy principles at Black Point Power Station**
A project to expand the capacity of the water treatment plant at Hong Kong’s Black Point Power Station (BPPS) was completed in 2023. The project has increased the capacity of the water treatment plant through Reserve Osmosis (RO) technology, which reduces the amount of wastewater compared to that of traditional water treatment plants that utilise chemical processes. This reduction in wastewater is not only reducing the use of chemicals but also enhancing the overall water processing efficiency of the system.
- **Reduction of water wastage through innovative technology in India and Mainland China’s solar farms**
Robotic cleaning systems have been deployed in CLP China’s solar farms to reduce water consumption, and a

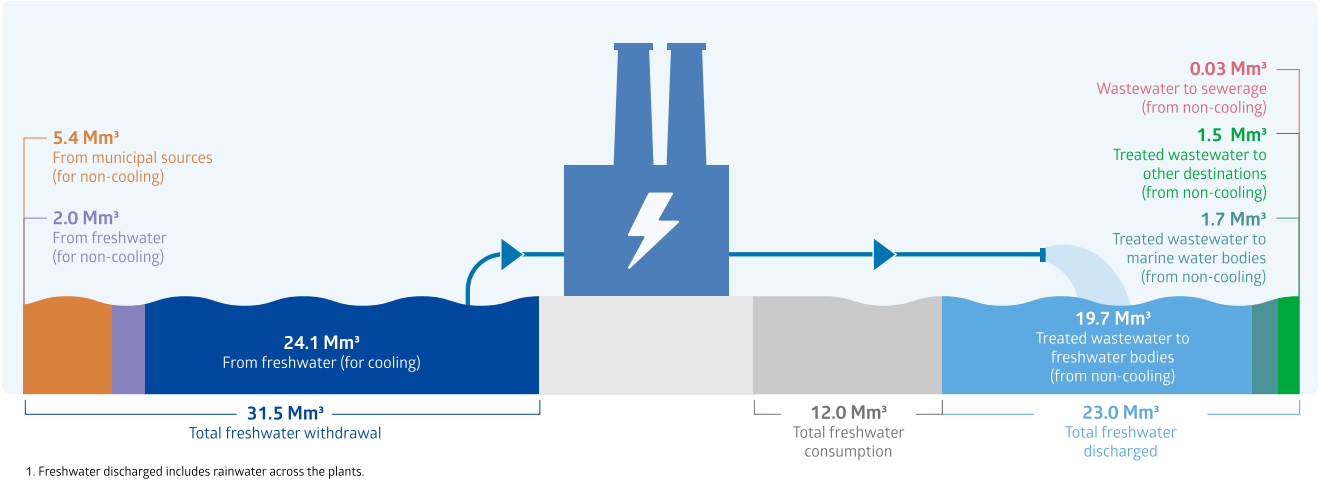
robotic solar panel dry cleaning system has also been utilised at Apraava’s solar farms in India to minimise water use and improve the energy yield of the solar panels. In 2023, field trials were conducted involving a combination of robotic dry cleaning and current wet cleaning of solar panels to validate water savings and measure improvements in energy yield. The trial result was encouraging, with the performance improvement in terms of energy gain measured at about 1.2 %, in line with market experience when achieving water savings. Going forward, dry cleaning of solar panels will be used at Apraava’s solar farms if feasible. Water recharging pits have also been constructed at all Apraava’s solar farms, for rainwater harvesting.

- **Initiatives to prevent wastewater spillage and reduce freshwater consumption in Australia**
In Australia, EnergyAustralia completed extensive repair and maintenance works to the Morwell River Diversion in Victoria state, which was damaged by heightened water flows following exceptionally heavy rainfall in June 2021. This greatly prevents the overflow of the Morwell River which could flood the mine of Yallourn Power Station and contaminate the water bodies nearby. In addition, Jeeralang Power Station installed an oil detection system in the stormwater outlet to prevent oil spillages.

The Springvale Water Treatment Plant continued to meet about 80% of the daily water needs at Mount Piper Power Station, significantly reducing the need to source freshwater and hence reducing freshwater consumption.

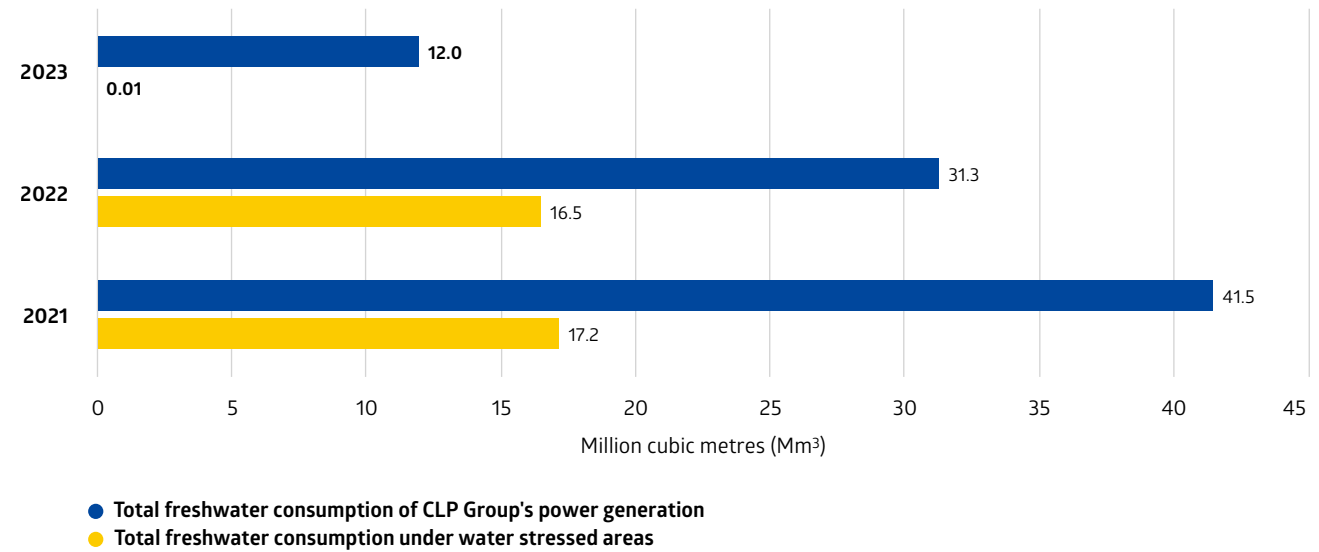
- **Increase of water use efficiency in India**
Jhajjar Power Station has been progressively improving water use efficiency at its site through continual improvement measures involving enhancements to the cycles of concentration with advanced chemical treatment in its cooling water system. In March 2023, Jhajjar Power Station won an award for excellence in water use efficiency in a programme organised by the Energy and Resources Institute, the International Water Association and the United Nations Development Programme.

Freshwater Balance



Freshwater consumption and consumption from water stressed areas

i The total amount of freshwater consumption decreased in 2023 mainly due to the divestment of Fangchenggeng Power Station, while water consumption for Apraava Energy's operations, particularly Jhajjar Power Station, was no longer included in the total as it is no longer a wholly-owned subsidiary.



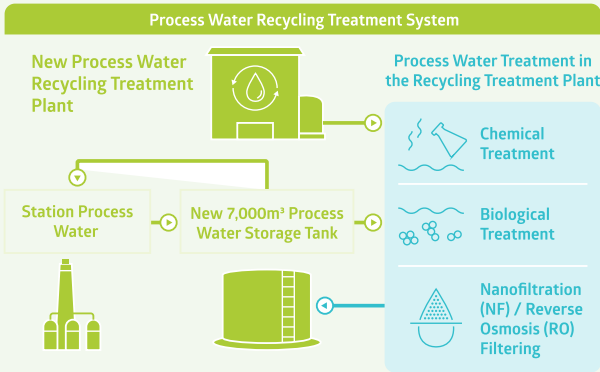
Case Study

Reducing water consumption through the Castle Peak Power Station (CPPS)'s Process Water Treatment Project

Power generation involves the use of large volumes of water, so improving water management is a key way to reduce water consumption. A project to enhance the existing process water management facilities at CPPS was begun in 2020 and completed in 2023.



The process water recycling treatment system was installed to treat process water and enable recycling in CPPS following the surrender of the Tsang Tsui Ash Lagoon (TTAL) to the government. Wastewater treated by this system will be suitable for reuse at the plant. In addition, with this new system, the water management process at CPPS no longer depends on the TTAL. The land will be released for alternative land for the benefit of the community.





Serving Our Stakeholders

Customers	87
Our people	116
Partners	133
Community	150

Customers

Overview

Areas of stakeholder interest	Relevant sustainability agenda
- Customer portfolio - Access to reliable energy - Asset management - Energy services and solutions - Customer privacy - Customer satisfaction - Security management - Physical security - Cyber security - Emergency and crisis management	Energy growth opportunities - Creating new revenue streams as other sectors electrify Energy security and reliability - Providing customers with reliable and reasonably-priced energy Business resilience - Reinforcing cyber resilience and data protection
Outcome for stakeholders	

Achieve 100% smart meters installation for CLP Power's residential and small-to-medium enterprise (SME) customers by 2025

Implemented Demand Response programmes, saving

410,000 kWh

at the peak time for electric use during summer

Provided customers with a suite of energy decarbonisation services and solutions

Signed new Memorandums of Understanding (MoUs) with Link Asset Management Limited and Chinachem Group

CLP Power maintained world-class supply reliability of over

99.999%

Since 2018, connected smart meters for around

80%

of CLP Power's residential and SME customers

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Customer portfolio

CLP operates retail businesses in Hong Kong and Australia, each characterised by distinct market structures, regulatory requirements, electricity demand, customer preferences and cultural norms. In 2023, the number of customer accounts in residential, commercial and infrastructure and public service sectors increased but decreased in the manufacturing sector. However, there was an overall increase in the commercial and industrial (C&I) sectors.

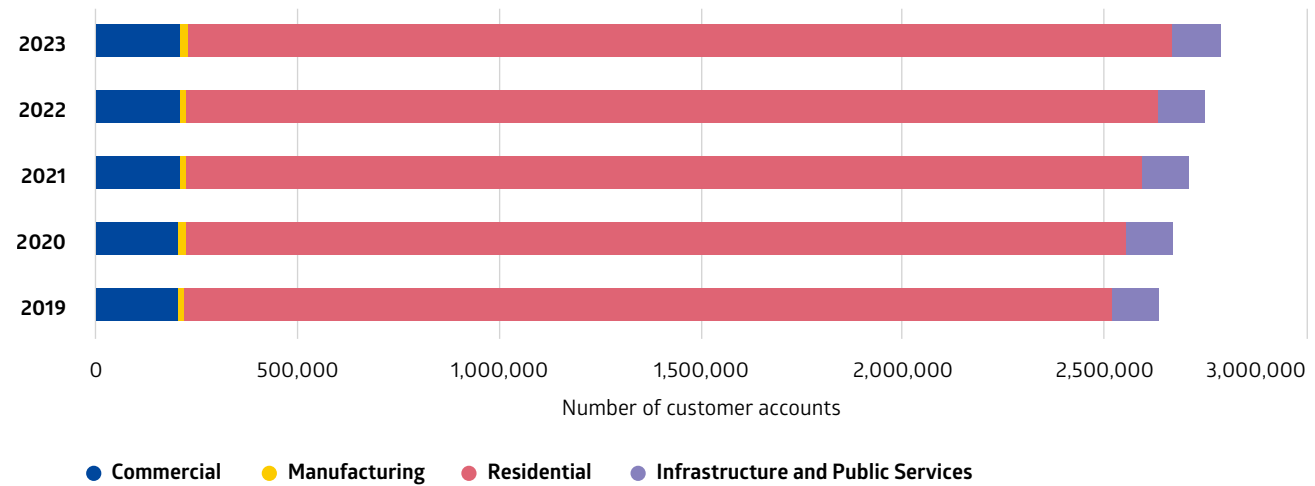
SASB reference: IF-EU-000.A; GRI reference: EU3

CLP Power is the sole electricity provider for Kowloon, the New Territories and most of the outlying islands in Hong Kong. It serves close to 2.8 million customers and approximately 80% of Hong Kong’s households. Total electricity sold in 2023 was 35,392GWh.

Despite its status as a mature market, Hong Kong continues to experience growing demand for electricity. This is largely being driven by territory-wide development and infrastructure projects, as well as new local railway infrastructure projects. Hong Kong is also being targeted as a prime location for energy-intensive data centres, so there is a need to ensure highly reliable power supplies are available to support the development of the data centre industry.

Hong Kong customer breakdown

i The number of customer accounts has continued to grow gradually over the last five years, mainly from the residential sector.



Hong Kong customer breakdown (number of customer accounts)	2023	2022	2021	2020	2019
Commercial	214,616	212,251	210,821	208,150	206,792
Manufacturing	16,923	17,191	17,427	17,540	17,575
Residential	2,439,557	2,407,225	2,369,217	2,333,901	2,301,200
Infrastructure and Public Services	118,548	115,404	113,956	112,245	110,841

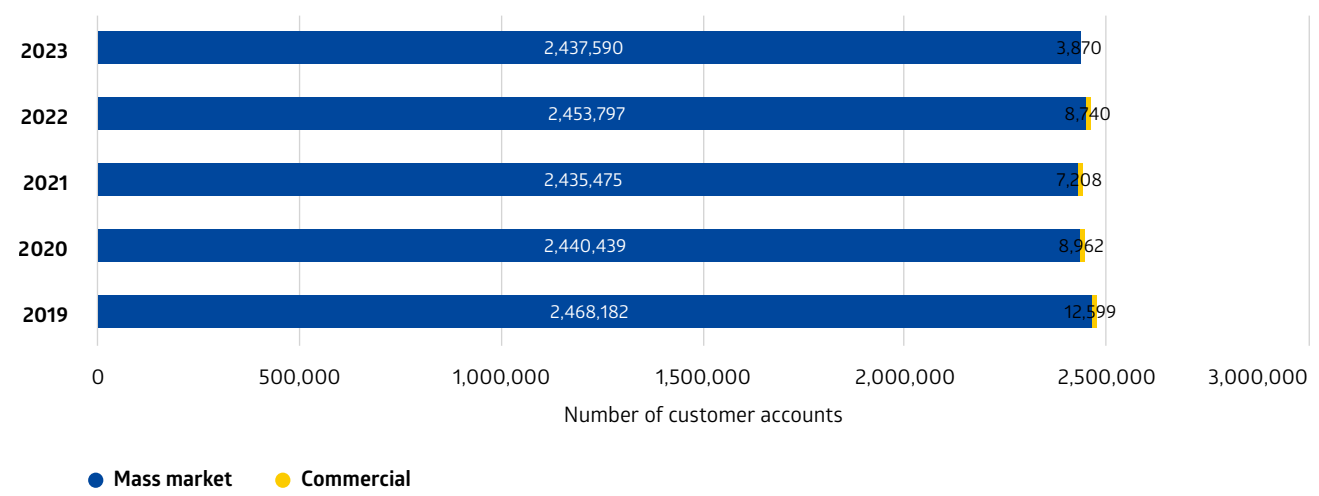
EnergyAustralia operates as a retail energy provider, selling electricity and gas to customers in New South Wales, Victoria, South Australia, the Australian Capital Territory and Queensland (electricity only). It is among approximately 30 retailers active in the key markets of New South

Wales and Victoria. Commercial accounts declined the most, however, this was largely due to a reclassification of several counterparties into mass market figures. This did not affect profitability with the Commercial and Industrial team posting a record contribution.

Australian customer breakdown

i

In 2023, total customer accounts declined by 0.8% or around 20,000 accounts. Heavy competitor discounting of Default Market Offers in different NEM states at various points in the year was more prominent compared with previous years. The number of commercial customers in 2022 has been revised due to classification updates.



Access to reliable energy

Our approach

High availability and reliability of the electricity supply are critical for the business operations of CLP's corporate customers and the daily lives of the Group's retail customers. Availability and reliability are therefore two key performance metrics that track CLP's ability to meet its commitments to customers.

GRI reference: EU10

Goals and targets

CLP calculates the availability factor for its generation assets in terms of the amount of time that the asset is able to produce full load equivalent electricity over a period, divided by the amount of time in that period. Typical values range from 70% to 90%. CLP aims to maintain an availability range of 90% and above for its newer assets.

Targets for each asset are set annually and are included in the business plan. Performance is reported on a weekly basis to senior management. Any significant variances in performance are analysed and appropriate corrective action taken.

Strategies and procedures

While CLP has generation businesses across the Asia-Pacific region, Hong Kong is the only location where its business is vertically integrated, so that it provides generation, transmission and distribution of power as well as retail services. CLP Power is regulated by the Hong Kong SAR Government under the [Scheme of Control \(SoC\) Agreement](#), which requires the Company to provide a sufficient and reliable electricity supply at a reasonable price and in an environmentally responsible manner.

In Hong Kong, CLP Power employs various measures to maintain high supply availability and high reliability. These include:

- Regularly upgrading its generation and network facilities to meet increasing electricity demand;
- Maintaining sufficient generating capacity to meet forecast demand as well as to cope with both planned and unforeseen outages;
- Developing an additional and economically viable gas supply option that strengthens energy security by providing access to competitive gas supplies from global markets using [Floating Storage and Regasification Unit \(FSRU\)](#) technology;

- Adopting advanced technology (such as smart grid technology) and implementing demand-side management measures to reduce growth in demand and optimise the utilisation of existing assets;
- Moving to condition-based maintenance by monitoring and timely assessing the condition of critical power supply equipment in order to formulate effective preventive maintenance plans. At the same time, CLP also makes reference to international standards and industry good practices to continuously enhance its asset performance;
- Expanding the use of instruments for conducting online monitoring of critical power supply equipment so as to analyse the health status of power supply equipment and to customise appropriate maintenance plans;
- Actively exploring various innovative technologies that could assist CLP's routine inspection and maintenance work, such as robots, aerial cameras, and big data to optimise resources and enhance work efficiency;
- Developing a well-trained and competent workforce for operating and maintaining the system.

In addition to recruiting professionals from the market, CLP also trains young engineering talents through systematic training schemes. In particular, CLP has established the CLP Power Academy since 2017 to collaborate with overseas and local tertiary institutions to train electrical and mechanical engineering professionals for building a healthy succession pipeline for the power industry.

To guarantee the availability and dependability of its power supply, CLP is working to strengthen its technological capabilities and enhance organisational development across the Group. Departments collaborate to design for an integrated management framework by sharing insights gained from regional experiences. This procedure is lowering the Group's overall operations risk and contributing to improved portfolio management.

A number of innovative projects to promote availability and reliability are currently being pursued in the areas of robotics, asset health, video analytics, energy storage, building information modelling and automation. These projects have been initiated by third parties and CLP's own engineers, who develop innovations based on their own operational experience.

Transmission network

To keep pace with the territorial development of Hong Kong, CLP conducts an annual review of future transmission network developments. This involves studying the latest system maximum demand forecast, as well as reviewing area load growth, infrastructure development and generation development, and planning accordingly.

Annual maintenance and improvement programmes have been developed for major transmission assets based on an analysis of current conditions along with the performance of the assets, levels of investment, and risk.

The power supply network is highly vulnerable to damage from extreme climate events, which could potentially cause service disruptions. In response, CLP is continuing to introduce a range of measures to improve the reliability of its power supply network.

Find out more in the CLP's Climate Vision 2050: Powering an orderly transition

In India, Apraava Energy carries out regular predictive and corrective maintenance of its transmission assets. This includes pre-emptive check-ups and assessments on operational clearances, to ensure that its assets are well structured and maintained with proper setup, hardware and security. Frequent site patrols are carried out when conducting assessments for landscape and assets, and the assessment results are used to identify defects and develop plans for shutdowns if needed.

Apraava Energy utilises a mobile application for the real-time tracking of site patrols, which has shortened the response time needed for making rectifications. The site patrol team uses thermographic cameras to help locate defects through heat mapping.

Plans are in place to use drones for site patrols, though ground teams will be retained at strategic locations to ensure a speedy response to any damage to critical assets.

Initiatives and progress

In Hong Kong, CLP maintained its world-class supply reliability percentage of over 99.999%, surpassing the ratings of other major international cities such as London, New York and Sydney.

SASB reference: IF-EU-240a.3, IF-EU-240a.4, IF-EU-550a.2, IF-EU-000.C; GRI reference: 203-1, EU4, EU12, EU26, EU27, EU28, EU29, EU30

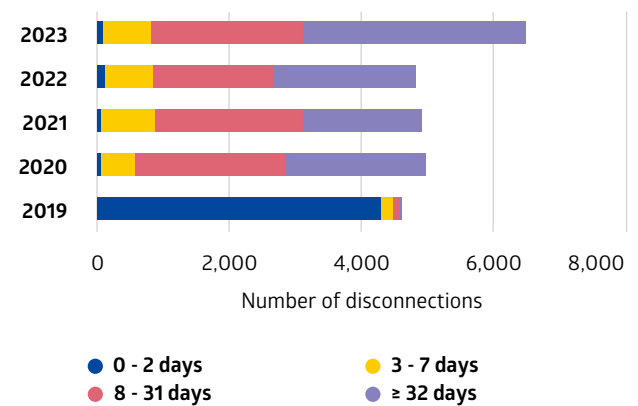
CLP's transmission and distribution network in Hong Kong serves approximately 80% of the city's overall population. At the end of 2023, CLP Power had approximately 16,920 km of circuits at medium or higher voltage. In addition, there were 241 primary and 15,539 secondary substations operating in Hong Kong. As of 2023, the average network loss for the past five years was 3.44%, slightly lower than the five-year average of 3.51% reported in 2022.

CLP uses a set of universally recognised supply reliability performance indicators from the Institute of Electrical and Electronics Engineers standard (IEEE 1366-2012) to monitor its system performance. It reports CLP's performance against these indicators annually to the Hong Kong Government.

In India, Apraava Energy achieved 100% availability for its Satpura Transco Private Limited asset and 99.86% availability for its Kohima-Mariani Transmission Limited asset for transmission of electricity to customers in 2023.

Disconnections for CLP Power Hong Kong Limited

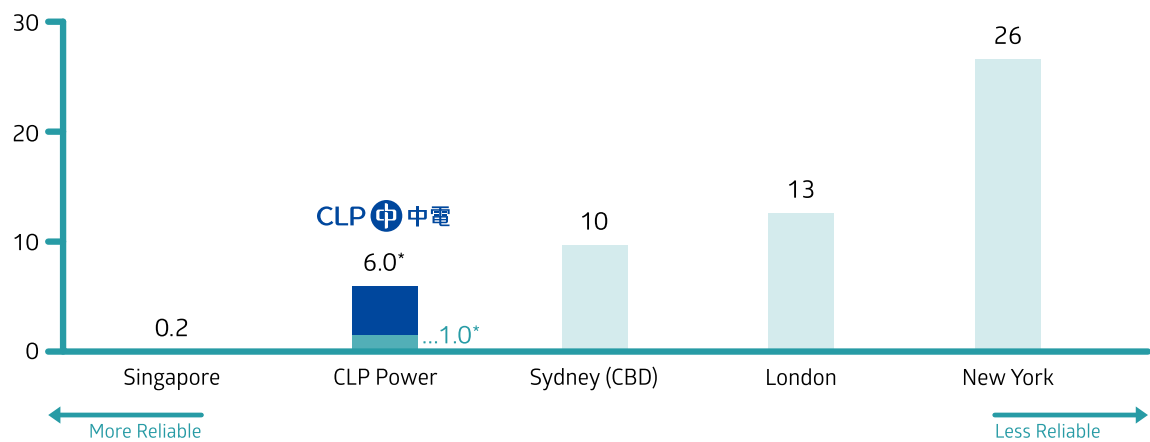
The total number of disconnections^{1,2} for Hong Kong customers³ was 6,520 in 2023, representing an increase of 34% compared to 2022 with 4,859 cases.



1 Total number refers to the disconnection orders completed due to heavily overdue payments.
2 Days refers to the number of days required from the issuance of the disconnection orders to the completion of the disconnection orders.
3 Customers include residential and commercial & industrial customers in Hong Kong.

Comparison of reliability levels between cities

Unplanned customer minutes lost per year



Remarks:

- *2021-2023 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 and Super Typhoon Saola in 2023), the three-year average was 1.0 minute.
- 2020-2022 average for all other cities.
- There are no overhead lines in Singapore.

Supply reliability performance indicators and results for CLP Power

Indicator	Result
System Average Interruption Frequency Index (SAIFI)	
The average number of supply interruptions for each customer served. Both planned and unplanned interruptions are included.	The three-year average SAIFI (2021–2023) was 0.27, meaning customers experienced a power interruption approximately once in four years during this period. This remained the same as last year's three-year rolling average.
System Average Interruption Duration Index (SAIDI)	
The average duration of interruptions each customer may encounter in a given year.	The three-year average SAIDI (2021–2023) was 0.29 hours, including both planned and unplanned interruptions. This was slightly lower than last year's three-year rolling average of 0.30.
Unplanned Customer Minutes Lost (Unplanned CML)	
The average duration of unplanned power interruptions per customer in a given year. These outages occur without prior notice, and happen as a result of various factors such as weather events, third-party damage to the network and equipment faults.	The three-year rolling average (2021–2023) of unplanned CML was about 6.0 minutes, which was slightly higher than the 5.7 minutes recorded last year. CLP Power maintains a world-class supply reliability of over 99.999% in Hong Kong, which is higher than other major international cities as shown in the diagram above.

Asset management

Our approach

Asset management refers to how CLP manages and utilises its assets to provide reliable, reasonably priced and low-carbon electricity services to customers and communities. Careful planning during the project development stage plays a crucial role in determining the operational efficiency or capacity factor range of an asset over its entire lifespan. Projects involving a major asset overhaul must undergo stringent technical and financial scrutiny before commencement.

Monitoring and follow-up

CLP's customised Group Operations Information System (GOIS) is used to compile operational data on adherence to the Generator Operational Performance Data Standard. It features built-in data collection, a data compilation and approval sequence, and a dashboard and reporting functions. Relevant staff at the asset, regional and Group levels are responsible for upholding the standard.

Continuous improvement

CLP is constantly looking for ways to improve the operational efficiency of its assets so that they remain compliant with the increasingly stringent regulations on emissions and fuel efficiency in certain jurisdictions. In addition, improvement opportunities continue to arise from innovation and optimisation, particularly through the leveraging of data analytics.

Initiatives and progress

In 2023, the consumption of coal and gas for power generation decreased by 16.9% and 3.3% respectively compared with 2022. Accordingly, electricity sent out from coal and gas assets decreased by 16.9% and 1.6% respectively (on an equity plus long-term capacity and energy purchase basis).

SASB Reference: IF-EU-000.D; GRI reference: 301-1, 302-1, 302-3, 302-4, 302-5, 303-5, 305-1, 305-2, EU11

CLP reports the annual operating performance of those of its generation assets that fall within the [reporting scope](#). The asset performance metrics include availability, generation sent out, thermal efficiency, and energy intensity.

Download CLP's asset performance statistics

Country	Total Servers (TJ)	Servers in Top 10 Data Centers (TJ)	Servers in Top 1 Data Center (TJ)
USA	250,177	146,370	2,854
France	394,274	151,327	2,936
Germany	426,190	142,304	2,717
UK	403,379	134,776	2,243
China	485,453	107,183	2,620



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Energy services and solutions

Our approach

CLP actively engages with its customers by reaching out with a suite of energy services and solutions designed to meet their evolving needs in the changing market landscape. CLP is also leveraging its digital capabilities to apply new technologies that are driving behavioural changes in customers’ habits of energy consumption.

Strategy and procedures

Drawing on its long expertise in the power industry, CLP is implementing various initiatives to encourage residential and business customers and the community at large to use energy more efficiently and contribute to environmental protection. CLP is actively promoting energy conservation:

- Equipping customers with cutting-edge tools and technical assistance;
- Facilitating customers to unlock greater energy efficiency potential;
- Offering customers valuable energy insights and practical tips for energy conservation ; and
- Educating the public through awareness campaigns and informative programmes

Goals and targets

The CLP Power Customer Service Quality Policy includes a commitment to support customers in using CLP products and services more efficiently and effectively.

In Hong Kong, CLP Power has worked closely with the Hong Kong SAR Government on the Development Plan, which covers the second five-year period under the current [Scheme of Control \(SoC\) Agreement](#). The Plan includes:

1. **Performance targets:** Under the current SoC Agreement, targets have been set (e.g. energy saved annually, number of buildings or customers supported, etc.) in order to drive the performance of the CLP Eco Building Fund, the CLP Electrical Equipment Upgrade Scheme and energy audits.
2. **Peak Demand Management:** This enables commercial and industrial customers to help lower the overall system demand, reducing the need for investment in new generation units in the long term. The programme leverages artificial intelligence (AI), developed in partnership with Autogrid, to help lower demand. The target is to achieve a reduction of up to 60MW from the demand peak.
3. **A new five-year energy-saving target:** CLP Power must achieve energy savings of at least 4% on the basis of average annual sales within a five-year period in order to earn incentives under the SoC Agreement. Further incentives will be earned if energy savings reach 5%.

Read more on CLP Power’s SoC Agreement performance

Initiatives and progress

CLP Power has conducted the Interim Review of the 15-year SoC Agreement with the Hong Kong SAR Government.

A greater number of CLP Power customers have enrolled in the Feed-in Tariff (FiT) Scheme, which encourages the development of renewable energy in Hong Kong. By the end of 2023, 376MW of renewable energy capacity was approved under the Scheme, amounting to the annual electricity usage of 89,700 residential customers.

In addition to its SoC Agreement obligations, CLP has harnessed its innovation abilities and digital capability to develop a range of customer-facing solutions and energy services.

GRI reference: 2-6, 302-5

CLP’s Group Ventures & Research functions integrate the venture investing, ecosystem activities as well as research capabilities into a single team. This enables a more systematic and synergistic process of formulating strategic focus and long-term vision, extracting strategic knowledge and value, and facilitating the cross-pollination of strategic insights across the CLP Group.

For its venture investing activities, CLP seeks opportunities that will enhance its core business and offer long term growth possibilities.

CLP has a global open innovation platform that sources solutions to relieve pain points, achieve operational excellence, build new capabilities, and develop business potential. CLP actively participates in accelerator programmes such as Free Electrons and the Phoenix scouting programme, working with start-ups in China and around the world to explore new business models and pilot and deliver cutting-edge technologies and solutions. These efforts have also helped CLP develop a suite of end-to-end products and services along the electric utilities value chain, summarised in the tables below. The Group has over 354 full time innovation positions and has spent over HK\$ 170 million in innovation projects this year.

CLP’s research work starts with identifying emerging ideas and technologies that could critically impact the business in the long term. Its research activities leverage partnerships with international associations, research institutes and universities.

Case Study

AutoGrid enables CLP's Demand Response programme to set a global industry standard

CLP's Group Ventures & Research team continues to play a unique role and make key strategic venture investments to derive tangible strategic value for CLP. CLP's venture investments have helped CLP to achieve different milestones.

CLP's venture investments are bringing direct value to CLP's operations. One example is CLP's implementation of AutoGrid for Peak Demand Response, one of the world's largest Demand Response programmes. Since 2020, CLP Power has invited residential customers with smart meters to make slight adjustments to their consumption behaviour and reduce their energy use during peak demand periods on hot summer days. In 2023, 950,000 households were invited to join the programme, and around 70% of these households saved a total of 410,000 kilowatt hours (kWh) of electricity over a four-hour peak time, which is equivalent to a reduction of 160 tonnes of carbon emissions.

CLP's venture investments are also unlocking new lines of business. In 2023, CLP sponsored a technology pilot with Hydro X, an Israeli hydrogen transportation and storage technology company, to successfully demonstrate that the Hydro X solution can safely store and extract hydrogen at high quality as an initial step to scale up its technology platform. In 2021, Hydro X received an investment from CLP-OSEG, CLP's joint venture with the Other Sources Energy Group in Israel. CLP is committed to supporting its ecosystem partners in developing decarbonisation technology such as hydrogen technology.

The CLP Digital team has a wide competence in digital services and solutions and data services. The Digital team is tasked with approaching issues and rethinking operations digitally, particularly in the areas of generation, grid, backend operations, sustainability, customer engagement, and achieving a decarbonised customer base.

Improving energy efficiency	
Products and services	Updates in 2023
 Cooling-as-a-Service (CaaS) Cooling systems are usually a building's largest source of power consumption. CLP provides targeted solutions such as chiller retrofitting and replacement services, CaaS and district cooling solutions to enhance energy efficiency and reduce carbon emissions of building complexes. Under the Build-Own-Operate-model, CLPe will fund, design, construct, operate and maintain the new cooling system to enhance energy efficiency and reduce carbon emissions of building complexes.	• In January 2023, CLPe signed an agreement with Shui On Group to install a new cooling system at Shui On Centre in Hong Kong to enhance the energy efficiency of this Grade A office building. The new system is expected to reduce electricity consumption by more than 30% annually. • In February 2023, CLPe collaborated with Chinachem Group to build a new water-cooled air conditioning system at Nina Tower. The chiller plants together with the PlantPro system will reduce the electricity consumption by over 50%, equivalent to a reduction of 7,000 tonnes of carbon emissions a year. • In December 2023, CLPe secured a Cooling-as-a-Service agreement with Henderson Land for the enhancement of the existing chiller plant at Flora Plaza. The upgraded chiller plant is anticipated to reduce electricity consumption by over 50% compared to the existing condenserless chiller system, resulting in an annual reduction of 200 tonnes of carbon emissions.
 Solar-as-a-Service (SaaS) Solar photovoltaic (PV) systems convert solar energy into electricity to support energy demand, and allow customers to feed electricity back into the grid.	• On 31 August 2023, a ceremony to celebrate the connection of the distributed solar PV project to the grid was held at MTR Shenzhen, which marked the readiness of the 1.66MWp solar PV system for power generation. It is estimated that the system, which is installed on the aluminium alloy roof of the car compartment inspection and washing depot, will generate 1,800MWh of clean energy and eliminate 948 tonnes of carbon emissions annually. • CLPe completed the solar systems for LINK Properties Limited in 14 locations and will further explore opportunities for solar projects in other LINK properties to support the company's sustainability target. • In support of the government's sustainable development plan, CLPe completed two floating solar projects for government premises at Ha Mei San Tsuen and Chau Tau.
 Battery Energy Storage System (BESS) as a Service Tailor-made BESS solutions can greatly improve business performance by providing safe, efficient and secure energy storage. CLPe provides a one-stop design, build and implementation service, technical support and maintenance work, collaborating with its customers to develop fully integrated energy storage solutions that meet their specific needs.	• In 2023, CLPe deployed over 30 Battery Energy Storage Systems across construction sites operated by prominent construction companies in Hong Kong. The replacement of conventional diesel generators resulted in a reduction of over 2,500 tonnes or a 75% reduction in carbon emissions compared to those created by diesel generators. These BESS installations, powered by advanced lithium-ion batteries, minimise the risk of system instability during maintenance while operating at significantly lower noise levels. They exemplify CLP's commitment to sustainability and safer construction practices.

Improving energy efficiency	
Products and services	Updates in 2023
 Energy efficiency improvements for buildings Buildings contribute significantly to Hong Kong’s energy demand. CLP offers various subsidies to support customers undertaking energy-saving retrofitting works. - CLP Eco Building Fund: The fund provides subsidies for energy efficiency improvement works for residential, commercial and industrial buildings. CLP Electrical Equipment Upgrade Scheme: This scheme for business customers provides subsidies to customers, especially SMEs, to replace or upgrade their lighting and air-conditioners to more energy-efficient models.	- The CLP Eco Building Fund provides HK\$100 million a year to subsidise improvement works for a target number of 400 residential blocks and C&I buildings that will enhance the energy efficiency of their communal areas. The initiative aims to save 48GWh of energy annually. - In 2023, customers saved around 50GWh of electricity from over 700 buildings with the support of the Eco Building Fund. - Since the launch of the Electrical Equipment Upgrade Scheme in 2019, over HK\$110 million in subsidies has been offered to C&I customers for replacing or upgrading their electrical equipment to more energy-efficient models.
 Energy efficiency improvements for businesses CLP Power works in partnership with institutions to offer flexible and innovative financing solutions to businesses.	- Building on previous collaboration, CLP Power and DBS Bank (Hong Kong) Limited introduced a new “SME Low-carbon Rewards” programme in 2023. It offers subsidies to eligible CLP Power business customers for purchasing CLP Renewable Energy Certificates, along with a series of privilege banking offers. - In 2023, ESR Group Limited (ESR) closed the first sustainability-linked loan in Hong Kong for a brown field data centre project with support from CLP Power. Far East Consortium International Limited (FEC) obtained its first five-year sustainability-linked loan from a bank with the support of CLP Power. The loan will help FEC improve its energy conservation performance and further reduce its carbon emissions , thereby contributing to the sustainable development of its hotel business in Hong Kong.
 Peak demand management To facilitate a more sustainable electricity supply, CLP works with customers to manage electricity demand and incentivise reduced consumption during periods of peak demand. Initiatives include: - Demand Response programmes are offered to commercial, industrial and selected residential customers with smart meters in Hong Kong to lower overall system demand, reducing the need to invest in new generation units. - EnergyAustralia’s PowerResponse includes a residential demand response programme and a contracted demand response programme for commercial customers.	- In Hong Kong, peak power demand was reduced by more than 180MW following the activation of CLP Power’s demand response programmes on 26 July 2023, when electricity demand had reached a new peak of 7,452MW. The programme incentivised over 750,000 commercial, industrial and residential customers of CLP Power to reduce consumption. - EnergyAustralia’s PowerResponse has a current contracted capacity of 250MW, involving over 300,000 customers.

Improving energy efficiency	
Products and services	Updates in 2023
 Energy management technology Innovations in technology are continuing to drive improvements in energy management and efficiency. CLP connects customers with a host of solutions and products designed to monitor, optimise and automate their energy usage and consumption patterns: - Launched in 2019, CLP’s Smart Energy Connect (SEC)’s solutions cover the entire value chain from energy supply to energy consumption, and include innovations for carbon-free energy, grid modernisation, power storage, EVs, building energy management and carbon offsetting. - A mass rollout of smart meters to all CLP Power customers, from 2018 to 2025, is supporting Hong Kong’s Smart City transformation.	- CLPe has introduced PlantPRO, an AI-based chiller plant optimisation solution, to 15 sites across Hong Kong. In 2023, PlantPRO achieved an estimated reduction in carbon emissions of over 500 tonnes. Additionally, the first PlantPRO data centre project was successfully completed in 2023. Given the escalating energy consumption within the data centre sector in Hong Kong, the deployment of PlantPRO promises to deliver substantial energy savings as well as enhanced reliability. CLPe has partnered with Hong Kong Air Cargo Terminals Limited (HACTL) to elevate that company’s energy monitoring capabilities, installing over 500 energy sensors in HACTL’s offices on Lantau Island. The CLP Smart Sensor Automation product has also been implemented to provide this client with comprehensive visibility into its energy consumption, since visibility is the first step towards energy conservation and carbon reduction. The CLP Digital team is collaborating with Neuron to conduct a trial of their digital twin and energy optimisation product at the current CLP Headquarters in Hung Hom. This initiative serves as the blueprint for future CLP buildings, revolutionising the way CLP operates. By seamlessly integrating digital technologies into buildings, it is unlocking advances in areas such as thermal comfort and energy efficiency. - Since 2018, CLP Power has connected 2.23 million smart meters for around 80% of its residential and SME customers in an effort to promote low-carbon living and further improve the safety and dependability of the power supply. CLP Power expects to replace all its residential and SME customers’ conventional electricity meters with smart meters by 2025.
 Energy audits CLP Power provides free energy audits and various consulting services to C&I customers to help them understand their energy needs and identify opportunities to reduce their energy use and hence their operating costs.	In 2023, CLP Power exceeded the annual total electricity saved target of 48GWh and helped C&I customers save around 50GWh of electricity with more than 600 energy audits completed.

Improving energy efficiency	
Products and services	Updates in 2023
 Energy data and analytics CLP provides a variety of energy consumption analysis tools and products to help customers make smarter energy management decisions. - At EnergyAustralia, PurchasePro is a self-service web portal which allows business customers to purchase an agreed load progressively rather than commit to a price at a single point in time. Smart Energy Online is an online assessment and management tool for C&I customers in Hong Kong. Similarly, EnergyAustralia's InsightsPro allows its C&I customers to access real-time consumption and cost data to optimise their business's energy usage.	- Approximately one third of EnergyAustralia's C&I customer load is managed by PurchasePro, and over 1,000 EnergyAustralia customers have access to InsightsPro. - Over 2,500 C&I customers in Hong Kong use Smart Energy Online to manage their energy consumption and improve their energy efficiency.
 Energy label for electrical appliances The CP Label provides useful information enabling consumers to identify products that are energy efficient and cost effective.	CP Label is Hong Kong's first label for electrical appliances to rate energy consumption and selling price. The initiative helps customers choose energy-efficient and cost-effective home appliances, and is raising public awareness of the importance of energy saving and switching to a low-carbon lifestyle.
 Advanced Retro-Commissioning (RCx) Training CLP Power offers an advanced RCx training course comprising classroom training and field visits for energy management employees and engineers who already have a basic understanding of RCx. The RCx training covers advanced topics and techniques such as data analysis, system diagnosis, measurement and verification.	CLP Power allocated a further HK\$2 million from the CLP Community Energy Saving Fund in 2022 and 2023 to fund a new series of advanced training. Besides offering training to customers, the programme also assisted them in carrying out the energy-saving improvement works required to reduce carbon emissions from their buildings and support Hong Kong's journey towards carbon neutrality. RCx is a systematic and cost-effective energy management solution that allows customers to improve the energy efficiency of their premises by optimising building equipment performance instead of simply replacing equipment.
 24/7 Carbon-free energy (CFE) solutions for corporate customers CFE impact visualisation platform	To stay abreast of interest from corporates in decarbonising their operations on a 24/7 basis, CLP has developed specialised tools for designing and optimising CFE infrastructure (such as solar and wind power installations) and energy storage to match specific corporate load profiles. CLP has also partnered with Granular Energy, winner of the 2023 Free Electrons programme, to provide customers with an easy-to-use tracking and visualisation platform. CLP has launched a website dedicated to educating the public about CFE, and commenced a series of blog posts to champion this area.

Using electricity more widely for transport and industry	
Products and services	Updates in 2023
 Electric-Vehicle-as-a-Service (EVaaS) Electric-Vehicle-as-a-Service (EVaaS) is a value-added service that enables corporate fleet customers to save upfront capital investment and enjoy flexibility in their fleet electrification journey. CLPe will invest, build, operate and maintain EVaaS charging solutions over a period of time at an agreed rate.	- In May 2023, CLPe and AVIS Hong Kong (AVIS) launched Hong Kong's first Electric Vehicle as a Service. Fleet operators and businesses in industries ranging from logistics to construction can select EVs from AVIS's wide range of vans and vehicles according to their needs, and CLPe will then customise their charging solutions by funding, procuring, and installing the EV charging facilities they require. - During the contract period, customers will pay a monthly fee to CLPe which covers AVIS's rental fees and the EV charging service fees, thus, minimising the investment costs, company assets and manpower needed for electrification. Other benefits include 24-hour support services, insurance coverage, car licence fees, and repairs and maintenance of charging facilities and vehicles. A cloud management system and mobile app designed by CLPe enables customers to easily manage their fleets and make adjustments according to their operational needs. This system monitors the real-time use of charging facilities and the charging status of EVs and provides electricity consumption data.
 Electric vehicle infrastructure - CLP Power continues to support green motoring and the electrification of vehicles in Hong Kong – a long-term government policy objective set out in the <i>Hong Kong Roadmap on Popularisation of Electric Vehicles</i>. CLP Power extended the free charging service for its EV charging stations until further notice. CLP Power's Eco Charge 2.0 EV Power Supply Support service. In 2016, CLP formed Smart Charge (HK) Limited, a joint venture with HKT to provide a one-stop service for EV charging. - The CLP Charge Point Operator platform and EV driver app were successfully launched in 2023, both of which are instrumental to the electrification of the CLP fleet and the creation of a future business model that includes charging-as-a-service. - In Australia, EnergyAustralia has outlined plans to support the transport industry with vehicle electrification by working with EV manufacturers, fleet operators and their customers to plan and build the charging infrastructure they need.	- CLP Power continued its efforts to promote green motoring in Hong Kong by providing free EV charging services. In 2023, CLP continued to enhance its charging infrastructure within CLP premises to support greater EV adoption in its fleet. - From the launch of the Eco Charge 2.0 service in November 2020 up to the end of 2023, CLP Power had completed preliminary power supply capacity assessments for more than 577 applications from owners of private buildings and estate managers, covering over 136,000 parking bays. Professional advice was also provided to the applicants. - To date, Smart Charge has designed, installed and is currently managing EV charging infrastructure in residential car parks in Hong Kong covering a combined total of almost 10,000 parking bays. - In 2023, EnergyAustralia reinforced its role as a leader in the electrification of Australia's transport sector. Its unique Green Transport Energy solution, which integrates EV chargers with onsite solar and battery storage, is not only supporting efficient EV charging but is also enhancing sustainability by harnessing renewable energy sources. Throughout the year, EnergyAustralia actively engaged with EV manufacturers, fleet operators, and customers with a focus on developing and implementing customised infrastructure solutions. A highlight of 2023 was a collaboration with Tropic Wings, North Queensland's largest tours and charter bus operator, involving the replacement of 12 diesel buses with electric ones, each supported by a customised charging solution. EnergyAustralia is responsible for delivering and overseeing the electrification infrastructure in Cairns, with completion expected by mid-2024. The project, valued at A\$10.2 million, includes a A\$4.75 million contribution from the Australian Renewable Energy Agency (ARENA), underscoring its importance for promoting sustainable transport.

Enabling low-carbon electricity supply	
Products and services	Updates in 2023
 Decentralised renewable energy / rooftop solar CLP offers feed-in tariffs and rooftop solar for its customers to support the decentralisation of energy and the growth of renewable energy. - The Feed-in Tariff (FiT) Scheme in Hong Kong enables customers to install a solar and/or wind power renewable energy system on their premises and connect the system to the CLP grid to earn FiT payments. - The Solar Home Bundle is now available to eligible households in NSW in Australia with annual electricity usage of above 6,000 kWh. EnergyAustralia will be launching the Solar Home Bundle in Victoria in early 2024 and are looking at ways to bring this offer to customers in other states.	- Since the commencement of the FiT Scheme in mid-2018 to the end of 2023, CLP Power had received over 24,800 applications. Around 96% of the applications, representing a total capacity of around 376MW, have been approved. About 21,100 applications have been completed and connected to the grid to enjoy FiT. - The FiT Scheme continues to attract customers from various sectors, including business and industry, schools, urban households and village houses. - The Solar Home Bundle was launched as a scale product in September 2021 following the successful trial of the Solar Plus Plan in 2020. EnergyAustralia aims to have more than 1,000 customers on the Solar Plus plan and Solar Home Bundle by the end of 2024 with ambitions for numbers to grow significantly as it is rolled out in other states.
 Corporate Power Purchasing Agreements (PPAs) Businesses wishing to increase the direct renewable energy available to them may elect to enter Power Purchasing Agreements with CLP. PPAs provide customers with the most credible and efficient clean energy available.	With increasing market demand, CLP proactively engages with customers in the property sector to support their renewable energy conversion journey. There was continued interest in the direct purchase of renewables whether as annual purchasing or as 24/7 granular matching. This is evidence of positive momentum in the market. CLP leverages expertise in renewable energy assets, battery storage and energy management indicator to support its corporate customers.
 Carbon Credit Website and Carbon calculator CLP revamped the Carbon Credit websites to promote public education and awareness about carbon offsets. The user-friendly layout now includes updated and comprehensive information about the carbon market and CLP's carbon credit program.	CLP refreshed its carbon credit website to educate the market about the appropriate use of carbon credits. The Group is currently working on further enhancements to provide broader education on certificates and their role in decarbonisation journeys.

Offsetting emission that cannot be otherwise avoided	
Products and services	Updates in 2023
 Energy attribute certificates (EACs) CLP offers a range of EACs to support customers' decarbonisation objectives. In Hong Kong, Renewable Energy Certificates (RECs) offer an alternative for customers wanting to support local renewable energy generation. Each unit of an REC represents the environmental attributes of electricity produced by local renewable energy sources, generated or purchased by CLP Power. In Mainland China, CLP China's renewable assets issue Green Electricity Certificates (GECs), which are the only officially recognised renewable energy certificates in Mainland China that can be used to meet obligations or to support voluntary green power trading. In Australia, EACs serve as an option to reduce customers' Scope 2 emissions when decentralised renewables are not a viable option. For example, PureEnergy from EnergyAustralia helps customers support the production of green energy from government accredited renewable sources.	• In 2023, close to 173GWh units of RECs were sold, a significant increase from the 100GWh units sold in the past year. • CLP China's wind and solar projects are eligible to apply for and issue GECs that can be traded through the market. For example, Yangzhou Gongdao Solar Power Station in Jiangsu province transfers the renewable electricity bundled with GECs to the zero-carbon energy customers in the region. • Around 12,000 EnergyAustralia customers have chosen a GreenPower government accredited PureEnergy option for their electricity supply.
 Carbon Credits Carbon credits represent carbon emissions avoided as a result of emissions reduction projects. CLP encourages its customers and corporates to purchase these carbon credits to offset their unavoidable emissions. In addition to selling carbon credits, CLP also collaborates with many industries to deliver carbon offset initiatives. EnergyAustralia has various programmes that provide carbon neutral electricity, such as: • Go Neutral, under which residential customers can opt to purchase corresponding carbon offsets to cancel out the emissions associated with their home gas and electricity usage, at no added cost to themselves. • Business Carbon Neutral, which helps business customers offset emissions associated with their electricity usage.	• CLP continues to promote carbon offsetting and support customers' decarbonisation journey. Customers can offset their unavoidable emissions with CLP Carbon Credits after taking actions to cut down their emissions. CLP had a HKD\$ 1.8 million offset of 79,000 tCO2e in 2023. • EnergyAustralia offers Climate Active-certified electricity and gas products for customers of all sizes that have opted in to the Go Neutral programme. This means that the Company purchases vetted carbon offset certificates to offset the emissions associated with the energy usage of these customers in their homes and businesses. EnergyAustralia exclusively purchases accredited international offset certificates derived from projects reviewed by external assessors, and smaller volumes of Australian Carbon Credit Units, in line with the Climate Active programme, its internal trading policy documents, and the advice of external assessors engaged by EnergyAustralia to ensure thorough vetting and quality assessment. Currently, around a quarter of EnergyAustralia's residential customers receive carbon offset energy as part of the Go Neutral programme. By the end of 2023, EnergyAustralia had selected and purchased offsets equal to over 6 million tonnes of greenhouse gas emissions for its residential and business customers. This represents the largest Climate Active certified offset offering in the Australian energy sector, and the second largest in all sectors in Australia.

Case Study

Helping Link Asset Management Limited (Link) achieve its 2035 Net Zero Pathway goals

CLP Power and CLPe have signed a Memorandum of Understanding (MoU) with Link Asset Management Limited to improve the energy efficiency of Link's premises and raise ESG awareness among its tenants.

To assist Link in achieving its 2035 Net Zero Pathway goals, CLP carries out regular energy audits on Link's properties, which include shopping arcades, fresh markets and car parks, and provides recommendations for improving their energy efficiency. CLP is also supporting Link's energy-saving initiatives through subsidy schemes such as the CLP Eco Building Fund. One of these funded projects has involved the installation of energy-efficient cooling systems in 21 shopping arcades, resulting in savings of

more than 20 GWh of electricity over the past five years. This is equivalent to the annual electricity consumption of over 5,000 households, and represents a reduction of 8,800 tonnes of carbon emissions.

CLP and Link will continue to explore collaboration opportunities, including the implementation of energy management solutions at Link premises and the potential acquisition of sustainability-linked loans from financial institutions. Additionally, CLP Power will provide technical support for EV charging installations to encourage low-carbon transportation. The two companies will also explore the feasibility of shifting from diesel generators to battery energy storage systems at Link's construction sites.

Case Study

Teaming up with Chinachem Group to push towards carbon neutrality

CLP Power signed a new MoU with Chinachem Group (Chinachem) in November 2023 to support Chinachem's pursuit of carbon neutrality.

This collaboration will introduce new sustainability initiatives to further enhance Chinachem's efforts in energy efficiency, decarbonisation and electrification. Under the new MoU, CLP Power will continue offering Chinachem technical assistance to replace conventional diesel generators with Battery Energy Storage Systems at two of its project construction sites. CLP Power will also support Chinachem's hotel division, Nina Hospitality, in implementing smart laundries and electric kitchens to enhance its operational and energy efficiency.

Chinachem has been implementing an ambitious carbon reduction roadmap CCG 3050+, aiming at the reduction of at least 51.8% of 2020 Scope 1 and 2 carbon intensity by 2030. In 2019, Chinachem and CLP Power signed a

five-year Collaborative Agreement on Smart and Green Initiatives to support the implementation of smart and low-carbon technology in Chinachem's iconic Nina Tower. Approximately 14 gigawatt hours (GWh) of electricity have been saved to date. The Agreement has established a solid foundation for the two companies to expand their collaboration in electrification, decarbonisation and energy efficiency.

CLP Power will also help Chinachem with the decarbonisation of its facilities. This involves utilising a pilot Energy Management System at Nina Mall that is driven by big data analytics and 5G technology to accurately forecast the cooling load. To identify further opportunities for decarbonisation, CLP Power will also conduct energy audits on Chinachem's new development projects. These include a premier cold storage and logistics facility in Kwai Chung, and the new Tung Chung business hub, which will house a green data centre.

Customer privacy

Our approach

Under the CLP Code of Conduct, every employee must safeguard the Company’s assets and the resources entrusted to the Company’s care, including customer information, against loss, theft or misuse.

GRI reference: 418-1

In Hong Kong, the Personal Data (Privacy) Ordinance (PDPO) governs the protection of the personal data of individuals. The Data Protection Principles in the PDPO outline CLP Power’s obligations as a data user. They relate to the collection, accuracy, retention, use and security of personal data, as well as individuals’ rights to access and correct their personal customer data.

Under the *Privacy Act 1988* (Privacy Act), EnergyAustralia has obligations to ensure the appropriate collection, use, disclosure and security as well as access to individual’s own personal information. There are also mandatory data breach reporting obligations in relation to Notifiable Data Breaches. EnergyAustralia is required to report data breaches if there is unauthorised access to, unauthorised disclosure of, or loss of personal information that EnergyAustralia holds, and if this is likely to result in serious harm to one or more individuals, and if EnergyAustralia has been unable to prevent the likely risk of serious harm with remedial action. Notifications must be made to the Office of the Australian Information Commissioner (OAIC) and to the affected customers with a description of the data breach, the kinds of information involved and recommendations for customers in response to the data breach.

On September 2023, the Australian Government expressed support for significant reforms to the Privacy Act, which are likely to include: Mandatory Privacy impact assessments for high risk activities, a Statutory Tort / direct right of action for serious invasions of privacy under the Privacy Act, establishment of litigation funds for the OAIC, maximum reporting timeframes for data breaches being reduced to 72 hours, and requirements for privacy policies to include references to where automatic decision-making has been used to decline/approve access to essential services such as utilities. A draft Bill is expected in 2024 which will likely contain additional detail, such as the compliance timeframes expected from entities such as EnergyAustralia.

In May 2018, the Australian Government announced that energy data would be included in the Consumer Data Right

(CDR). The sharing of product data in the energy sector commenced on 1 October 2022 and consumer data sharing commenced on 15 November 2022. It gives customers the right to share certain transaction, usage and product data relating to their electricity accounts with EnergyAustralia with authorised parties under the CDR regime who are then able to compare what other electricity offers may better suit the customer’s needs. EnergyAustralia was granted an exemption by the Australian Competition and Consumer Commission (ACCC) from the original commencement date in November 2022, requiring EnergyAustralia to commence CDR data sharing by 15 May 2023.

By 15 May 2023, EnergyAustralia successfully went live as a CDR ‘data holder’, meaning EnergyAustralia is now able to share information required under the CDR regime for most of its eligible residential, small business, and large business customers. EnergyAustralia continues to refine its CDR data sharing platform as it receives feedback and enquiries from customers or other CDR participants.

Strategy and procedures

The [CLP Privacy Principles](#) set out the Company’s commitment and approach to protecting personal data. CLP has a designated Corporate Data Protection Officer who oversees the governance of personal data management of business operations in Hong Kong. Their contact details can be found on CLP’s [CLP Privacy Policy Statement](#).

The Group preserves the confidentiality of the personal data provided to it in accordance with the [CLP Privacy Policy Statement](#), which was updated with effect from 1 November 2018. The CLP Privacy Policy Statement demonstrates the Company’s approach to protecting personal data and is applicable to everyone across its entire Hong Kong operations who handles personal data. All employees who have to handle or process personal data of any individual for business operations in Hong Kong must follow CLP procedures, practices and local regulations in relation to personal data privacy.

These procedures are outlined in the CLP Personal Data Protection Compliance Manual which sets out CLP’s data protection compliance framework, including its governance structure and the roles and responsibilities of different functions and personnel within the governance structure. All business units with operations in Hong Kong must implement and abide by this manual which also provides guidance on the protection and use of personal data. Adherence to policies and procedures regarding privacy and data protection are further embedded in [CLP’s Code of Conduct](#) and the compliance management procedures of the Code.

Under the Code of Conduct CLP commits to compliance with all laws and regulations and to abiding by the Company's policies and procedures which includes data privacy laws and the CLP Data Protection Compliance Manual. The Code of Conduct stipulates that anyone found violating the Code will be subject to disciplinary action. CLP's internal audit function appraises compliance with policies and procedures and evaluation of the effectiveness of the overall controls in accordance with their audit cycles and assessment scope. In addition, suppliers are informed of and expected to comply with data privacy laws as outlined in [CLP's Supplier Code of Conduct](#).

Monitoring and follow-up

CLP monitors and documents any complaints related to breaches of customer privacy and the loss of customer data. In addition to the CLP Personal Data Protection Compliance Manual, there is a written guideline used by the Customer Success and Experience Business Unit for handling customer data incidents. The guideline includes information about the classification and assessment of the scope and severity of data incidents, reporting roles and responsibilities, and an incident response strategy and checklist. The Corporate Data Protection Officer also retains a record of data incidents and follow-up actions.

EnergyAustralia has developed and maintains a Data Breach Response Plan which is implemented by a Data Breach Response Team. The plan outlines the strategy for assessing, managing, containing and reporting data breaches within required timeframes, and outlines relevant roles and responsibilities. The plan is activated whenever a potential data breach is identified.

Learn how CLP responds to cyber security incidents

→

Training and awareness

CLP further protects customer information through a focus on preventing unauthorised disclosures to malicious attackers or impersonators. This involves carrying out specific awareness activities in the year such as communications and quality assurance assessment, and providing coaching and additional training for frontline staff. Company-wide communications, employee training and briefing sessions with leadership are also conducted to ensure all staff understand current privacy and data management obligations. A Data Breach Response Plan has been formulated and a Data Breach Response Team established to ensure the business has the capability and the procedures in place to respond swiftly to any such incidents.

A compulsory e-learning programme on data protection is given to all new employees and is periodically mandated to be given to all employees to refresh their knowledge. CLP also runs frequent tailored data protection awareness programmes, which include regular briefings, case sharing, quizzes and refresher activities, for employees who have regular interaction with protected data (such as members of the Legal Review Committee). Industry threats are continuously reviewed with a view to strengthening controls over the management and monitoring of networks, systems and mobile devices, data loss, and suspicious cyber activities. CLP also regularly emphasises the need for potential privacy incidents to be reported in a timely manner.

At EnergyAustralia, briefing sessions on customer privacy include leadership, enterprise-wide communications and employee training to ensure all staff are up to date with current privacy and data management policies and practices. Privacy training is a compulsory requirement for all new employees, and subsequent refresher training is provided to all employees annually.

Initiatives and progress

In 2023, CLP Power reported no cases of customer data loss in Hong Kong. In Australia, EnergyAustralia reported one case involving the compromise of customer data in the year.

GRI reference: 418-1

CLP Power was awarded the Privacy-Friendly Awards 2023 Outstanding Gold Certificate by the Office of the Privacy Commissioner for Personal Data (PCPD) in Hong Kong, in recognition of its commitment to and efforts in protecting the personal data privacy of its customers and stakeholders.

Customer satisfaction

Our approach

CLP is committed to providing high quality service and good value to customers, including by meeting its regulatory requirements and delivering on its customer service pledges.

GRI reference: 417-1

Strategy and procedures

CLP customers can access information about its products and services quickly and efficiently through communication channels such as an email welcome pack sent to new customers, the CLP Power websites and the CLP Mobile App, as well as the EnergyAustralia websites and Mobile Apps. CLP also engages with its residential, commercial and industrial customers through satisfaction surveys, online service portals, site visits to its assets, account manager support, and through its Customer Service Centres and Customer Interaction Centre.

CLP strives to respond effectively to customer needs and preferences. All escalated cases will be studied thoroughly to ensure issues raised by customers are appropriately resolved.

EnergyAustralia averages one to two million conversations with customers every year, either over the phone or via digital service channels. In 2023, EnergyAustralia handled more than 1.5 millions calls. It also engages with more than 100,000 individuals, businesses and stakeholders annually through formal research to help shape its business decisions, products and services.

Monitoring and follow-up

In Hong Kong, an external market research consultant conducts an annual telephone survey to measure customer satisfaction. The customer satisfaction score considers overall satisfaction towards CLP, and includes a relative rating comparing CLP to an ideal utility in Hong Kong. The score is benchmarked against the public utilities in the energy sector and other public service organisations.

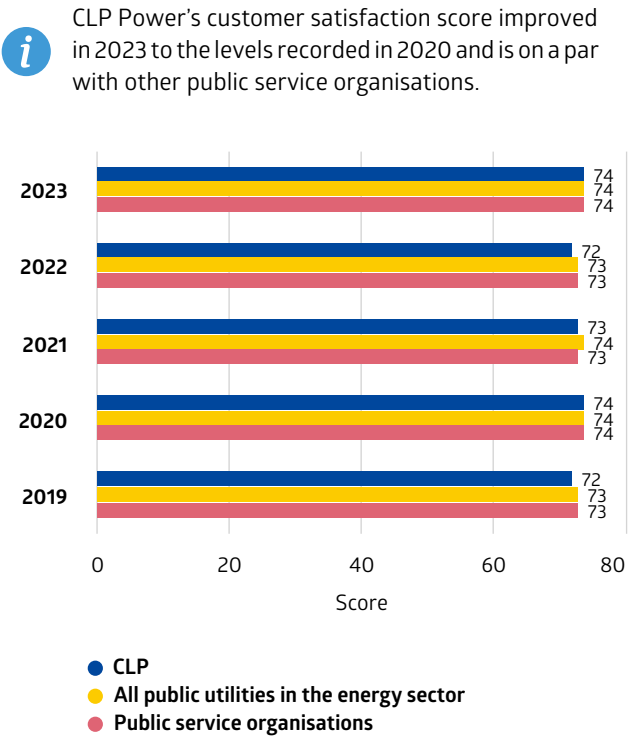
EnergyAustralia counts the number of calls and complaints it receives, and measures customer satisfaction through its Strategic Net Promoter Score (SNPS). Customer satisfaction is measured monthly via an online NPS survey sent to a representative group of customers. The Transactional Net Promoter Score (TNPS) is also used to track customer satisfaction in relation to specific customer interactions, providing more direct feedback to frontline staff.

Initiatives and progress

CLP is committed to providing safe and reliable energy for its customers to support their business operations and daily lives. Its frontline teams have continued to maintain essential support and customer services, and to ensure the reliability of the power supply.

GRI reference: 417-3, 418-1

CLP Power Hong Kong Limited customer satisfaction score



Australia

Complaints received by EnergyAustralia

The total complaint volumes received in 2023 increased by 25% from the 2022 figure. Following the challenges experienced during the second half of 2022 across the industry, this year continued to experience the impacts of increased cost of living pressures driven by the market uncertainties arising from the energy crisis and market sustainability that resulted in unprecedented call volumes impacting EnergyAustralia's service levels. This resulted in customers reaching out to the Ombudsman directly and bypassing EnergyAustralia's opportunity to resolve the complaints internally.

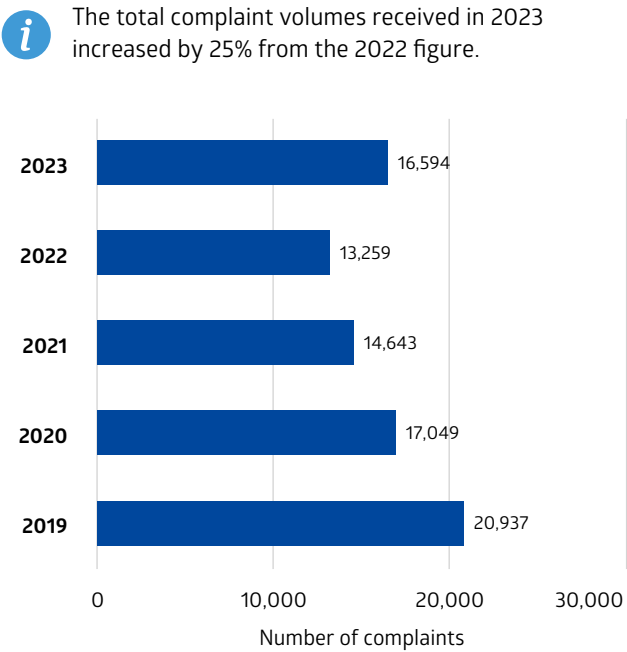
The mid-year market-wide price increase activity coupled with heavy media coverage of increases across the industry at large further triggered complaints to both the Ombudsman and internally to EnergyAustralia. The nature of the complaints highlights the cost-of-living crisis, with energy affordability as a key driver.

EnergyAustralia noted a year-on-year increase in total complaint volumes. Actions are underway to restore stability in complaints performance, and the fourth quarter of 2023 showed a declining trend in complaint volumes. This was the result of bolstering EnergyAustralia's resources to resolve complaints and to meet growing demand from customers seeking hardship assistance, coupled with initiatives already in place to reduce the incoming volume of complaints.

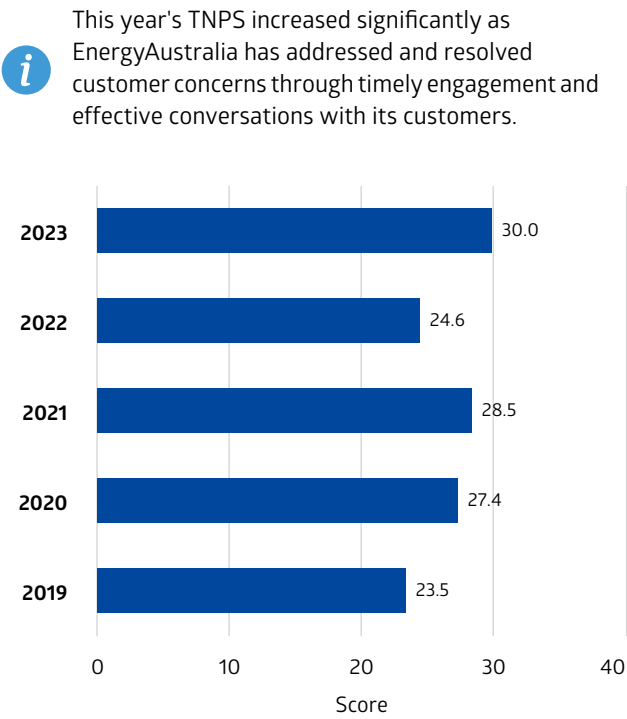
Despite these challenges, EnergyAustralia continued to go above and beyond to successfully address and resolve customer concerns through timely engagement and effective conversations with its customers preventing further escalations.

This has been reflected in EnergyAustralia's TNPS which is at a 5 year high of 30.

Complaints received by EnergyAustralia



EnergyAustralia's Transactional Net Promoter Score (TNPS)



Security management

Our approach

CLP Group Digital's Group Security protects CLP's people, property, information and reputation against security risks.

Strategies and procedures

CLP's security strategy is guided by the CLP Risk Management Framework, with oversight from the Board. The Group Security Policy, last updated in 2021, lays out the overall approach taken to minimise risk to people, including employees, contractors, customers and the public, and to manage other business risks to acceptable levels. In 2023, all cyber security-related standards have been updated to take into account technological advances, changing legislation and emerging standards of good practice.

The policy addresses the following areas:

- **Integrated and centralised organisation and governance:** Security is an integrated department within CLP Digital. It covers all relevant lines of security activity within the Company, and operates independently of the IT and operational technology governing organisations.
- **Policies, standards and guidelines:** Provides a suite of documents guiding the management and monitoring of risks in line with recognised industry standards.
- **Understanding the threats:** Ensures decisions related to the application of security measures are appropriately informed and, wherever possible, intelligence driven.
- **Communications and awareness:** Aims to continuously enhance the security awareness and knowledge of employees and contractors to encourage security-positive behaviour.
- **Technical domain:** Ensures that robust operational detection and response tools are developed, applied and maintained.
- **Liaison:** Aims to maintain constructive and trusted relationships with external stakeholders (such as national cyber security agencies and industry bodies) to ensure speedy and effective cooperation if the need arises.

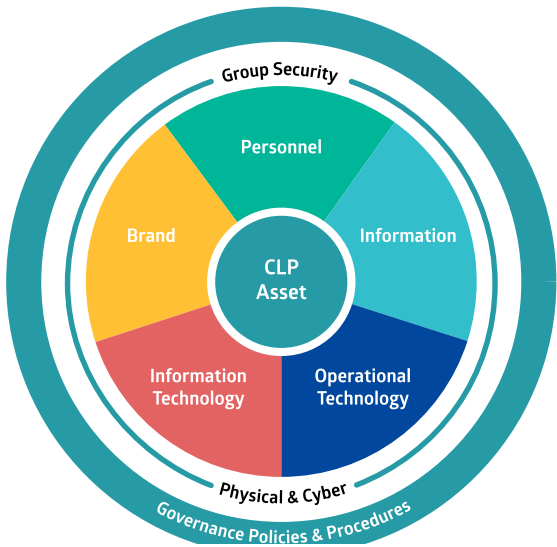
The strategy includes cyber security and physical security measures to protect five separate but co-dependent lines of activity:

- **Information:** The confidentiality, integrity and availability of data stored in both hard and electronic formats;

- **Operational Technology (OT):** Hardware and software that detects, monitors or controls physical devices (such as turbines) at CLP assets;
- **Information Technology (IT):** The IT used to store, retrieve, transmit and manipulate data or information;
- **Personnel:** Staff employed by CLP, both at the workplace and travelling for business; and
- **Brand:** CLP's image, identity and associated reputation.

CLP security measures are robust and scalable. They provide comprehensive, layered and flexible protection.

CLP's approach to security



Operational responsibilities

The Group Security team was established in 2020 to ensure that CLP's cyber and physical security capabilities and efforts complement each other. The team gives CLP in-house capabilities across the full range of security skillsets. Following internal restructuring in 2022, the Group Security team was integrated into Group Digital in a strategic move to support CLP's transition. Group Security is now separate from Group Operations but maintains close working relations with its various departments in particular HSE and the Project Management Office. Regular reports are provided by Group Digital to the Board's Audit & Risk Committee (ARC), providing assurance that adequate risk management is in place and being followed and that appropriate remedial action is being taken where needed.

Read more from the Audit & Risk Committee Report in 2023 Annual Report

Physical security

Our approach

Physical security is applied appropriately to all of CLP's assets. Enhanced measures are in place to protect sensitive locations such as data centres, control rooms, and transmission and distribution sites.

GRI reference: 410-1

Strategies and procedures

Physical security encompasses physical measures to safeguard people, prevent unauthorised access to equipment, facilities, material and documents, and safeguard these items against security incidents. It covers physical barriers (e.g. fences), security lighting, physical access controls and surveillance systems.

A comprehensive body of documents has been developed to assist all regions and regional assets in establishing or revising their security management documentation. These documents are aligned with international standards for security, and lay out best practices from across the Group.

- The CLP Physical Security Standard lays down the minimum standard of physical security measures expected at every asset owned or operated by CLP, regardless of location or role.
- The CLP Physical Security Guideline provides practical guidance on the security requirements expected of all business units, in line with the Group Security Policy and Physical Security Standard. For instance, it includes guidelines on how to identify potential areas of weakness, develop appropriate security countermeasures, and prepare a security response plan.
- The CLP Security Vulnerability Assessment Guideline is the flagship document that lays down the process for evaluating the security status of any CLP site. Applied in close collaboration with the operator, it provides a comprehensive security “health check” using a risk-based approach that covers threats and areas of weakness, and offers solutions.
- CLP's Security Due Diligence for Project Design and Construction or Site Acquisition has been developed to support projects in the early stages of acquisition or construction. All projects and acquisitions undergo this process, regardless of size.

- The CLP Business Travel Risk Management Plan minimises the security, medical and health risks faced by employees engaged in business travel. On behalf of the Group, the Security team in CLP Digital leads on business travel security in close cooperation with Group HR and Group Finance.

Training and awareness

CLP security staff must always comply with CLP's Code of Conduct. They receive related training on an annual basis. In addition to training on national regulations and site-specific requirements, contract security staff receive induction training on CLP policies relating to a harassment-free workplace, minimum wage guidelines and measures preventing discrimination in the workplace. They must complete this induction training before being granted access to their assigned workplace sites.

2023 has seen the removal of all COVID-19 related control measures and the reestablishment of business travel across CLP's operational footprint. This has meant considerable effort has been made to ensure that all staff either supporting or engaged in business travel were properly briefed about the support they can obtain from the company.

Cyber security

Strategies and procedures

Cyber security incidents occur in a virtual space. Some, such as data leaks, may not cause immediate disruption and therefore be difficult to detect or trace. As CLP’s workplace and operations become increasingly digitalised, electronic devices could become vulnerable to cyberattacks. CLP therefore strives to protect its OT and IT systems, defined as follows:

- **Operational Technology** is the hardware and software that detects, monitors or controls physical devices (such as turbines) belonging to CLP.
- **Information Technology** is the technology used to store, retrieve, transmit and manipulate data or information.

CLP’s management of cyber security is documented in 20 standards which align with the NIST Cyber Security Framework and provide guidelines for selecting and specifying security controls for informations systems and processes to reduce the risk of cyber threats and attacks. These all sit under a unified Group Security policy document. Due to differing regulatory requirements mandated in other jurisdictions, some Regions/ Businesses Units have developed their own documents which align with their local jurisdiction but respect the baseline laid down by Group Security’s 20 standards.

Training and awareness

Employee and associates of the Group represent important cyber defence assets. They need relevant knowledge to raise their awareness and maintain their vigilance.

Continual efforts are made through training and education to raise cyber security awareness among employees and encourage them to practise good “cyber hygiene”. Security awareness activities at the employee level include simulated phishing emails, internal broadcast campaigns, briefings, videos and the introduction of ‘Cyber Champions’, a communication campaign, all designed to promote good cyber practice across departments and functions.

Monitoring and follow-up

CLP continually monitors its IT systems and networks and stays alert to potential threats to its OT systems. Advances in cyber security technologies have helped improve the Group’s ability to detect cyber security breaches. If suspicious activity is discovered in the IT or OT network environments, immediate action is taken to investigate it and, if necessary, isolate the threat and initiate recovery action. Employees are reminded regularly to report suspicious cyber activity directly to CLP Group Security via several channels. Suspicious emails can be automatically reported with the click of a button.

Initiatives and progress

In 2023 a new Security Operations Centre was established in CLP Hong Kong. Deloitte was engaged to support this service, which provides 24/7 security monitoring, reporting and response. As a result, CLP’s ability to manage incidents round the clock has been significantly enhanced. Other similar initiatives have been launched by CLP China, EnergyAustralia and Apraava Energy.

As one of CLP’s top-tier risks, cyber security is regularly assessed and reports made to senior management through the risk management process. Further regulatory changes are anticipated. Although recruiting individuals with the relevant cyber security skillsets can be difficult, CLP is looking to further enhance its capacity in the areas of process, people and technology and to recruit the expertise required to spearhead these efforts.

Read more from the Audit & Risk Committee Report in 2023 Annual Report

Emergency and crisis management

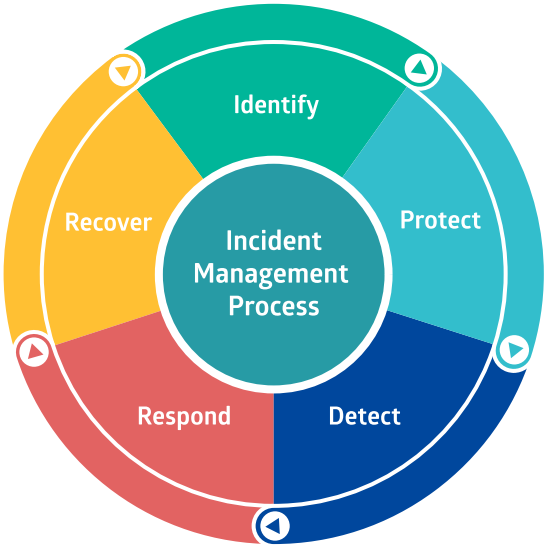
Our approach

Attacks on CLP’s operation systems or physical assets could have dire consequences. CLP must be able to detect any incursion in real time, every time, and remediate the incident before harm results.

Strategies and procedures

CLP maintains robust and regularly tested emergency response and crisis management procedures. As the first line of defence, when an incident arises the Incident Management Process (shown below) is activated.

CLP Incident Management Process



Crisis Management Plan

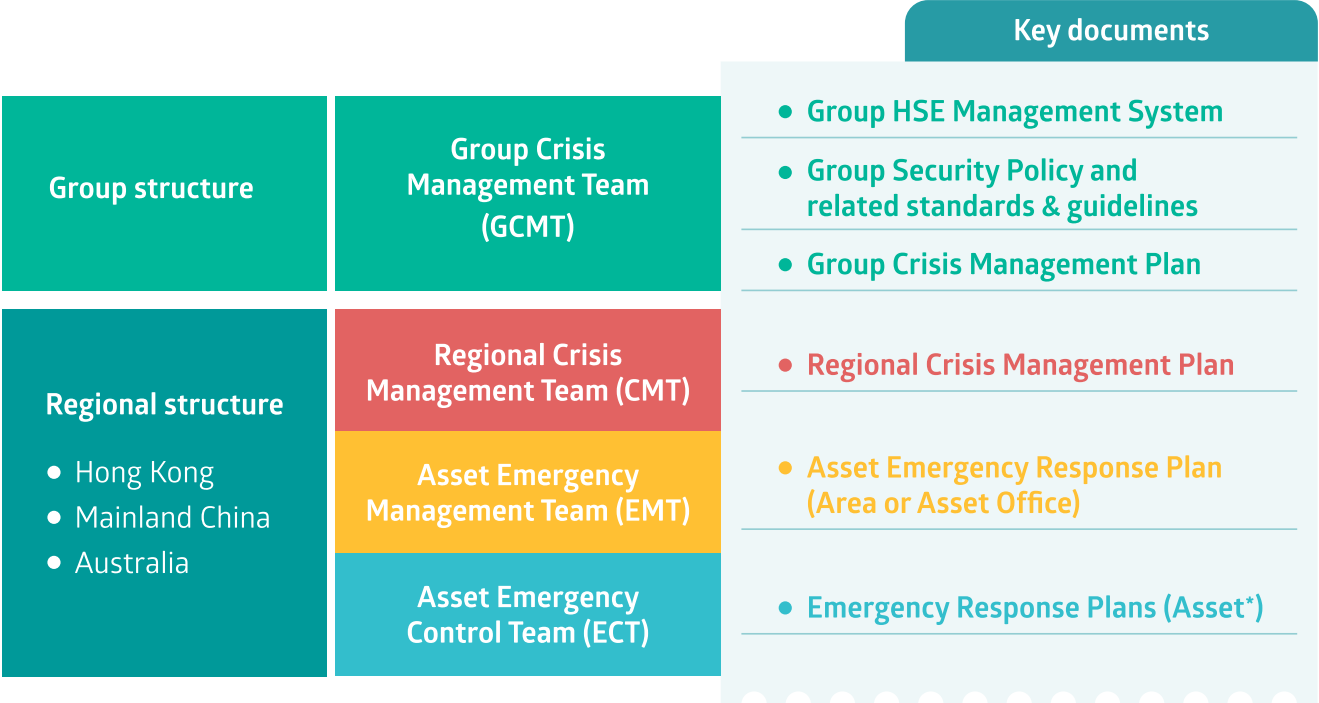
CLP’s Group Crisis Management Plan ensures high levels of preparedness in responding to and recovering from emergency situations, and helps minimise disruption to customers. The Plan is continually reviewed and enhanced to ensure it remains in line with operational changes and the broader operating context. It provides a strong platform for the effective handling of a crisis at the Group level. The plan:

- Outlines crisis management organisation, roles, responsibilities, procedures and processes;
- Specifies the tools needed to ensure the collective response is well planned, well executed and fully integrated across the organisation;
- Describes the relationship and interface between the handling of regional- and Group-level crises; and
- Details the processes that govern internal and external communications during emergencies and crises, ensuring that those responsible for managing a crisis have the necessary information to carry out their responsibilities and that key stakeholders are informed.

The Group-level plan is supported at regional level by Regional Crisis Management Plans which mirror the Group document but are tailored for each region. In addition, detailed emergency response plans have been developed for each asset. These plans are designed to be used by first responders and asset managers.

CLP’s Crisis Management & Emergency Response Structure is outlined in the diagram below.

CLP Crisis Management & Emergency Response Structure



*An asset is anything owned and operated by CLP, covering power stations, depots, offices, transmission lines, customer service centres, etc.

Training and awareness

As specified in both Group and regional publications, emergency response drills are conducted at least annually at all Group sites, with smaller scale drills taking place more often.

Group and Regional Crisis Management Plans are reviewed at least every three years. Regional crisis management exercises are conducted annually as part of the internal peer review process.

Initiatives and progress

CLP has continued to enhance its crisis management capability to ensure the organisation can respond promptly and effectively if an incident occurs.

From a crisis management perspective, the emphasis of the Company has been on maintaining and enhancing capability. Initiatives continued in the year include:

- Considerable work has been conducted to develop a replacement to the now aged Crisis Communications Billboard (CCB). An interim solution has been developed and is being rolled out in the first and second quarter of 2024 to ensure that there is a seamless transition from one platform to another;

- Reviewing and improving notification and communication tools; and
- At Group level, conducting crisis management communication drills and administrative drills to ensure that the equipment and procedures are functional and fully understood by the operators.

Case Study

Crisis management in action during extreme weather events

In early September 2023, CLP implemented multiple measures to maintain a reliable power supply and mitigate the impact of Super Typhoon Saola, when typhoon signals of No.8 and above were hoisted for 38 hours.

To ensure a stable power supply, CLP enhanced inspections of its power supply equipment prior to the typhoon, installed flood gates at substations vulnerable to flooding, and pruned trees that could pose a potential risk to overhead lines.

Given the severe damage caused by Super Typhoon Mangkhut to the power supply facilities of remote villages

in 2018, CLP prioritised the replacement of smart meters at remote villages in 2019. With smart meters in place, the result was improved supply failure detection and a reduction in repair time. Moreover, CLP maintained close communication with power supply companies in Guangdong Province to ensure mutual assistance when necessary.

Additionally, CLP released a short video that offered advice on how to prepare for approaching typhoons and covered some important reminders on dealing with power outages during typhoons.

Our people

Overview

Areas of stakeholder interest	Relevant sustainability agenda
- Workforce size and mix - Fair and ethical work practices - Fostering diversity and inclusion - Talent and skills development - Supporting employees to thrive in change - Health, Safety and Environment management - Occupational health and safety	A safe, future-ready workforce - Attracting and developing diverse future talent and capabilities - Helping our people succeed - Embedding agile and innovative ways of working, mindsets and behaviours - Promoting workplace safety and wellbeing Community stewardship - Promoting responsible supply chains
Outcome for stakeholders	

Achieve gender balance in leadership positions by 2030

Achieve 30% of engineers to be female by 2030

Completed a revamp of the Group's Health, Safety and the Environment Management System (HSEMS)

6

new “Come and Learn” learning modules, with over 1,000 participants from Hong Kong and Mainland China

Zero fatality among employees and contractors

29.1%

of leadership roles occupied by women

13.3%

of engineers are women

Over 4,100 employees have been trained via the Design Thinking programme since its launch in 2019

Workforce size and mix

CLP engaged over 16,200 employees and contractors on a full-time equivalent basis at the end of 2023.

GRI reference: 2-7, 2-8

Reflecting Apraava Energy's transition to a joint venture at the end of 2022, total workforce reporting excludes Apraava

Employees and contractors by region

	Employees			Contractors			Total	
	Average FTE (a)	Permanent %	Fixed-term contract %	Labour supply (b)	Service contractor (c)	Contractors sub-total	Total workforce (a)+(b)+(c) ¹	Contractors in total workforce %
Hong Kong	5,168.0	83.0	17.0	904.1	4,880.1	5,784.3	10,952.3	52.8
Mainland China	702.0	70.1	29.9	24.0	534.8	558.8	1,260.8	44.3
Australia	2,330.0	95.9	4.1	138.5	1,600.0	1,738.5	4,068.5	42.7
Group total¹	8,200.0	85.4	14.6	1,066.6	7,014.9	8,081.6	16,281.6	49.6

1 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.

Fair and ethical work practices

Our approach

The Group is fully committed to complying with all local laws and regulations relating to work practices, demonstrating respect for all its people, and implementing values-based management in addressing broader social issues.

GRI reference: 2-23, 2-25, 2-30, 401-2, 402-1, 407-1, 408-1, 409-1

CLP's human resources policies and procedures are intended to ensure compliance with all local laws and regulations relating to employee compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, as well as laws combatting discrimination and, sexual and non-sexual harassment, and those covering benefits and welfare. CLP takes immediate action to investigate and address any suspected breaches or issues that are brought to its attention.

Standards and procedures

Beyond compliance, CLP recognises its responsibility to respect human rights at work, as laid out in international principles, standards, and laws. CLP is a signatory of the World Business Council for Sustainable Development's (WBCSD) Call to Action for Business Leadership on Human Rights, and of the Good Employer Charter established by the Labour Department of Hong Kong, in which it pledges to be an

Energy from 2023. For more details, please refer to [Reporting scope and data verification](#) section.

Across remaining markets, the total employment rose, primarily due to continued post-pandemic recovery of activity. Utilisation of service contractors increased, reflecting temporary skills requirements to support decarbonisation and digitalisation projects.

employee-oriented employer that implements good human resources management practices.

Human rights and labour standards

In addition to local legal compliance, CLP respects internationally recognised human rights relevant to its operations and requires its business partners and suppliers to do the same.

The commitment to upholding human rights is outlined in CLP's [Group Labour Standards](#). Referencing the United Nations Guiding Principles on Business and Human Rights and other international standards, they set company-wide minimum standards on critical working conditions and the basic rights of employees in the workplace.

CLP's commitment is also integrated into its [Value Framework](#) and [Responsible Procurement Policy Statement](#) and the newly launched [Supplier Code of Conduct \(SCoC\)](#). EnergyAustralia also has its own SCoC and reports annually on the risks of modern slavery in its operations and supply chains, as well as the actions taken to address those risks.

Read more on CLP's Group Labour Standards

Human Rights Due Diligence

As part of its pre-investment decision-making process, CLP conducts comprehensive due diligence to evaluate the non-

financial impacts and risks in areas including those relating to employment practices, the environmental, local community and other stakeholder impacts.

CLP conducts internal and external due diligence on performance management and reward practices to ensure they are free from gender bias.

CLP also implements the risk assessment processes across the procurement lifecycle to manage ESG issues, including human rights. For more details, please refer to the [Responsible procurement](#) section.

Discrimination and Harassment

CLP aims to provide work environments that are free of harassment or discrimination on the basis of gender, physical or mental conditions, race, nationality, religion, age, family status, sexual orientation, and any other attribute recognised by the laws of the country in which the Company operates.

Use of temporary and contractor labour

CLP uses temporary labour for work that is time-bound or during periods of peak activity, and engages labour employed by third parties for non-core work and work requiring specialist skills. CLP aims to achieve an optimal balance between the insourcing and outsourcing of capabilities, and to ensure that the working hours and remuneration of workers employed by contractors are fair and reasonable.

Fair wages

CLP complies fully with all local legal requirements with respect to the minimum wage. In practice, its remuneration and benefits for permanent staff often significantly exceed local legal minimum requirements.

While it is not Group policy or market practice to provide the same employment benefits to temporary staff as for regular permanent staff, CLP's benefits for temporary staff are competitive with local market practice and meet or exceed local legal requirements. CLP monitors pay carefully to ensure it is competitive and rewards employees for individual and company performance. Its core employee benefits are reviewed regularly to ensure they are fit for purpose and sustainable.

Supporting our people to speak up and acting on reports of wrongdoing

Each CLP business has an employee grievance procedure in place that reflects the CLP's Value Framework and any applicable local legal requirements. The procedures ensure fairness and independence in the investigation process and respect the confidentiality of the parties involved. CLP's [Whistleblowing Policy](#) enables employees and related third parties to raise concerns about irregularities through a confidential channel.

Monitoring and follow-up

Detailed policies are in place in each jurisdiction, based on CLP's Value Framework and Group Labour Standards, that are fully compliant with local legislation. Regular refresher training is organised for employees on key topics, including CLP's Code of Conduct, business practice review and its Harassment-free Workplace Policy.

CLP prohibits child labour and forced labour in all of its operations, and has stringent checking and control procedures in its selection and onboarding processes to enforce this policy.

Each year, CLP uses independent external consultants to benchmark remuneration and benefits against relevant recruitment markets. Decisions on remuneration are subject to the corporate governance process and the approval of the Board Human Resources & Remuneration Committee, to ensure a balance between the interests of both employees and shareholders.

CLP carries out independent audits of its human resources policies and procedures to identify legal non-compliance risks and takes remedial action if any are identified. Immediate action is taken to investigate and address any suspected breaches or issues that are brought to the Company's attention.

Read more on breaches of the CLP Code of Conduct
→

Initiatives and progress

CLP has furthered its efforts to operate ethically and fairly, and has continued to receive external recognition for its policies and practices relating to wages and retirement.

GRI reference: 201-3

CLP’s Group Labour Standards outline CLP’s commitment to international principles and conventions. They also provide details of how CLP delivers on this commitment through company-wide minimum standards on critical working conditions, including fair and decent work and working hours, and the basic rights of employees in the workplace. The standards have also been embedded into the procurement requirements for labour suppliers in Hong Kong, and CLP’s tracking and monitoring of its temporary manpower resources has been strengthened. Relevant expectations of labour practices and human rights have been embedded in the newly launched Supplier Code of Conduct and communicated to CLP’s suppliers.

In 2023, CLP did not identify any operation or supplier as having a significant risk of child labour, young workers exposed to hazardous work, or forced or compulsory labour, and no breach of laws and regulations in relation to child labour and forced labour was recorded. Additionally, no Group operation was identified in which the right to exercise freedom of association and collective bargaining was violated or at significant risk.

In 2023, Apraava Energy established a Human Rights Policy under its diversity and inclusion (D&I) roadmap. Like the CLP’s Group Labour Standards, it is guided by the United Nations Guiding Principles on Business and Human Rights and provides a framework for addressing and preventing associated risks. The policy reflects Apraava Energy’s commitment to respecting and promoting human rights across the organisation.

Apraava Energy organised awareness sessions titled “Right Environment at Workplace” in the year. These covered topics such as anti-harassment policies, gender sensitisation, sexual harassment, and grievance resolution.

CLP’s Hong Kong businesses were awarded Fair Wage Certificates by the Fair Wage Network in recognition of their wage policies, practices and ongoing enhancements in the assessment in prior years. In 2023, CLP improved its wage communications with employees and the launch of its refreshed performance management system enabled it to place greater emphasis on the linkage between rewards and performance, while also streamlining and enhancing the total rewards statement for employees.

In recognition of its efforts in providing sustainable retirement benefits, CLP also received awards for “Hong Kong Best ORSO (Occupational Retirement) Scheme” and “Hong Kong Best Member Communications” in 2023, by Asia Asset Management. These awards are given to companies in the Asia Pacific region for their excellence in managing retirement benefits for employees. CLP has been a winner for several consecutive years.

Fostering diversity and inclusion

Our approach

CLP believes having a diverse workforce and an inclusive culture supports high performance and its ability to operate effectively in the many communities in which it operates. To this end, CLP has set targets to encourage more women into the workforce, and policies to help employees better balance their work and home-life commitments.

Given the nature of CLP’s business and the markets in which it operates, CLP has set gender diversity as a Group-wide priority. Long-term aspirational Group-wide gender diversity targets have been set that reflect UN Sustainable Development Goals. The targets are:

- **Women in Leadership target:** To achieve gender balance in leadership positions by 2030, against a 2016 baseline of 22% of women in leadership positions;
- **Women in Engineering target:** For 30% of engineers to be female by 2030 compared to a 2016 baseline of 9%; and
- **Equal pay for work of equal value:** Ensuring equal pay for work of equal value is maintained in all CLP Group businesses, that any gender pay equity gap is eliminated, and that CLP meets all relevant local compliance and disclosure standards.

Standards and procedures

CLP is a signatory to the International Energy Agency’s [Equal by 30](#) initiative, a commitment by public and private sector organisations to work towards gender equality in the energy sector by 2030, and to the Women’s Empowerment Principles established by the UN Global Compact and UN Women in India. Local Diversity and Inclusion Councils operate in Hong Kong, India and Australia that are driving the Company’s efforts on diversity.

CLP’s human resources policies include initiatives to encourage the retention of employees, such as flexible work arrangements, maternity leave, and other family-friendly policies and benefits. CLP’s recruitment processes are designed to be fair and non-discriminatory. In Hong Kong, its processes follow the [Equal Opportunities Commission Code of Practice](#), and include the use of consistent selection criteria. In other parts of the Group, CLP complies with local legislation and codes of practice on recruitment. When conducting senior level searches, CLP also requires external recruitment firms to identify candidates with diverse backgrounds, in line with the Group’s values.

Monitoring and follow-up

Gender diversity progress is reviewed as part of CLP’s regular general management and engineering talent reviews. The [Board Human Resources & Remuneration Committee](#) reviews progress against gender diversity targets annually. CLP also conducts regular reviews to identify any gender pay gaps, and to ensure equal pay for work of equal value.

Initiatives and progress

Management has continued to leverage a variety of targeted programmes and activities to drive improved outcomes in diversity and inclusion.

GRI reference: 202-1, 202-2, 405-2

As of the end of 2023, the percentage of Women in Leadership roles was maintained (2023: 29.1% vs 2022: 29.1%), while Women in Engineering increased slightly (2023: 13.3% vs 2022: 13%). Over the past two years, the number of female graduate trainees recruited in Hong Kong has nearly doubled as part of an enlarged intake. Many female graduate hires had participated in either CLP’s Female Engineering Student Mentoring Programme or had received an Engineering Study Award to support their final-year studies.

The percentages of women identified in succession pipelines, high potential pools and development programmes were around 30%, in line with last year. In Hong Kong, an empowerment programme for women called Taking the Stage, aiming to build confidence and executive presence, was implemented. In addition, selected female executives also participated in Board preparation programmes and career facilitation dialogues.

CLP conducted its first D&I employee survey in Hong Kong which attracted over 1,000 responses, and provided insights to prioritise areas such as promoting flexible working and creating a more inclusive environment. CLP also supported employees to establish a Gender Equity support network to increase employee awareness and programme participation. Work commenced to refresh CLP’s Group Diversity Strategy, which is expected to conclude in 2024.

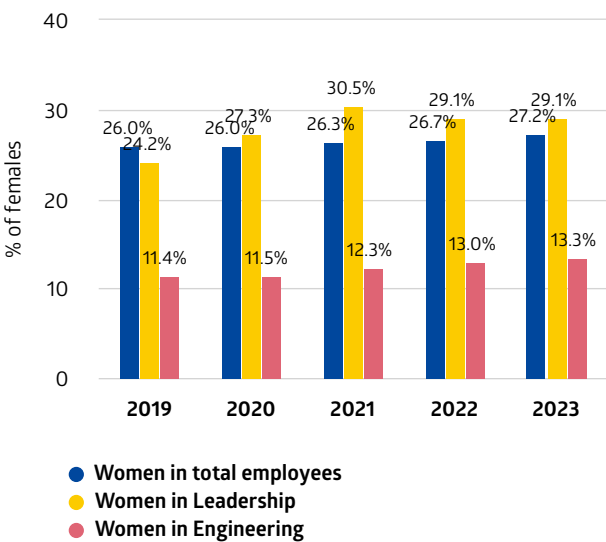
CLP’s principle of equal pay for work of equal value continued to be upheld. This is achieved through independent external assessment of job size and complexity together with external pay range benchmarking, allowing pay differentials to reflect only each employee’s experience, performance and certain market factors. Performance and pay outcomes are reviewed internally and externally for gender bias, and differences in the average pay between females and males are moderate (single-digit difference), except for some technical roles which are typically dominated by male team members with higher length of service.

Across the Group, EnergyAustralia continued to conduct activities to foster its diversity, equity and inclusion as part of its Diversity, Equity & Inclusion (DEI) Strategy. Work commenced to refresh EnergyAustralia’s DEI strategy, under the umbrella of the Group Strategy. In 2023, EnergyAustralia reaffirmed its commitment to maintaining zero gender pay gap on a like-for-like job grade basis through annual Workplace Gender Equality Agency reporting and analysis.

Female Representation in CLP

i

Gender workforce participation remained similar in 2023, taking population changes into account.



Talent and skills development

Our approach

CLP's ability to transition to a zero-carbon and digitally enabled future requires systematic organisational development, including a fostering of the talent and skills required to compete effectively in key markets.

GRI reference: 404-2, 404-3

CLP has a comprehensive training and development framework in place, aligned with its business objectives, to help employees perform competently in their current roles and prepare them for future business challenges and opportunities. Investment is also being made in helping young people develop and in building future energy industry capability that is inclusive and accessible to all.

Standards and procedures

CLP seeks to attract, retain, and develop a diverse and multi-generational workforce, and to develop new skills and share talent effectively across its portfolio of businesses. Internal development efforts are supplemented by external recruitment for new-to-CLP skills focused on capabilities in innovation, digital and renewables.

Investing in youth and early careers

Addressing the need for future skills and ensuring an adequate supply of talent for the evolving energy industry requires significant investment in encouraging young people to join CLP, and accelerating their early career development.

Opportunities for young people are provided in Hong Kong through mentoring programmes, partnerships with local and overseas institutions for work placements for secondary and tertiary-level students, internships for fresh graduates across a range of disciplines, technical apprenticeships, and the CLP Graduate Trainee Programme. The [CLP Power Academy](#) in Hong Kong also offers programmes for school leavers and working adults looking to pursue careers in the energy industry. CLP participates in youth development schemes such as the HKSAR Government's Greater Bay Area Youth Employment Scheme. In Mainland China, CLP supports the efforts of local technicians and engineers to attain professional engineering qualifications.

Enhancing performance management as part of building a high-performing organisation

CLP revised its performance management system in core markets, to provide enhanced feedback to team members to support their development as well to increase performance differentiation. Leadership expectations and competencies were also been refreshed to set out guidance on the behaviours and capabilities expected of employees.

Maintaining core skills and developing new skills for the future

Skills and safety training are provided to develop technical and functional competencies and behaviours. All CLP employees participate in an annual performance and development cycle which includes at least two performance discussions each year and provides ongoing feedback and coaching conversations, clarity in terms of expectations on behaviour and performance, understanding of how they contribute to CLP's objectives, and support for individual development needs. Cross-functional and 360-degree feedback is included where appropriate. Through this process, CLP also recognises and rewards individual performance and success. Employees are provided the opportunity to continuously learn and build skill via online and face-to-face learning resources and programmes, and can access company support for employee-initiated self-development, including support for job relevant degree programmes or certifications.

Developing leaders

CLP's strategy requires a diverse, resilient and agile leadership team with the stakeholder management and change leadership skills to help CLP grow, and high-quality succession leadership roles in place. CLP remains committed to filling most of its leadership roles internally.

Strategic, general management and talent development programmes are used to develop future leaders, with programmes delivered internally (in Hong Kong through the CLP Learning Institute and the Power Academy) and in partnership with leading academic institutions, including the International Institute for Management Development (IMD), the Tsinghua School of Economics and Management, the Chatham House and the École Polytechnique Fédérale de Lausanne (EPFL). Expert briefings and workshops are conducted on the latest global economic, political and technological trends, including those relating to energy transition, digital disruption, wellbeing and resilience.

Monitoring and follow-up

CLP conducts regular talent and capability reviews, underpinned by employee analytics, focused on both general management and engineering streams. These reviews monitor and follow up on actions to address current and future gaps and opportunities, including the progress of development programmes, recruitment campaigns, initiatives to strengthen gender diversity and cross-business assignments.

The effectiveness of this approach is measured against a range of key performance indicators, including retention of

key talent, turnover, diversity and employee engagement measures, using developed employee analytics tools. The [Board Human Resources & Remuneration Committee](#) reviews talent and capability progress annually.

Despite the challenges of recruitment and delivering training during the COVID-19 pandemic in past years, CLP increased its investment in youth development, core skills training and leadership development programmes, and invested in training systems and frameworks.

Initiatives and progress

CLP inducted 45 trainees into the Hong Kong Engineering Graduate Trainee programme in 2023, the largest intake ever with the highest number of female and Mainland students.

CLP also expanded its recruitment channels with local and overseas institutions. Extended recruitment efforts in Mainland China resulted in significantly higher numbers of applicants from Mainland graduates, enriching the talent pool. For more information, please see the case study in the [2023 Annual Report](#).

Other development programmes for engineers and managers at different stages of their careers progressed, helping to

strengthen CLP’s career pipelines. Engineering talent rotations across Hong Kong and Mainland China were scaled up, while CLP’s Energy Transition Experience Programme continued to introduce the energy business and its opportunities in Mainland China.

To support the development of CLP digital talents and build their capabilities, targeted initiatives such as the Digital Talent Day and Digital Trainee Programme were organised. In addition, the #Leaders of Future, one of CLP’s leadership development programmes, continued with a strategic thinking programme facilitated by faculty from the Ivey Business School to help strengthen participants’ agility and foster an innovative mindset, as well as enhancing their commercial acumen.

Supporting employees to thrive in change

Our approach

CLP is committed to developing an engaged and high-performing workforce, and helping all its people to thrive in a period of change brought about by energy transition.

GRI reference: 401-2, 401-3, 404-2

In the long term it is achieving this by maintaining strong working relationships with its employees and their representatives, providing flexible working arrangements and benefits to support employees through all their life stages, helping employees to strengthen their wellbeing and resilience, and providing support and re-skilling opportunities to employees whose jobs are affected by the transition to net zero or other business restructuring.

Standards and procedures

Offering flexible, family-friendly working arrangements

CLP aims to support employees through all their life stages, from those starting their careers to those reaching retirement.

People at different life stages benefit from different working arrangements. To this end, CLP promotes family-friendly leave policies and flexible working arrangements, and offers a range of leave options to help its people achieve a good work-life balance. These include parental and adoption leave, volunteering leave and study leave. Where practicable in CLP’s offices and premises, lactation facilities are provided for mothers in the workforce.

CLP has enhanced its flexible work policies and online collaboration tools to enable new ways for employees to connect virtually and perform their roles better. Working options have been made more flexible, resulting in an increased take-up of new part-time work options and work-from-home arrangements.

Investing in health, wellbeing, and strengthening resilience

CLP Power provides comprehensive support for its employees’ physical, social, financial and emotional wellbeing. It is working towards meeting the requirements of ISO 45003:2021 Psychological health and safety at work – Guidelines for managing psychosocial risks, as part of the Occupational Health and Safety Management System. Confidential employee assistance programmes are also offered to assist employees encountering work or personal issues and needing professional support.

In recognition of CLP’s efforts in promoting employee wellbeing, CLP received various awards in Hong Kong for its programmes and for promoting happiness at work and the 2023 Wellness China Award in Mainland China for its local employee health and wellbeing programme.

Keeping everyone informed and engaged

CLP’s employee relations approach focuses on establishing and maintaining strong working relationships with employees, being proactive in consulting on any workplace changes, and providing opportunities for employees to raise concerns. CLP employees have the right to join organisations and professional bodies of their choice. CLP respects and fully complies with all legal requirements with regards to union membership and collective bargaining. In Australia, CLP engages in collective bargaining with nearly 800 employees through certified enterprise bargaining agreements approved by the independent workplace relations tribunal, the Fair Work Commission. These agreements cover most terms and conditions of employment, including notice periods, provisions for consultation and dispute resolution.

CLP organised the ‘Culture Jam’ Programme in the third quarter of 2022 for employees in Hong Kong and Mainland China, to provide an opportunity for two-way dialogue on ways of working. Building on these efforts, Culture and Leadership Change resources have been made available to leaders and team members on the strategic context of various projects that impact culture, roadmaps and guidance to implement employee engagement activities at the local level.

Further efforts are underway to shape CLP’s culture, including refreshing CLP’s Value Framework. The introduction of more digitalised ways of working, new and agile office environments with tools and support for more collaborative and effective communication in the workplace, are also part of these ongoing changes. These will continue in coming years to help make CLP an even more engaged and better place to work.

Supporting employees and communities affected by energy transition or business restructuring

CLP provides comprehensive support to employees whose jobs are affected by business change or restructuring. Support is tailored to individual needs, and includes training and skills development, career planning, assistance in redeployment, and financial counselling. To this end, CLP has actively engaged with local stakeholders from employee representative organisations and local educational institutions to ensure that study opportunities are available to help meet the needs of its people, and the region’s new and emerging industries.

Following the announcement of the 2028 closure of Yallourn Power Station in 2021, EnergyAustralia implemented the Yallourn Workforce Transition Programme to provide career transition support to employees. The comprehensive support programme includes components covering employee engagement, training, re-skilling and accreditation, financial advice, job search skills and other specialist support.

In 2023, significant efforts have been made in skills-matching with the offshore wind sector as part of EnergyAustralia’s Job Upskilling and Matching Programme. The programme is designed to help Yallourn workers in finding new employment opportunities. Over 20 employees have expressed a strong interest in working at a wind farm as their first preference for jobs. Parallel initiatives have been undertaken to provide training to workers interested in exploring new careers in other areas such as teaching and nursing.

Standards and procedures

To better understand its employees’ views, CLP commissions independent external consultants to conduct regular employee engagement surveys.

In Hong Kong, joint consultative committees have been established which act as an additional channel of communication between the Company and employees’ representatives. Employee benefits are regularly benchmarked to ensure that appropriate remuneration packages and staff support is provided.

Read more on CLP’s refreshed Value Framework

CLP China won WELLNESS EMPLOYER® Award

The Wellness Employer award not only recognises outstanding efforts and teamwork, but also encourages knowledge and experience sharing with other companies. It motivates CLP to continuously innovate and improve its programme, with the aim of building positive and healthy organisational relationships, and attracting and retaining talent.

A woman in a patterned jacket is standing on a stage, presenting to an audience. Behind her is a large projection screen displaying a presentation slide. The slide features the title "2022年中國健康僱主頒獎典禮" (2022 China Healthy Employer Award Ceremony) and a colorful illustration of a city with people and buildings. The audience is seated in the foreground, and the stage is lit with warm lights. The overall atmosphere is professional and celebratory.

Another major health and wellbeing initiative was the establishment of the China Digital Health Platform through the *Codoon* App in 2021. Through this digital platform, CLP China regularly organise individual and cross-team physical activities and competitions to encourage fitness, healthy eating habits and quality sleep. *Codoon* is a very popular digital platform among China employees providing healthy tips and connecting data, people and technology for engaging and rewarding individual health journeys. The employee participation rate is above 60%.

Health, Safety and Environment management

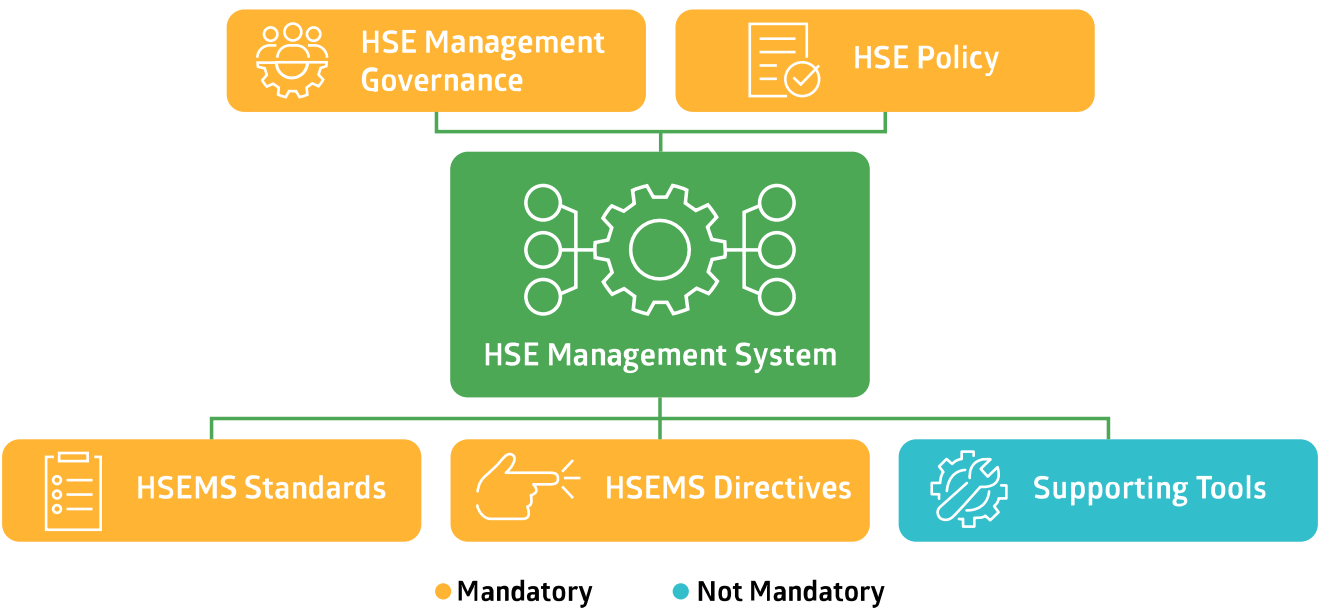
Our approach

Integrating health, safety and environment (HSE) standards across the Group's businesses and processes helps CLP operate in a safe, secure and environmentally responsible manner.

GRI reference: 403-1, 403-2

CLP remains committed to continually improving its HSE performance by building capabilities and capacities to prevent harm to its people, assets and the communities in which the Group operates.

HSEMS core components and relationships



The diagram shows the core components of the HSEMS and their interrelationships.

CLP's HSE Policy lays out the strategy, direction, and vision for its HSE performance. Developed in line with the HSE Policy, the HSEMS enables CLP to manage risks in a planned and systematic way while continually improving its HSE performance.

CLP has an integrated HSE Policy which in turn drives the Group's HSE Management System (HSEMS).

The CLP HSEMS covers four areas:

- Leadership and commitment;
- Planning and support;
- Operational enablers; and
- Monitoring, learning and improving.

[Download the HSE Policy](#)

The HSEMS provides:

- Clear requirements and expected outcomes based on goal-oriented risk reduction;
- Process flexibility to cope with operational diversity (e.g. size, regions, and nature of work conducted);
- Integration of the feedback loop between CLP Group requirements and work done by the frontline; and
- Less HSEMS clutter (e.g. requirements that are unnecessarily duplicated , inconsistent, or contradictory).

Download the HSEMS Standard


Download an overview of the safety and environmental management systems of CLP's assets


Strategies and procedures

To support safe operations, CLP has an HSE Improvement Strategy with clear objectives, focus areas and timelines, supported by input by HSE professionals and a suitable budget.

In line with the Group's HSE Improvement Strategy, an annual improvement programme is developed, approved and communicated to staff and contractors in each business unit. Recommendations are implemented on agreed timelines and the programme progress is monitored.

For more details, read the [Occupational health and safety section](#).

Hierarchy of operational responsibilities

HSSE Executive Committee	• Chaired by the CEO • Has the highest executive responsibility on HSSE-related issues
PORT and Global HSE Team	• Meet monthly and bi-monthly respectively to coordinate, monitor and share knowledge and experience • Focus on raising safety performance levels
Operational level HSE committees (employees, project partners and contractors)	• Engage with internal and external stakeholders at the operational level • Line management to implement high level HSE standards • HSE professionals to facilitate the overall engagement effort and advise on HSE matters

Operational responsibilities

The Group Health, Safety, Security and Environment (HSSE) Committee, chaired by the CEO, has the highest executive responsibility on HSSE-related issues.

The Projects and Operations and Regional Teams (PORT) and the Global HSE Team conduct monthly and bi-monthly meetings respectively to coordinate, monitor and share knowledge and experience in HSE practices across the Group. Special focus is given to becoming a better learning organisation in order to maintain high levels of safety performance and build a solid safety culture across the Group.

In addition, various HSE committees have been established to engage with employees at the operational level, as well as project partners and contractors. HSE professionals facilitate the overall engagement efforts and advise on HSE matters, while the responsibility for implementing HSE standards rests with line management.

Occupational health and safety

Our approach

The Group-wide HSE Improvement Strategy aims to build individual, team and organisational capabilities and capacities to prevent harm to CLP's people and assets and the communities in which it operates. Using the Group-wide strategy as its base, each business unit annually develops its own HSE action plan.

GRI reference: 403-1, 403-2, 403-3, 403-5, 403-7, 403-8

The CLP Group's HSE Improvement Strategy in 2023 was organised based on five pillars.

- Building capabilities;
- Rethinking risk;
- Involving stakeholders;
- Maintaining a healthy and engaged workforce; and
- Ensuring environmental sustainability.

Each pillar emphasises a key principle of effective HSE management. The strategy is designed to enrich the Group's safety culture across its operations in all operating regions, promote more proactive risk management, and engage employees, contractors and other key stakeholders to collectively implement changes that could improve safety performance. There is a strong theme of becoming a better operational learning organisation.

In 2024 commencement of the development of a new Group HSE Improvement Strategy will be undertaken. This will replace the improvement strategy currently being executed and will build on capabilities gained from previous years.

Goals and targets

CLP is committed to ensuring all its activities and operations focus on the elimination of fatalities, life-altering injuries, and the occurrence of significant HSE events.

Monitoring and follow-up

CLP's HSE Performance Monitoring and Reporting Standard contains the safety performance indicators and the requirements for safety data reporting used by the Group. The safety performance indicators identify trends as well as areas which require attention. CLP has also used targeted engagements and worker insights to help develop comprehensive and effective incident prevention interventions.

Safety performance is reported internally every month. Safety performance data and associated insights are collected and presented in the monthly and bi-monthly meetings of the PORT and the Global HSE Team. These are also reported on a quarterly basis to the Group HSSE Committee, chaired by the CEO.

CLP's HSE Incident Investigation and Reporting Standard sets out the standard for implementing and maintaining a safety incident management system across the Group. In the event of a major incident, the CLP Group Incident Investigation Panel (IIP) is provided with the output investigation provided in line with the Investigation Report Format Standard. The IIP, chaired by senior members of staff from outside the business unit in which the accident occurred, conducts a thorough investigation to identify factors contributing to the incident and actions required to prevent a recurrence. The IIP's reports are reviewed by the Group Chief Operating Officer and the regional Managing Director.

Training and awareness

Personnel are only asked to do work in roles for which they are deemed capable and competent, based on careful selection, placement, training, ongoing competency assessment and authorisation of employees, and third-party independent assessment where appropriate. A process is in place to deliver training to ensure individuals understand the hazards, risks and control measures associated with their work.

At the asset level, there is flexibility to structure health and safety measures and design more specific relevant training. This includes monitoring the percentage of contractors who have undertaken training. Safety training requirements are included in all contracts, and all contractors are expected to undergo safety training relevant to their duties. Spot checks are conducted to ensure compliance.

Continuous improvement

Thorough investigations are conducted into all incidents that cause or have the potential to cause serious injuries. In 2023 CLP began the process of evaluating its current incident investigation methodology to help further support both better investigations and identify systemic related opportunities for improvement, in line with its adoption of a human and organisational performance focus. The chosen methodology is the [TapRoot® Root Cause Analysis](#) which will be implemented (including the patented software system) in CLP's overall HSE data capture system. Personnel required to conduct investigations will go through new training in 2024 to support the revised approach. The aim is to move beyond simply looking at human error as a cause, and to understand the more complex latent conditions within the systems where people operate in that contribute to incidents. CLP is committed

to understanding how decisions and actions are made by employees at a particular point in time in their work, by understanding the context which our people operate. CLP is committed to learning from those closest to the work, to understand its challenges and identify practical improvement opportunities. The Group believes that by harnessing frontline knowledge, CLP will not only get better solutions, but also foster an environment of ownership from its people who perform the work.

To find new and better ways of working by learning from investigations into incidents, in 2023 CLP continued the “Risk – Gravitational Energy” campaign at its operations. This has the express goal of reducing activities where gravity may cause injuries, for instance when working at heights or where objects have the potential to fall. Business units focused on learning from normal work in a proactive way rather than waiting for an event to occur before learning. In this way, CLP is making a fundamental shift in approach by utilising learning teams in work streams where no injury event has actually occurred. In 2023, once again there was a CEO Award at its annual event which recognises work done in materially reducing exposure to gravitational energy.

Major progress has been made both by adopting technology and redesigning systems work approaches. For example, CLP China introduced robots to clean, polish and repaint wind turbine towers in two of its sub-regions. Such an initiative eliminates the fall from height risk presented by manual painting, with the additional benefit of being able to conduct works without operational interruptions. Not only does this have a significant safety impact in reducing CLP’s exposure hours to gravitational energy, but it also delivers an efficiency improvement in cost and schedule.

CLP Power also introduced the Mobile 360 Forklift Safety System which both a configurable warning alarm & critical zones detection for pedestrian alerts and offers operator assistance for distracted driving, drowsiness, smartphone usage, smoking and seat belts. The Group continues to focus on digital and technology-based opportunities to assist its people in performing their daily work safely.

Read the case study on how robots help to eliminate diving risks

It is a matter of profound regret that Apraava reported a fatality in the first half of 2023. The fatal incident involved a contractor at Apraava Energy's Sidhpur wind farm in Gujarat state. CLP is deeply saddened by the incident, which occurred in May, and Apraava Energy has taken measures to improve

SASB reference: IF-EU-320a.1; GRI reference: 403-4, 403-5, 403-6, 403-9, 403-10, EU17, EU18

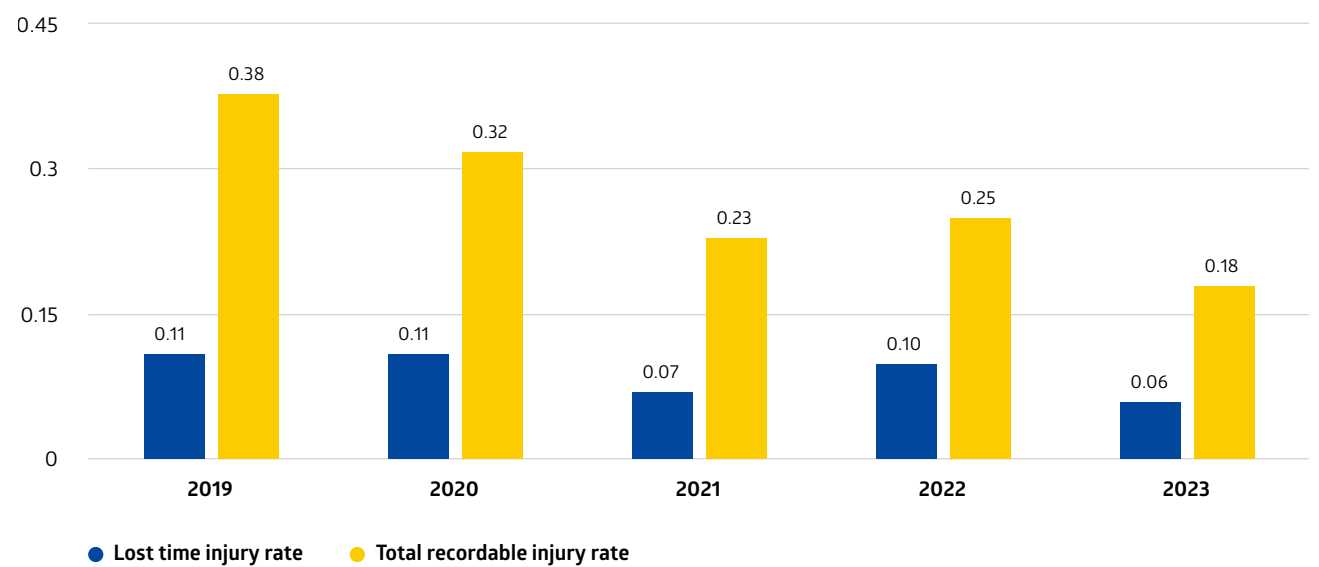
The key safety metrics are summarised in the table below.

	Hong Kong ²	Mainland China	Australia	Total ³	Employees and contractors combined
Fatalities (number)	0/0	0/0	0/0	0/0	0
Fatality rate (number per 200,000 work hours)	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00
Days away from work injuries (number of personnel)	1/5	0/0	1/3	2/8	10
Lost time injury rate (number per 200,000 work hours)	0.02/0.07	0.00/0.00	0.05/0.19	0.03/0.09	0.06
High-consequence injuries (number of personnel)	0/0	0/0	0/1	0/1	1
Total recordable injury rate (number per 200,000 work hours)	0.11/0.15	0.00/0.00	0.19/0.64	0.13/0.22	0.18
Work-related ill health (number of personnel) – employees only	0	0	3	3	3
Lost days (number) – employees only	8	0	117	125	125

3. Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.

Lost time injury rate and total recordable injury rate of CLP Group (employees and contractors combined)

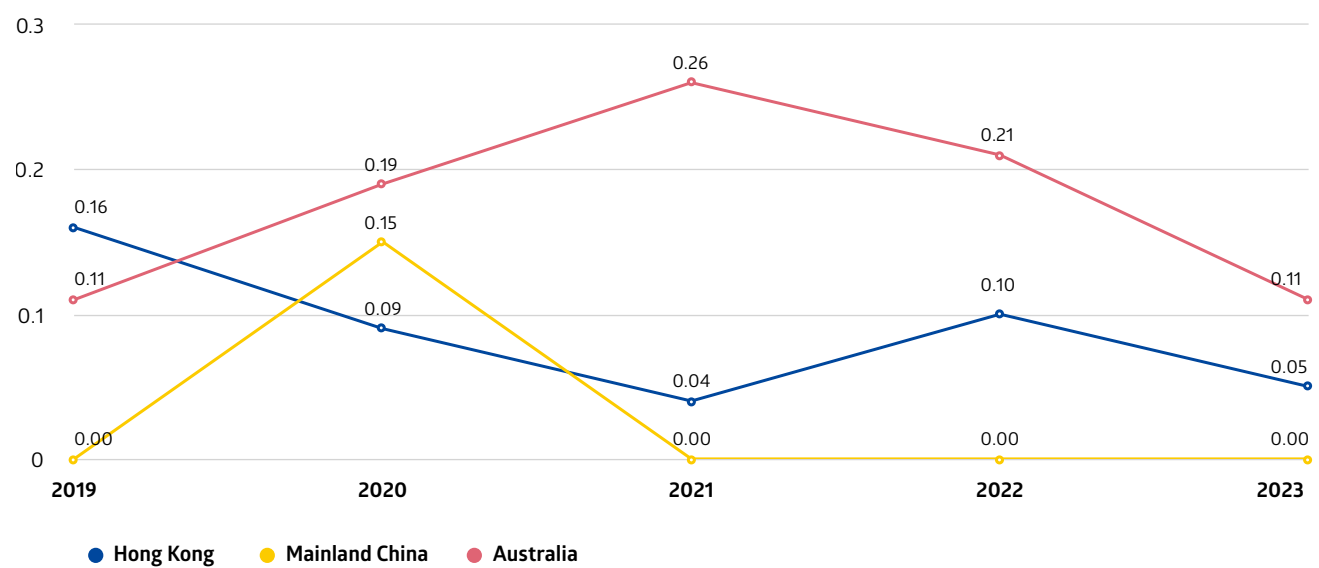
Both the lost time injury rate (LTIR) and total recordable injury rate (TRIR) decreased in 2023. Primarily the reduction in incidents for both CLP Power and Energy Australia are the key drivers for the overall rates. Both business units implemented a range of initiatives focused on issues such as assurance and inspection, stakeholder engagement, key critical risk areas and improved wellness offerings. Additionally, Apraava data is no longer captured and does not feature in the 2023 group statistics.



1 All rates are normalised to 200,000 worked hours, which approximately equals to the number of hours worked by 100 people in one year.

Lost time injury rate (LTIR) by region (employees and contractors combined)

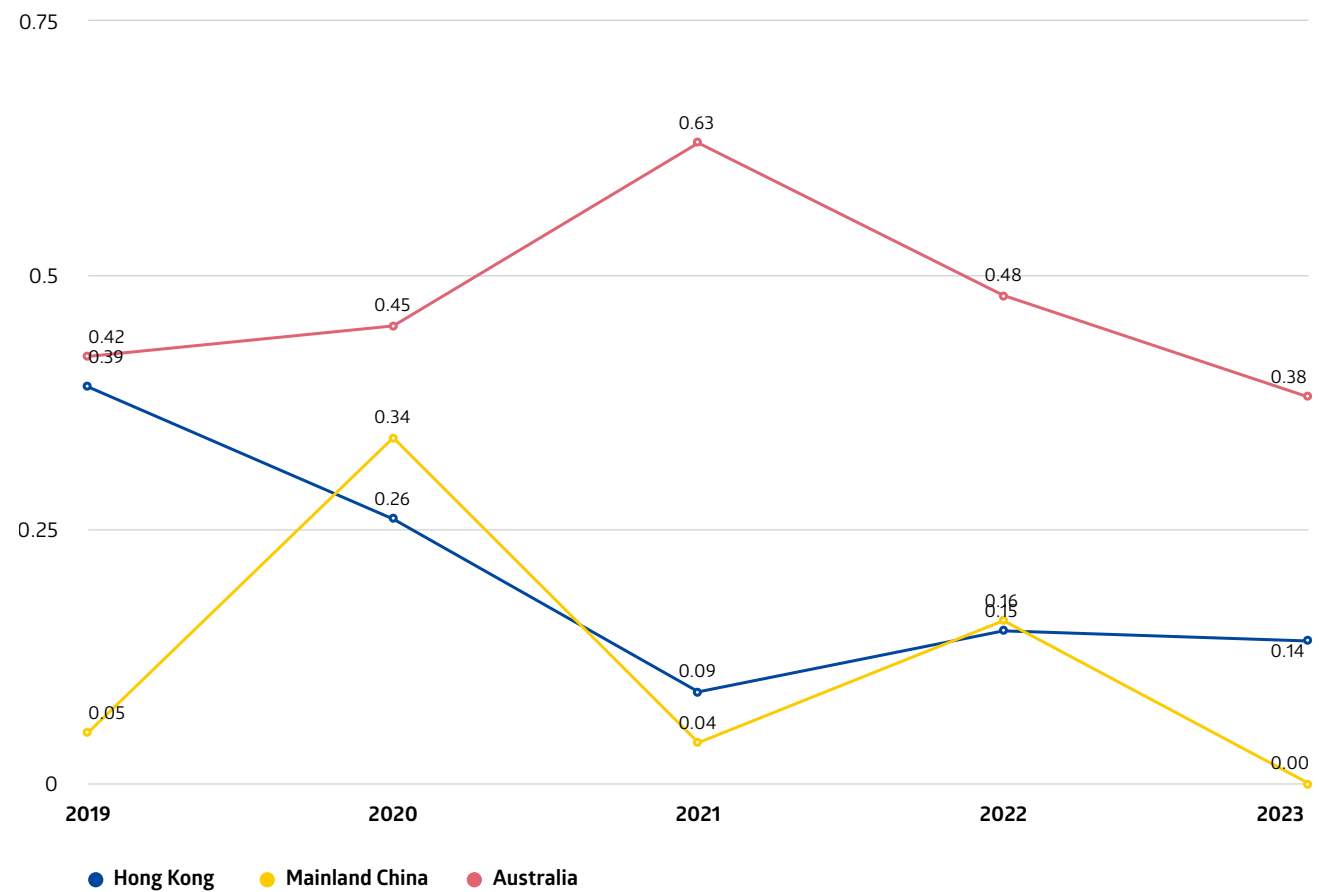
The LTIR decreased in 2023 for all regions.



1 All rates are normalised to 200,000 worked hours, which approximately equals to the number of hours worked by 100 people in one year.

Total recordable injury rate (TRIR) by region (employees and contractors combined)

i The TRIRs for all regions decreased in 2023.



1 All rates are normalised to 200,000 worked hours, which approximately equals to the number of hours worked by 100 people in one year.

Partners

Overview

Area of stakeholder interest	Relevant sustainability agenda
- Public policy - Code of Conduct and anti-corruption - Legal compliance - Supply chain management - Responsible procurement	Transition to net zero - Investing in zero-carbon energy infrastructure Energy growth opportunities - Creating new revenue streams as other sectors electrify Community stewardship - Promoting responsible supply chains
Outcome for stakeholders	

Zero convicted cases of corruption reported to Audit and Risk Committee

Signed a MoU with the Longhua District People's Government of Shenzhen Municipality to promote the development of low-carbon energy in GBA	Secured approval of the new 5 year Development Plan supporting the Hong Kong SAR Government's policy priorities
Recorded 1 new reportable case of legal non-compliance in 2023	
Launched a cross-sector eMobility Network with 14 businesses and organisations	Pledged support for Hong Kong's Climate Action Plan 2050 and the low-carbon energy development in Mainland China

Public policy

Our approach

CLP is dedicated to acting as a trusted partner to governments and regulators while advocating collaborations among the business community to shape practices and services that contribute to developing sound government energy policies and laws that balance social, economic and environmental needs.

GRI reference: 2-28, 415-1

In response to the climate crisis, energy transition is a critical priority for governments around the world. CLP is continuing to engage with governments and regulators to formulate decarbonisation policies and plans, while promoting

the sustainable development of energy systems. Through its participation in a range of industry and professional bodies, CLP is also providing input into the major issues affecting the energy sector and establishing itself as a thought leader for the industry.

CLP maintains a politically neutral stance and refrains from making political contributions. When considering proposals for CLP to become a member of an organisation, the respective Corporate Affairs teams review the proposals based on CLP's business objectives and the purposes of engagement. All membership proposals are subject to the final approval of the senior management of the Group or its Business Units.

Download CLP's Policy on Making Political Contributions

Initiatives and progress

CLP has continued to strengthen its communication with governments, regulators and standard setters, as part of its efforts to contribute its knowledge, experience, and best practices to government decision-making and to promote sustainable development within the energy sector.

GRI reference: 2-28, 201-4, 415-1

Joint efforts by the private and public sectors are crucial to addressing the emerging challenges in the energy sector. In Hong Kong, CLP Power has been actively collaborating with the Hong Kong SAR Government on the Development Plan under the current Scheme of Control (SoC) Agreement, which sets out the electricity regulatory framework and mechanism for the supply of electricity to the city. Approved by the government in November 2023, the new five-year Development Plan for 1 January 2024 to 31 December 2028 provides strong support for the government's policy priorities. It focuses on investments designed to drive Hong Kong's economic and infrastructural development, the continued delivery of a world-class reliable electricity system, the transition to becoming a smart and resilient city, and the continuation of the decarbonisation journey.

In addition, the 2023 Interim Review of the SoC Agreement between CLP Power, Castle Peak Power Company Limited (CAPCO) and the Hong Kong SAR government was completed. Agreements were reached on the incentive and penalty mechanism, fuel cost arrangements in the event of a fuel crisis, and further enhancement to information transparency.

CLP maintains regular communication with government officials and legislators through channels such as site visits and information sharing sessions, to facilitate mutual understanding of strategies and policy directions relevant to the shaping of a low-carbon future. CLP also actively responds to major public policy consultations and develops carefully considered positions relevant to the energy sector on ways forward for the energy industry and the community.

CLP Power's Five-Year Development Plan to Fuel Hong Kong's Revitalisation and Development

CLP's responses to major public policy consultations, along with its position on critical issues such as climate change, are available on the Company's websites and other online channels.

- CLP Power has pledged full support for the Hong Kong SAR Government's Hong Kong's Climate Action Plan 2050 since its announcement in 2021. One of the government's key strategies is to encourage motorists to switch to electric vehicles (EVs). In support of the government's EV-charging at Home Subsidy Scheme, CLP Power launched the advanced service Eco Charge 2.0 in 2020. EV charging-enabled infrastructure was successfully installed in several private residential blocks in 2023. The first project completed under the scheme has converted more than 300 existing parking spaces by installing an EV charging-enabling infrastructure. The largest project, located in Yuen Long, has seen EV charging-enabled infrastructure added to more than 400 parking spaces.

- In October 2023, CLP Power together with 14 businesses and organisations launched a cross-sector partnership called the eMobility Network to further promote the wider use of electric commercial vehicles (ECVs) in Hong Kong. This partnership, comprising ECV manufacturers and operators, charging service providers and a bank offering green finance services, aims to facilitate technology exchange, accelerate the popularisation of ECVs and support government policies promoting the new energy transport industry. CLP Power is also collaborating with the government and the transport industry on e-transport trials for buses, public light buses, taxis and ferries.
 - EnergyAustralia is strongly committed to engaging with policymakers at all levels to advance the country's clean energy transition. Policy developments are expected to promote investments which enable more renewable energy to enter the grid reliably and affordably. EnergyAustralia is also continuing to work with partners to ensure a reliable supply of clean energy to meet customer demand and support the transition to a lower-carbon power market.
 - Apraava Energy actively contributes to domestic and global discussions on energy and climate change-related legislative and regulatory changes. For example, it participated in stakeholder consultations by the Bureau of Energy Efficiency (BEE) regarding the design of the National Carbon Market in India. Apraava Energy is also a member of the Product Advisory Committee of the National Commodity and Derivatives Exchange (NCDEX) which is involved in designing the derivatives market for carbon markets.
- CLP contributed to the public consultation on proposals to enhance climate-related disclosures under the environmental, social and governance (ESG) framework introduced by the Stock Exchange of Hong Kong Limited (the Exchange). The proposals outline detailed climate disclosure requirements which better align with the International Sustainability Standards Board (ISSB) Climate Disclosure Standard for Hong Kong-listed companies.

None of CLP’s businesses receive any significant government financial assistance.

CLP supports and actively participates in a range of organisations that enable it to keep abreast of different stakeholders’ views, navigate policy uncertainties and shape informed policymaking. The table below outlines the total amount CLP has contributed to organisations influencing public policy. These contributions include membership fees, donations, sponsorships and input into policy position papers. CLP has a general policy of avoiding political contributions, and no contributions were made to political parties, government officials or political candidates during the year.

Contributions to organisations

	2023	2022	2021	2020	2019
Lobbying, interest representation or similar (HK\$M) ¹	0	0	0	0	0
Local, regional or national political campaigns, organisations or candidates (HK\$M) ¹	0	0	0	0	0
Trade associations or tax-exempt groups (e.g. think tanks) (HK\$M) ^{1,2}	8.05	8.69	14.12	8.90	8.04
Others (e.g. spending related to ballot measures or referendums) (HK\$M) ¹	0	0	0	0	0

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
2 Includes contributions to trade associations or tax-exempt groups that seek to influence public policy in the form of memberships, donations or sponsorship. The scope was reviewed in 2023.

CLP prioritises its engagement with organisations that are actively involved in climate change and broader energy market policies. Significant resources are devoted to the

organisations listed below (in alphabetical order) through membership, sponsorship and other contributions, including active participation by CLP senior management.

Organisation	Description of organisation	CLP contributions and engagement
Australian Energy Council (AEC)	The AEC represents 20 major electricity and downstream natural gas businesses operating in the competitive Australian wholesale and retail energy markets.	The Managing Director of EnergyAustralia was previously Chair of the AEC. EnergyAustralia continues to actively participate in its various working groups on a range of competitive energy market issues. For example, an EnergyAustralia representative currently chairs AEC's Sustainability Working Group.
Business Council of Australia (BCA)	The BCA is a CEO-led industry association representing more than 100 of Australia's largest businesses. It supports the transition to a more carbon-efficient economy, with the goal of net-zero emissions by 2050.	EnergyAustralia is a BCA member and supports the BCA's advocacy for a national, bipartisan energy and climate change framework that can deliver against reliability, affordability and sustainability objectives.
Business Environment Council (BEC)	The BEC is an independent, charitable organisation established by the business sector in Hong Kong, which promotes environmental excellence by advocating for the uptake of clean technologies and practices.	CLP actively participates in or sponsors events, public consultations and working groups organised by the BEC. It is also a signatory of the BEC Low Carbon Charter and the Power Up Coalition.
Confederation of Indian Industry (CII)	The CII is a not-for-profit industry-led organisation. It works to create and sustain an environment conducive to the development of India through various advisory and consultative processes. It works closely with the Indian government on policy issues, interfaces with thought leaders, and looks to enhance industry efficiency, competitiveness and business opportunities.	Apraava Energy has been a member of CII for more than a decade. Its Managing Director is the Co-Chairman of the CII National Committee on Power, and its Chief Operating Officer is currently a member of the India CEO Forum for Clean Air, operating under the CII National Initiative Cleaner Air Better Life. Through these engagements, Apraava Energy plays an active role in representing the power sector in India on relevant issues.
Energy Transitions Commission (ETC)	The ETC is a London-based international think tank supporting energy transition by educating about credible, accelerating transitions towards universal, clean energy systems across the world. It aims to inform decision-makers in both the public and private sectors, and support leaders in more rapidly deploying low and zero-carbon solutions.	CLP joined the ETC in August 2018 and has contributed to the ETC's work programme and publications by participating in the ETC Commissioners Meetings, the ETC Representatives Meetings and ETC Communications Club Meetings.
Free Electrons	A global accelerator programme for electric utilities, Free Electrons enables startups to work closely with utilities to develop digital solutions to the challenges arising from the increase of renewable energy and the decentralisation of energy systems.	CLP has participated in Free Electrons since 2019 and hosted the Grand Finale of the programme in Mumbai in 2023. The 2023 programme attracted applications from over 500 start-up companies worldwide, and CLP collaborated with at least three startups to pilot their innovative solutions.
IFRS Foundation	The IFRS Foundation develops internationally recognised disclosure standards that bring transparency, accountability and efficiency to financial markets. Responding to the need for consistent and comparable sustainability information, it created the International Sustainability Standards Board (ISSB) in 2021 to develop IFRS Sustainability Disclosure Standards.	CLP is supporting the development of globally comparable sustainability disclosure standards in its role as an inaugural member of the International Sustainability Standards Board's IFRS Corporate Champion. The programme was launched by the IFRS Foundation in 2023. Through this programme, CLP is playing an active part in the corporate community by helping to shape best practices in sustainability disclosures for the industry.

Organisation	Description of organisation	CLP contributions and engagement
International Electric Research Exchange (IERE)	IERE is a worldwide, non-profit organisation for exchanging electricity and energy-related cutting-edge technologies as well as research and development information among its members from the electricity and energy supply industry, equipment provider businesses, academic research, government, etc.	CLP joined IERE in 2000 and has been an Executive Member since 2014. Currently, CLP representative also serves as the Treasurer. CLP continues to work with IERE on the joint research and development programme and Technology Foresight activities, including participating in the IERE General Meetings and workshops.
Kadoorie Farm and Botanic Garden Corporation (KFBG)	KFBG raises awareness of ecological and sustainability issues, undertakes species conservation and ecosystem restoration, reconnects people with nature, and promotes sustainable lifestyles.	CLP has been supporting KFBG's 10-year forest restoration programme since 2022. This programme is helping build knowledge and capacity in reforestation, supporting ecosystem recovery, and exploring nature-based solutions for carbon offsetting. By 2023, a total of 3,514 seedlings were planted (of the 25,000 planned for this project), representing 109 species belonging to 36 botanical families, before the end of the rainy season in August.
The Hong Kong General Chamber of Commerce (HKGCC)	HKGCC is a member-led organisation dedicated to improving the business environment in Hong Kong and its competitiveness. It's membership is composed of around 4,000 companies, which include multinational companies, SMEs and start-ups, from Hong Kong, Mainland China and internationally.	CLP actively participates in and sponsors events, public consultations and working groups organised by the HKGCC. The CLP Power Chairman is currently serving as the Chamber's Chairman. CLP's senior management are also supporting the Chamber's work in its various Committees as Chairman and Vice Chairman.
The Hong Kong Institute of Directors (HKIoD)	HKIoD is Hong Kong's premier body representing directors, and works to foster the long-term success of companies through advocacy, standards-setting in corporate governance, and professional development for directors.	In 2022, CLP became a founding sponsoring partner of the HKIoD-hosted Hong Kong chapter of the Climate Governance Initiative, a programme that aims to raise awareness of and focus on climate issues among company directors.
World Business Council for Sustainable Development (WBCSD)	A global, CEO-led organisation of over 200 businesses, the WBCSD is working to accelerate the transition to a sustainable world. Its Sustainable Development Goals are being pursued through six work programmes: Circular Economy, Cities & Mobility, Climate & Energy, Food & Nature, People & Society, and Redefining Value.	CLP actively participates in the WBCSD's programmes and working groups. In support of the WBCSD's <i>Roadmap to Nature Positive for the energy system</i> , CLP's representatives joined the respective working group and shared practical experience in tackling nature-related issues.
World Energy Council (WEC)	The WEC is a UN-accredited global energy body formed in 1923 with more than 3,000 member organisations in over 90 countries. WEC informs global, regional and national energy strategies by hosting high-level events, publishing authoritative studies (e.g. the World Energy Trilemma Index), and working through its extensive member network to facilitate global energy policy dialogue.	CLP began participating in WEC as a member organisation in 1988. Since the formal establishment of the Hong Kong member organisation (WEC-HK) in 2016, CLP's former CEO has been serving as Chair and representing WEC-HK and its members. In 2023, CLP contributed to the WEC-sponsored BBC documentary series <i>Humanising Energy</i> with a Hong Kong-centric e-mobility film titled " Charting a Quieter Course ".

Case Study

Promoting joint efforts to develop the Greater Bay Area and achieve carbon peaking and carbon neutrality goals

With more than 40 years of business development in Mainland China, CLP is playing a vital role in supporting the national “3060” dual carbon goal (i.e. achieving carbon peaking by 2030 and carbon neutrality by 2060). To this end, CLP is actively promoting different forms of partnership in the public and private sectors in the Greater Bay Area and Mainland China, driving collective momentum in energy transition and climate actions.

With the aim of promoting the growth of the regional power industry, CLP hosted the 11th Guangdong, Hong Kong and Macau Power Industry Summit in Hong Kong from 31 May to 2 June 2023. Themed “Embrace Opportunities in Decarbonisation and the Greater Bay Area”, the summit brought together approximately 80 senior executives from CLP, China Southern Power Grid Co., Ltd., Companhia de Electricidade de Macau - CEM, S.A. and China General Nuclear Power Group. During the three-day summit, the four companies released a Manifesto on enhancing cooperation in areas such as securing power supply, promoting the sustainable development of new energy and energy storage systems, and building a collaborative energy ecosystem in the Greater Bay Area. The manifesto upholds the principles of equality and mutual benefit, and enables CLP to actively explore new forms and areas of cooperation to create a better future for the region.

CLP is also working to power the high-quality development of Mainland China’s green economy. CLP Chief Executive Officer Mr T.K. Chiang pledged his support for the sustainable development of the energy sector in Mainland China at the Fourth Qingdao Multinationals Summit, jointly hosted by the Ministry of Commerce of the People’s Republic of China and the People’s Government of Shandong Province, which took place from 10 to 12 October 2023. This reflects CLP’s strategic positioning in Shandong Province where CLP has developed wholly-owned wind farms in Penglai, Laizhou, and Laiwu with a combined capacity of almost 600 MW (including contributions from minority-owned assets) to meet the rising demand for renewable energy in the region.



Governor of Shandong Province Mr Zhou Naixiang (left) with CLP Chief Executive Officer Mr T.K. Chiang.

To showcase CLP’s decarbonisation journey, CLP participated in the 24th Conference on the Electric Power Supply Industry (CEPSI 2023) from 19 to 23 October in Xiamen, Fujian Province, which brought together around 1,000 power companies across the Asia-Pacific region. Under the theme “Low-Carbon Energy Powering a Green Future”, CLP took this opportunity to stage an exhibition promoting its Climate Vision 2050 and introducing its vertically integrated power supply business in Hong Kong and CLP China’s operations in 15 provinces, autonomous regions and municipalities, covering an array of generation sources including wind, solar, hydro, nuclear, and coal as well as its energy storage solutions. The exhibition also highlighted CLPe’s one-stop energy solutions for customers in the commercial and industrial sectors.



CLP Power Managing Director Mr Joseph Law delivers a keynote address titled “CLP Power – Acceleration to Net-Zero” at CEPSI 2023.

Case Study

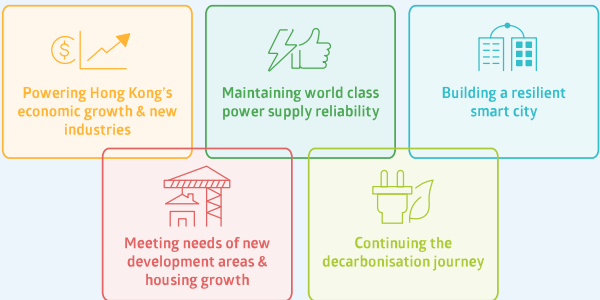
Powering Hong Kong's growth and prosperity through a new five-year Development Plan

As Hong Kong’s largest power company with a legacy stretching over 120 years, CLP has always been committed to supporting the city’s long-term development and prosperity.

CLP Power’s new Development Plan for 2024 to 2028 estimates a capital expenditure of approximately HK\$52.9 billion on investments that will provide strong support for the Hong Kong SAR Government’s policy priorities, including developing new areas of economic growth to reinforce Hong Kong’s advantages as a global city and supporting the city’s decarbonisation process. The new Development Plan was approved by the Executive Council of the Hong Kong SAR Government in November 2023 under the current Scheme of Control (SoC) Agreement.

Hong Kong is CLP’s home market. Here, CLP operates a vertically integrated power supply business and supplies highly reliable electricity to over 80% of the city’s population. In the new Development Plan for 2024 to 2028, CLP Power commits itself to a range of investments that will support Hong Kong’s accelerating economic and infrastructural development along with its long-term decarbonisation goals.

Five areas of investment focused on delivering the Hong Kong SAR Government’s policy priorities:



One of the government’s policy priorities is to reinforce Hong Kong’s competitive edge through new development areas and infrastructure, which will act as engines for future growth. In the new Development Plan, CLP Power has confirmed a range of investments to meet the emerging demand for energy from new development areas, large-scale infrastructure projects, new energy transportation and new areas of housing supply. At the same time, CLP Power will continue to maintain world class reliability by providing a stable power supply at a reasonable cost.

In line with the government’s vision of building Hong Kong into a world-class smart city, CLP Power is leveraging its expertise to help the city embrace new technologies and other innovations in its energy system. Key initiatives highlighted in the new Development Plan include the further roll-out of smart meters, tower strengthening and network reinforcement work, the introduction of grid-scale batteries, and pilot hydrogen blending. To support Hong Kong’s transition to a lower-carbon future, CLP Power is also continuing to progressively phase out coal-fired generation, and is working with the government to expand the proportion of natural gas and non-fossil fuels in the city’s fuel mix by the interim milestone of 2030.

The tariff adjustment and the CLP Community Energy Saving Fund (CESF) for a range of support programmes for 2024 are included in the first year of the new five-year Development Plan.

CLP Power’s Five-Year Development Plan to Fuel Hong Kong’s Revitalisation and Development, and 2024 Tariffs

Code of Conduct and anti-corruption

Our approach

CLP has built a reputation as an established and trustworthy business partner when it comes to upholding business conduct and ethics. Guided by CLP’s Value Framework and Code of Conduct, its employees are committed to acting with integrity and honesty in all their business activities and standing firm against corruption within the Group.

GRI reference: 2-24, 2-26, 205-1, 205-2, 205-3

CLP’s Code of Conduct sets out 15 Principles that guard against corruption within CLP. The Code is applicable to the entire Group, including CLP Holdings and its wholly owned subsidiaries, joint ventures and companies under CLP’s operational control. It is available to the public in both English and Chinese.

15 Principles of CLP’s Code of Conduct



All CLP employees, irrespective of their position and function, are expected to fully adhere to these principles. In the case of joint ventures or companies in which CLP does not hold a controlling interest, representatives are also expected to act in accordance with the Code and to make a concerted effort to influence those with whom they are working to follow similar standards. Contractors working for CLP are encouraged to follow the Code for the duration of their contract.

In addition to the Code, CLP has implemented an Anti-Fraud Policy as part of its Corporate Governance Framework. This is aimed at preventing and controlling fraud activities such as corruption, conspiracy, embezzlement, money laundering, bribery and extortion.

Download CLP’s Code of Conduct

Download CLP’s Anti-fraud Policy

CLP has a [Whistleblowing Policy](#) in place to encourage and assist employees and related third parties (including customers and suppliers) who engage with CLP to raise concerns about any real or perceived misconduct, malpractice or irregularity. The Whistleblowing Policy is available to the public in both English and Chinese. Concerns can be reported independently to CLP Group Internal Audit 24/7 through a dedicated and confidential whistleblower hotline or email. Any concerns received are handled with care and treated fairly and properly.

Download CLP’s Whistleblowing Policy

Training and awareness

Code of Conduct training is mandatory for all staff joining the Company. CLP promotes the Code of Conduct and Whistleblowing Policy to employees, on a regular basis, by advising of any updates or revisions.

Every four years, the Company conducts a Group-wide Business Practice Review (BPR). This review includes refresher training for all employees to reinforce their understanding of the Code’s Principles, and to ensure business practices remain compliant and ethical.

During the review sessions, potential issues are raised and reviewed with management. A number of case studies based on past violations are included to demonstrate the proper way to handle potential and actual situations involving Code violations. Contractors are encouraged to attend the sessions alongside CLP employees.

The latest BPR training was completed in 2022 for all regions, including Hong Kong, Mainland China, India, and Australia. The next round of BPR training is scheduled to commence in 2025.

Monitoring and follow-up

The [General Representation Letter \(GRL\)](#) process serves as a reporting mechanism for instances of non-compliance with the Code of Conduct. Leaders in areas of responsibility are required to sign a GRL annually addressed to the Group Chief Executive Officer (CEO) and Chief Financial Officer (CFO), outlining their area’s adherence or otherwise to the Code of Conduct, amongst other Company policies.

This process reinforces the need for personal responsibility for good governance, and facilitates internal assessment of the adequacy and effectiveness of controls at different levels

within CLP. As part of this annual process, business practices are reviewed and fraud risks in different areas are assessed, with any irregularities or exceptions being reported to senior management. Leaders including managers or above, Finance and Procurement staff, secretaries in the Group, and other key staff identified by management, must also sign an annual Code of Conduct Compliance Statement.

The Group-wide reporting system for Code of Conduct violations applies to any alleged or potential breaches. Potential cases of the Code of Conduct violations can be reported to Group Internal Audit (GIA) by employees, vendors, contractors and GIA auditors through anonymous letters, emails or phone calls. The Group Code of Conduct Committee, which comprises the Chief Financial Officer, the Chief Strategy, Sustainability & Governance Officer and the Chief Human Resources Officer, reviews and endorses any disciplinary measures to be taken.

GIA regularly reviews compliance with the Code, and investigates any potential violations except those related to human resources, which are investigated by the Human Resources (HR) department. The number of Code breaches and any cases of corruption are reported annually to the Audit & Risk Committee (ARC), with the relevant data verified by a third party.

To expedite responses to Code of Conduct violations in Australia, EnergyAustralia has been delegated the responsibility of managing and addressing violations by its employees. Under this arrangement, EnergyAustralia informs the ARC of CLP Holdings of cases involving senior EnergyAustralia employees.

At Apraava Energy, a separate Internal Complaints Committee has been established to handle complaints of sexual harassment at the workplace in accordance with Indian laws.

Initiatives and progress

In 2023, 12 breaches of the Code of Conduct were reported, though none were financially or operationally material to the Group, nor did they involve employees at the grade level of senior manager and above.

GRI reference: 406-1, 417-2, 417-3

In addition, there were no convicted cases of corruption. The breaches were managed internally in accordance with CLP's complaint handling process for Code of Conduct breaches.

Regarding whistleblowing cases, nine cases were received in 2023 compared with five in 2022.

Records of confirmed cases of Code of Conduct Principles breaches during the past five years are shown in the table below. Between 2019 and 2023, CLP did not have any breaches related to six Code of Conduct principles, namely Political Contributions, Gift & Entertainment, Laws & Regulations, Representation, Response to Incidents, and Compliance & Report.

Code of Conduct Principles

	2023	2022	2021	2020	2019
Zero Harm Vision¹					
<i>Includes issues regarding health and safety, and alcohol and drug abuse.</i>	0	0	0	0	0
Respect for People¹					
<i>Includes discrimination, harassment and other issues related to not respecting people.</i>	2	5	4	8	17
Ethics and Business Integrity¹					
<i>Includes unethical business behaviour related to integrity, honesty and fairness.</i>	0	2	10	1	13
Other Principles¹					
<i>Includes Conflicts of Interest, Company Policies, Financial Controls, Protecting Information & Assets, and Meeting Responsibilities.</i>	10	3	4	16	1
Total	12	10	18	25	31

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Legal compliance

Our approach

The CLP Group operates in multiple jurisdictions, each with its own distinct legal and regulatory requirements. Ensuring compliance with these requirements is a top priority for CLP in terms of maintaining its business credibility and social licence to operate.

CLP aspires to go beyond meeting its basic legal requirements and to apply international best practices in its operations. It therefore voluntarily follows high standards that reflect the Company's principles and values, and is prepared to forego opportunities or advantages where necessary in order to uphold the highest standards of corporate governance and integrity. Specific policies and guidelines for each operational area are in place and are reviewed regularly to assist CLP in ensuring compliance with the differing jurisdictional laws and regulations. These policies and guidelines set the standards and requirements for compliance with laws relating to competition, personal data and privacy, intellectual property, health and safety, environmental protection, emissions, employment and human resources amongst others. Any compliance issues are escalated according to the policy requirements and in accordance with the code of conduct and applicable laws. Adherence to policies and procedures is also evaluated by CLP's internal audit function in accordance with their audit cycles and assessment scope.

Monitoring and follow-up

One of the ARC's responsibilities is to review and monitor the Company's compliance with the Code of Conduct, as well as the Company's policies on compliance with applicable legal and regulatory requirements such as the Hong Kong Exchanges and Clearing Limited (HKEx) Listing Rules, the Companies Ordinance (Hong Kong) and the Securities and Futures Ordinance (Hong Kong). The ARC also reviews regulatory and legal issues. Every six months, Group Legal Affairs compiles a CLP Group Key Regulatory and Legal Compliance Issues Report, which covers key regulatory compliance issues and legal cases involving CLP as a defendant, for submission to the ARC.

CLP is often confronted with changes in the legal and regulatory regimes of the jurisdictions in which it operates. The Company closely monitors emerging regulations and ensures that it is prepared for changes. CLP's businesses in each jurisdiction have a process in place for monitoring, tracking and documenting all applicable legislation and amendments to it, and ensuring details are communicated to all relevant personnel, business units and management.

In reviewing new and amended laws and regulations which came into effect during the 2023 reporting year, CLP has identified those which had or will have a significant impact on the business for inclusion in this report. The threshold applied for assessing inclusion in the report is whether significant investment or expenditure was or will be required to ensure compliance. Laws and regulations that met this threshold are outlined in the respective sections of this report:

- 1. **Emissions** – laws and regulations addressing air and GHG emissions, discharges into water and land, and generation of hazardous and non-hazardous waste;
- 2. **Employment** – laws and regulations regarding compensation, dismissal, recruitment and promotion practices, working hours, rest periods, equal opportunity, diversity, anti-discrimination measures and other benefits and welfare;
- 3. **Health and Safety** – laws and regulations providing for safe working environments and protecting employees from occupational hazards;
- 4. **Labour Standards** – laws and regulations preventing child and forced labour;
- 5. **Product Responsibility** – laws and regulations on consumer data protection and privacy; and
- 6. **Anti-corruption** – laws and regulations on bribery, extortion, fraud and money laundering.

Initiatives and progress

There was one new reportable case of legal non-compliance in 2023.

SASB reference: IF-EU-140a.2, IF-EU-550a.1; GRI reference: 2-27, 205-3, 206-1, 306-3 (2016), 411-1, 413-2, 416-2, 417-2, 417-3, 418-1, EU22, EU25

In the spirit of transparency and accountability, CLP reports cases of legal non-compliance annually in its Sustainability Report. These include cases of criminal convictions against CLP, and major breaches that resulted in significant fines (greater than HK\$1 million) or equivalent non-monetary sanctions. CLP's 2023 legal compliance performance is summarised below, according to the GRI Standards 2021 and the HKEx Environmental, Social and Governance Reporting Guide.

The Company is also exposed to the risk of contractual disputes and litigation in the course of its normal operations. The Group considers each instance separately in accordance with legal advice and makes provision and/or discloses information as appropriate.

Legal non-compliance

	Number of cases	Supplementary information
Business practices		
Anti-corruption	No reportable cases	Read more in the Code of Conduct and anti-corruption section.
Anti-competitive behaviour	No new reportable cases in 2023. There is one existing and previously reported case involving Ho-Ping Power Station in Taiwan, in which the CLP Group has a 20% equity interest	The Ho-Ping litigation is against a penalty for alleged concerted action with other independent power producers (IPPs) in violation of the Taiwan Fair Trade Act. The Taiwan Fair Trade Commission (FTC) in 2013 ruled and fined nine IPPs for alleged cartel behaviour. Ho-Ping filed litigations against the FTC penalty. The FTC's decision was eventually overruled by the Taipei High Administrative Court (THAC) in October 2014. However, the FTC successfully appealed the THAC's decision to the Supreme Administrative Court (SAC), and the case returned to the THAC for re-examination. In May 2017, the THAC ruled again in favour of Ho-Ping and rejected the FTC's decision. In June 2018, the SAC accepted FTC's further appeal and, for the second time, returned the case to the THAC for re-examination. In June 2020, the THAC ruled in favour of Ho-Ping for the third time, and the FTC once again appealed to the SAC. In August 2022, the SAC ruled in favour of FTC. Ho Ping submitted an application for a retrial in September 2022. As at December 2023 there had been no new progress on the application for a retrial. In April 2023, Ho-Ping lodged an administrative appeal which was rejected by the SAC. In June 2023 Ho-Ping filed an administrative proceeding which was brought to the first preparation proceedings court in November 2023. The court proposed that both FTC and Ho-Ping undertake mediation before the matter proceeds further, to which both parties agreed and await a timetable for the mediation.
Employees and contractors		
Employment practices	No reportable cases	-
Labour standards (child and forced labour)	No reportable cases	-
Occupational health and safety	One reportable case from an existing and previously reported event involving Yallourn Power Station in Australia, in which the CLP Group has a 100% equity interest	As reported in the 2022 sustainability report, in December 2021, the Victorian Workcover Authority (WorkSafe Victoria) laid charges against EnergyAustralia Yallourn regarding three breaches of the Occupational Health and Safety Act in relation to the death of Graeme Edwards at Yallourn Power Station in 2018. The three charges were related to failures to, so far as reasonably practicable, provide and maintain a working environment that was safe and without risk to health. At the committal mention on 3 June 2022, a plea of guilty was entered in relation to the charges brought by WorkSafe Victoria. At the sentencing hearing on 13 February 2023, EnergyAustralia Yallourn was fined a total of A\$1.5 million. EnergyAustralia paid this fine in 2023.
Customer		
Customer privacy	No reportable cases	Read more in the Customer privacy section.
Product and service information and labelling and marketing information	No reportable cases	
Access to electricity	No reportable cases	-
Customer health and safety	No reportable cases	-
Community		
Rights of Indigenous people	No reportable cases	
Environment		
	No reportable cases	Read more in the Monitoring and compliance of emissions and other nature-related regulations section.

	Number of cases	Supplementary information
Other		
-	There was one new case in 2023 related to EnergyAustralia in which CLP Group has a 100% equity interest.	On 15 May 2023, the Australian Energy Regulator notified EnergyAustralia of its Board's decision to issue EnergyAustralia with six infringement notices (A\$67,800 each) totalling A\$406,800 for failure to comply with the National Gas Rules. The infringement notices have been paid. The infringement notices related to two failings by EnergyAustralia to accurately submit certain information required under the National Gas Rules to the Australian Energy Market Operator during the period from 1 July 2020 to 23 December 2021.

Supply chain management

Our approach

CLP endeavours to build a value chain that supports its core environmental, social and business objectives. In collaboration with its suppliers, CLP has extended its responsible business principles to promote good working practices throughout the entire supply chain.

CLP's effective procurement and supply chain management system cultivates long-term and mutually beneficial relationships with suppliers who share CLP's values and goals. The system is centred on the CLP Group Procurement Standard (GPS) which is supported by a set of policies that include [CLP's Value Framework](#), [CLP Procurement Values and Principles](#), CLP SCoC and other procurement policies that govern daily CLP operations.

The system aims to continually improve CLP's competitive advantages by building commercially viable strategic relationships with preferred suppliers. It evaluates business value outcomes based on total cost of ownership management, environmental, social and governance (ESG) value, supply chain resilience and innovation.

Strategies and procedures

The GPS sets out a framework for strengthening CLP's supply chain management capability to support its "Power Brighter Tomorrows" vision and match world-class procurement practices. The GPS provides a structured path for the business to deliver value outcomes in the four areas mentioned above, and is regularly reviewed internally.

The latest version of the GPS, which places a special emphasis on safety across the supply chain, was released in early 2022. Its five dimensions are:

- Corporate strategy and guiding principles
- Business value outcomes
- Future-fit structures and collaboration
- People and technology
- Change management

For each dimension, the GPS defines levels of world-class practice from "basic" to "advanced". Each business unit assesses the level of functional capability it requires to support its business outcomes, and then develops a plan to progress from its current level towards more advanced practices.

CLP's Group Procurement Standard



CLP's Whistleblowing Policy and Harassment-Free Workplace Policy are also part of CLP's procurement operations, and CLP encourages all suppliers to uphold the principles outlined in these policies.

The CLP Procurement team actively participates in membership of project steering committees, providing appropriate levels of oversight and governance in procurement decision-making. Procurement commitments in the Company's various regions are made with reference to the clearly-defined authorities set out in the *Company Management Authority Manuals*.

Monitoring and follow-up

CLP's fit-for-purpose sourcing strategies are designed to identify suppliers that best meet its requirements and that deliver value at an acceptable level of risk.

Under the standard procedure, supplier selections are conducted through competitive tendering which assesses each supplier's ability to fulfil criteria of quality, health and safety, environmental protection, delivery, innovation, sustainability and cost. Every supplier contract is designed to safeguard CLP stakeholder interests and ensure the supplier meets its commitments and obligations in areas such as legal and regulatory compliance, intellectual property rights, data confidentiality and security.

The Procurement Leadership Team, comprising each Region's head of procurement, oversees aggregated future procurement needs, supply market opportunities and risks, and the development of procurement strategies. The Group

Procurement team has enhanced its in-house capacity by bringing in a sustainable procurement specialist to support the planning and implementation of procurement practices relating to sustainability.

Procurement and business unit personnel work collaboratively to review and assess the performance of incumbent suppliers in the market. They also monitor sustainability risks in the areas of human rights/modern day slavery, environment and community. These initiatives provide useful information for formulating effective sourcing strategies as well as managing risk and supplier relationships.

To better manage supplier clusters, CLP segments its contracted suppliers into tiers based on relative contract value and potential business impact, including risks in relation to supply chain and sustainability factors. The tiers are reviewed on an annual basis. This process of segmentation allows CLP to apply appropriate levels of governance and engagement for more efficient supply chain management.

In addition, regular risk assessments are conducted according to the Corporate Risk Matrix for strategic suppliers with high business criticality and spend value. The assessments are conducted in conjunction with supplier risk management and supplier relationship management processes, covering modern slavery, labour practices, supplier continuity, employee health and safety and cybersecurity. Risk mitigation plans are developed to address identified risks related to delivery performance, supply disruptions, business continuity and sustainability along the supply chain. Regular meetings with suppliers are conducted to discuss the

progress of mitigation plans and explore opportunities for further improvement.

Continuous improvement

Through year-round operational, business, and executive reviews, CLP continues to enhance its supplier relationship management process for strategic suppliers. The reviews consistently assess the delivery performance of each strategic supplier, and are used to drive ongoing improvements.

Past performance data, future business needs, and technology and innovation roadmaps are regularly reviewed with suppliers. While supplier performance is measured under a structured framework, CLP also values direct feedback from its suppliers. This offers candid two-way communication opportunities and, when it has a specific focus on technology roadmaps and innovation, helps CLP prepare for future challenges.

Initiatives and progress

All suppliers contracted for critical projects were subject to sustainability risk assessments, representing 55% of the total procurement project spend.

GRI reference: 2-6, 2-24, 204-1, 308-1, 308-2, 407-1, 408-1, 409-1, 414-1, 414-2

CLP defines critical projects by considering their importance to its business operations, as well as their sustainability risks and contract value.

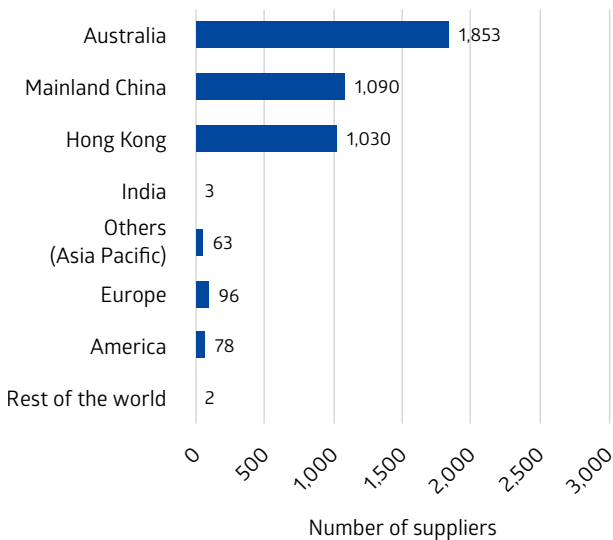
Suppliers of critical projects are assessed on their sustainability practices through tools such as questionnaires, proposal evaluations, site visits, and where subcontracting is involved, audits on the subcontractor's capability to meet project requirements.

In 2023, all critical projects awarded underwent sustainability risk assessments. These critical projects represented 55% of total procurement projects by value, as compared with 51% in 2022, and 67% in 2021.

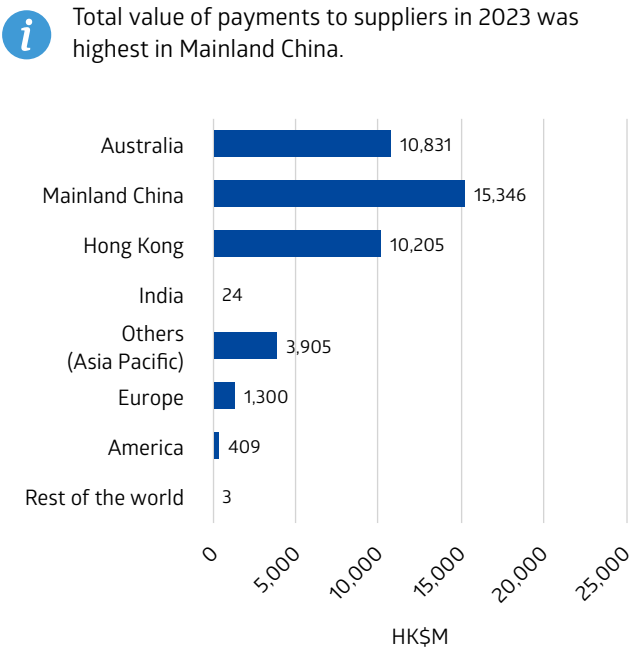
In 2023, the Group sourced products and services from 4,215 suppliers to the total amount of HK\$42 billion – 52% of this total was spent on local suppliers based in the respective Hong Kong, Mainland China, India and Australia markets. Charts on the number of suppliers by region and the spend per region are shown below.

Number of suppliers by region in 2023

i The highest number of CLP's active suppliers are in Australia.



Payment to suppliers by region in 2023



In Hong Kong, CLP Power introduced several initiatives in 2023 designed to enhance the procurement team’s capabilities for managing its supply chain and associated risk. These included:

- Contract law training sessions to reinforce the understanding of key contract terms relevant to potential supply chain disruptions or supplier non-compliance events;
- A Know Your Counterpart (KYC) questionnaire was launched and screening of existing and potential suppliers was put in place to identify potential compliance and sanction risks arising from third party suppliers;
- A Learning Portal was created to encourage self-learning in Commercial and Supply Chain Management; and
- A Supplier Survey was conducted to understand CLP's position in suppliers' markets.

In Australia, in line with its obligations under the Australian Modern Slavery Act 2018, EnergyAustralia submitted its third Modern Slavery Statement to the government in 2023. To assess the risk of modern slavery to its operations, EnergyAustralia used an in-house developed risk matrix based on supplier locations and commodities. This matrix has a special focus on modern slavery and enables the identification of high-risk suppliers. Subsequently, EnergyAustralia reviewed the policies, processes and internal governance practices of these suppliers. A training series on modern slavery was also delivered to over 150 team

members, including those from non-procurement functions, for awareness raising. In the case of medium to large businesses lacking policies or practices prohibiting child labour or forced, bonded or involuntary prison labour, EnergyAustralia provides them with tools for developing such policies and practices in alignment with EnergyAustralia's SCoC. Small business suppliers are asked to confirm in writing that they will abide by EnergyAustralia's SCoC, and EnergyAustralia subsequently conducts surveys to monitor their compliance.

EnergyAustralia remains committed to fostering indigenous inclusion by including indigenous participation clauses in its supplier contracts, particularly for contracts relating to generation sites. By doing so, it seeks to encourage its suppliers to help drive indigenous inclusion by increasing their indigenous business spend and employment as well as boosting their cultural awareness.

In 2023, EnergyAustralia redesigned its market templates to include questions relating to participants' indigenous supplier engagement in areas such as employment and supplier base. These questions are enabling EnergyAustralia to differentiate participants and gain insights into the progress suppliers have made towards working with Aboriginal and Torres Strait Islander communities and businesses.

These initiatives stem from EnergyAustralia's Reconciliation Action Plan (RAP) strategy. The release of the second “Innovated” RAP in 2023 further clarified EnergyAustralia's commitment to promoting reconciliation and cultural understanding as well as enhancing relationships with Aboriginal and Torres Strait Islander peoples and organisations. This year, members of the workforce participated in various local cultural learning sessions in Gippsland, Victoria, Lithgow and New South Wales. These sessions provided them with a closer connection with local Traditional Owners and Custodians, as well as enhancing their understanding of the connections between EnergyAustralia's project sites and local history and culture.

By year end, the procurement team reported that it had sourced goods and services from 17 indigenous suppliers with a total of A\$669,749 in spending.

Responsible procurement

Our approach

As a responsible business, CLP is committed to building a value chain that, at its core, shares responsible procurement practices; at the same time, CLP requires its business partners to be in alignment with its targets and objectives.

GRI reference: 2-24, 407-1, 414-2

CLP proactively engages with suppliers to promote responsible procurement practices for a sustainable supply chain. Since the release of its Supplier Code of Conduct (SCoC) in 2022, CLP has been widely communicating the values, policies, standards and objectives embedded in the SCoC with its supplier community. The SCoC outlines responsible procurement practices that support CLP’s environment, social and business objectives in 11 areas:



Legal Compliance



Business Ethics



Cybersecurity



Quality and Safety



Environmental Management



Climate Change



Community Relations



Supply Chain Management



Labour Practices and Human Rights



Employee Health and Safety



Diversity and Inclusion

For each of these, the SCoC specifies practices that the supplier must comply with and others that they should work towards achieving. While the SCoC is embedded in CLP tender documents and contracts, CLP also encourages its suppliers to monitor, manage and disclose their performance in accordance with the SCoC. CLP extends similar principles to its own upstream supply chains. Since the release of the SCoC, over 500 of its suppliers have agreed to abide by the SCoC requirements. In 2023, CLP also conducted on-site due diligence checks on selected suppliers based on the SCoC principles.

Download the CLP’s Supplier Code of Conduct

EnergyAustralia’s latest SCoC also reflects CLP Group’s responsible procurement practices. It includes a whistleblowing channel that suppliers may contact directly or raise any concerns with anonymously. The Code has been

added to supplier contract templates and to EnergyAustralia Purchase Order Terms and Conditions.

Download EnergyAustralia’s Supplier Code of Conduct

Operational responsibilities
CLP’s contract terms and conditions include specific sustainability requirements and expectations regarding business ethics. Suppliers are encouraged to align with the requirements and expectations stated in the SCoC and are expected to adopt similar standards and practices when doing business with the Company.

CLP’s responsible procurement team actively engages with key internal and external stakeholders to promote procurement practices that reduce ESG risks and enhance supplier capabilities to meet CLP’s sustainability expectations. The Company is striving to shift from a reactive approach of risk mitigation to a proactive approach of advancing opportunities in the strategic sustainability agenda.

Strategies and procedures

CLP takes a risk-based approach to responsible procurement across the procurement lifecycle. ESG risks are identified and evaluated regularly at category, project and supplier levels, taking into account responsible procurement practices. This evaluation considers the following risks:

- Country-specific risks;
- Product/service-specific risks;
- Industry/category-specific risks;
- Legal and regulatory compliance risks;
- Cybersecurity risks;
- Labour practices and sub-contracting risks;
- Health and safety risks;
- Governance and business conduct risks;
- Environmental risks;
- Operational/supply chain risks; and
- Brand and reputational risks.

Specifically, the risk assessment process aims to help CLP manage ESG issues such as labour practices, human rights, modern slavery, child labour, harassment, safety, environment, subcontractor management and anti-bribery along the value chain. The risk assessment results provide insights for developing sourcing strategy and risk mitigation measures for strategic suppliers in each category.

Training and development

CLP regularly conducts workshops for contractors to raise their safety and environmental awareness and capability. To enhance the professional development of contractor staff, workshops and training on procurement practices and supplier relationship management are conducted regularly.

Initiatives and progress

CLP is strengthening its Responsible Procurement Framework and enhancing the visibility of its supplier sustainability risk, as part of its three-year Responsible Procurement Roadmap.

Endorsed by the Sustainability Executive Committee, the Roadmap builds on five strategic directions, namely building suppliers' awareness, assuring suppliers' compliance, managing priorities, driving positive impact and getting stakeholders' recognition.

In the first year of the three-year Roadmap, foundational capabilities and aspirations for sustainability in procurement were established. Currently, a Supply Chain Risk management framework is under development. This will help assess a supplier's sustainability profile by considering their industry and geographical location. All active and new suppliers will be assessed to identify sustainability risk hotspots, and be informed of further actions required, including possible support to improve their sustainability performance. The launch of the proposed assessment process is planned for 2024.

Community

Overview

Areas of stakeholder interest	Relevant sustainability agenda
- Providing access to reasonably priced energy - Community investment - Safety around CLP's network - Nuclear safety	Community stewardship Ensuring thriving communities
Outcomes for stakeholders	

CLP Power announced

>HK\$200 million

in community support programmes, with HK\$110 million to provide fuel cost subsidies for people in need

Opened CLP Pulse, a new cultural hub to promote heritage, culture and green education

Awarded over A\$200,000 in Community Grants to 38 local community programmes in Australia

Created hopes for the underprivileged youngsters through a series of initiatives

Provided care to elderly by launching home electrical safety and digital device classes

Our approach

Across the Group, measures have been put in place to ensure that social and physical challenges will not prevent people from accessing and using the Company's products and services. These include challenges relating to language, culture, literacy, financial situation and disability.

In Hong Kong, CLP Power offers a braille bill for those who are visually impaired. In Australia, EnergyAustralia provides interpreter services for those with a first language other than English, and also offers [hearing-impaired](#) and [vision-impaired](#) billing services.

Various subsidy schemes and hardship programmes in Hong Kong and Australia are in place to relieve those in need and safeguard their access to electricity. Special arrangements are in place to ensure that customers facing financial difficulties can avoid disconnection to their electricity supply.

Hong Kong

CLP is committed to maintaining electricity tariffs at reasonable levels while ensuring power supply reliability. CLP's tariff adjustments have been relatively stable over the years, due to prudent cost management and controls combined with a strategy of using a diversified fuel mix, utilising more natural gas, less coal, and importing zero-emission and relatively stably-priced nuclear power. While international fuel prices have fallen from their peak and appear to have stabilised, CLP Power will continue to adopt a prudent cost control approach in its management of electricity tariffs.

Soaring international fuel prices and a surge in the fuel cost for electricity generation since January 2021 have led to an increase in the Fuel Cost Adjustment. To ease the burden on families in need, CLP Power allocated HK\$110 million in 2023 to the CLP Fuel Cost Subsidy Programme, which provided one-off fuel cost subsidies to 150,000 underprivileged households and tenants of subdivided units in its supply area. The Company also allocated HK\$20 million to subsidise families in transitional housing in their purchase of energy-efficient electrical appliances.

CLP Power also provided subsidies and one-stop support to enable landlords of subdivided units to carry out rewiring works and install individual electricity meters for tenants of subdivided units, a move that has improved the safety of the units and enhanced tracking of electricity usage. The programme was launched in January 2019, and by the end of 2023 the programme had supported the rewiring of 79 subdivided units and the installation of 274 individual electricity meters.



In 2023, CLP Power announced over HK\$200 million in community support, with HK\$110 million allocated for subsidising the fuel expenses of 150,000 grassroots families and tenants of subdivided units.

Australia

EnergyAustralia recognises that all customers should have fair and equal access to its products and services. Through its Energy Charter, EnergyAustralia is committed to collaborating with customers to improve energy affordability, energy efficiency and provide support to customers in vulnerable circumstances.

Download EnergyAustralia’s Energy Charter 2022 disclosure

The rising cost of living continues to present challenges for many Australians. To support households facing short-term financial difficulties, EnergyAustralia continued to offer payment plans and payment extensions, as well as providing information on available government assistance. The EnergyAssist hardship programme offers support to customers experiencing financial hardship by providing additional tailored solutions that include customised payment plans, payment matching, debt waivers, and energy-efficiency education. These measures are ensuring that customers are well-informed when making decisions about their energy consumption.

EnergyAustralia also partnered with various organisations to directly assist customers facing financial hardship and improve their energy efficiency:

- Member of the [One Stop One Story Hub Partnership](#), which supports people facing family and domestic violence or financial hardship by helping them navigate support programmes and reduce the need for multiple interactions.
- Partnered with [Uniting Energy Audits](#) to provide customers with energy-efficiency information via a home or phone audit, thus helping them to reduce their energy consumption and bills.
- Partnered with [The Good Guys](#) to assist with the delivery of new appliances and the removal of old ones as part of our appliance swap programme.

Furthermore, EnergyAustralia's business customers can access support through the Rapid Business Assist programme, launched in 2020 to support small to medium enterprises facing financial uncertainty. In consultation with these customers, the Company customised payment schedules were developed, advice on reducing energy consumption were provided, and guidance on accessing government energy-relief subsidies was offered.

Read more on EnergyAustralia’s Hardship Policy

Community investment

Our approach

CLP's community initiatives, sponsorship and donation activities complement other elements of its operations to build and maintain trust from its stakeholders and sustain a harmonious relationship with the community. CLP's approach is to apply its skills and resources strategically to projects, programmes and initiatives that have a positive impact on community development in the short and long term.

The Group is committed to contributing to programmes which support healthy, resilient and sustainable community development over the short and long term. In line with the CLP Group Community Initiatives, Sponsorship and Donation Policy on community engagement, the Company aims to:

- Support projects or programmes that align with the needs and expectations of local communities and respect their cultures, traditions and values;
- Support projects or programmes that are systematically managed with clearly defined objectives and expected outcomes;
- Foster enduring partnerships with credible international, national, regional and local community organisations, non-governmental organisations and charities;

- Support projects or programmes that offer an opportunity for CLP's employees to participate; and
- Regularly evaluate the outcomes and impacts of its contributions.

Download the CLP Group Community Initiatives, Sponsorship and Donation Policy

Strategies and procedures

CLP's community investment strategy is guided by the CLP Group's Community Initiatives, Sponsorship and Donation Policy. This sets out principles and directions for implementing community initiatives across all CLP's business units and group functions. Sitting alongside the Company's corporate governance and internal control measures and its standardised online reporting platform, the policy aims to facilitate a coherent and transparent approach to the assessment, design, review and reporting of CLP's community activities. It ensures that resources are deployed to meet the community's needs effectively and in a timely manner.

The community investment strategy focuses on four key areas: Community Wellbeing, Environment, Education and Development, and Arts and Culture. Each business unit implements the strategy according to local conditions and community needs.

CLP's Community Initiative Approach



Monitoring and follow-up

The CLP Group’s Community Initiatives, Sponsorship and Donation Policy is reviewed every three years to ensure it remains aligned with the Group’s development and changes in the external environment. A review was conducted in 2023 which reaffirmed that the policy in use has proved to be comprehensive and aligns with megatrends and the local needs of different regions.

Different tools for evaluating the socio-economic impact of community initiatives have been benchmarked, and the most

suitable of these are used to review the effectiveness of CLP’s community initiatives.

CLP has a standardised online reporting system for reviewing and reporting on its community initiatives. The system is designed to enhance the overall effectiveness and efficiency of these initiatives by aggregating data on themes, partners, spending, beneficiaries, volunteer hours and impacts.

Initiatives and progress

CLP Power launched a series of community support programmes in 2023, which are mentioned in the following case study section.

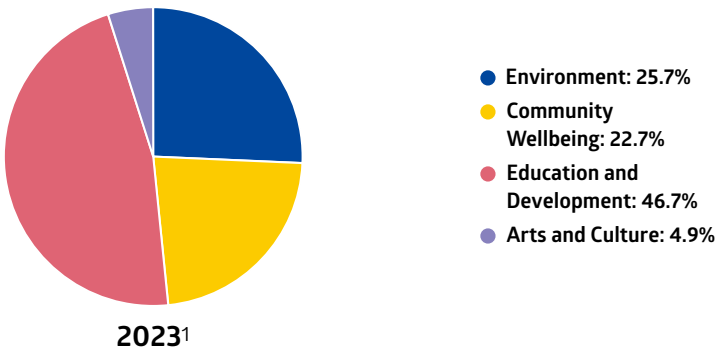
GRI reference: 201-1, 203-1, 203-2, 413-1

	2023	2022	2021	2020	2019
Direct beneficiaries ¹	626,000+	1,305,000+	1,580,000+	918,000+	615,000+
Organisations benefitted ^{1,2}	291	280	232	263	401

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
2 Organisations benefitted include professional bodies, academic institutes, NGOs and community groups.

Beneficiaries by theme

Of the more than 626,000 beneficiaries in 2023, 46.7% benefitted from CLP’s Education and Development programmes. The main contributor was the POWER YOU Kindergarten Education Kit programme which targets all kindergarten children in Hong Kong.



1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023.

Volunteering services in Hong Kong bounced back as pandemic restrictions were lifted locally. However, the increase was offset by a decrease in China and Australia due to the launch of new programmes with different focuses and a review of volunteer policy respectively. More community programmes were implemented across Hong Kong, China, and Australia in 2023. The amount donated by CLP for charitable and other community purposes decreased to HKD\$9.18 million. Community spending by theme and geography is summarised in the charts below.

	2023	2022	2021	2020	2019
Amount donated for charitable and other purposes (HK\$M) ^{1,2}	9.18	10.02	15.09	27.00	20.98
Volunteer hours (hours) ^{1,2}	16,701	19,329	16,541	10,973	20,015
Programmes implemented (number) ¹	458	481	443	468	663

1

Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

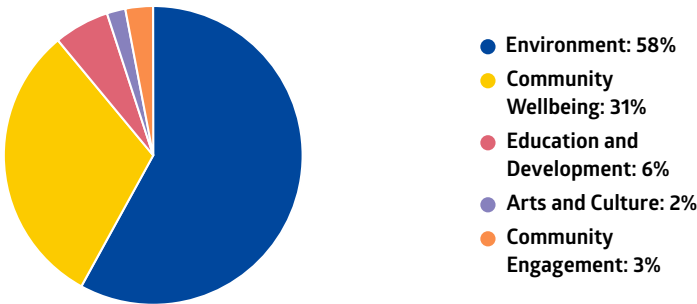
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Numbers have been subject to rounding.

Community spending by theme

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The largest percentage of community spending was directed to environment initiatives (58%), followed by community wellbeing initiatives (31%).



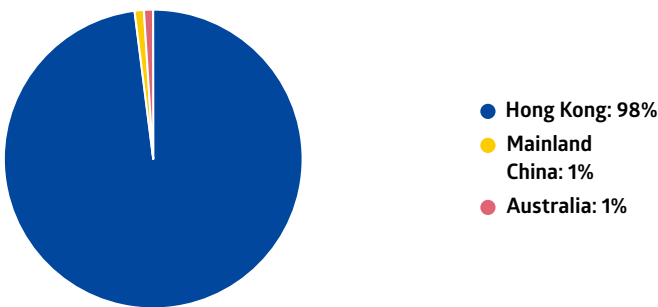
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Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023.

Community spending by region

i

The largest percentage of community spending was directed to Hong Kong (98%).



1

Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023.

Case Study

EnergyAustralia's workplace giving programme passes A\$2 million in donations

EnergyAustralia actively engages with its local communities through volunteering, workplace giving and social investment.

In 2023, over A\$200,000 in Community Grants was awarded to 38 local community programmes near EnergyAustralia's power stations and Geelong contact centre.



As part of EnergyAustralia's Workplace Giving programme, staff donations are made to nine charity partners through pre-tax donations, which are then matched by EnergyAustralia. EnergyAustralia continue to have one of the highest participation rates among all participants in Australia, and in July 2023, the Company celebrated surpassing A\$2 million in donations to our charity partners within the first five years of the programme.

EnergyAustralia's employees are granted 16 hours of paid volunteering leave each year. In 2023, the Company

refreshed its volunteering policy to provide additional flexibility. Since implementing this change, over 600 of EnergyAustralia's employees have volunteered a total of 1,400 hours in their local communities.

To extend EnergyAustralia's support further, the Company End of Year Giving Appeal resulted in a donation of A\$54,000 to its Workplace Giving charity partners. In addition, EnergyAustralia's contributed over A\$10,000 worth of toys and hamper items through donations to local Christmas appeals in its communities. Dedicated volunteers in Melbourne and Geelong sorted the donated presents to give underprivileged children the joy of receiving gifts at Christmas. Furthermore, a team of volunteers assembled 21 items of furniture for three Melbourne families who were setting up new homes after experiencing family violence and homelessness.



EnergyAustralia volunteers assembled IKEA furniture and sorted presents as part of the End of Year giving appeal.

Find out more on local community initiatives at EnergyAustralia

Read more on each business unit's community programmes in the Annual Report

Case Study

A new cultural hub to promote heritage, culture and green education

CLP Pulse is housed in the Grade 1-listed CLP clock tower building built in 1940. Formerly CLP’s Head Office, the building has been transformed into a museum that showcases the intertwined histories of Hong Kong’s electricity development and the Kadoorie Family. It also promotes decarbonisation and sustainable development through experiential activities.

May 2023 saw the opening of CLP Pulse, a new museum featuring themed exhibitions on the history of the electricity industry in Hong Kong, its pivotal role in shaping the city’s development, and the influence of the Kadoorie family on the modernisation of Hong Kong as well as the intangible cultural heritage of Hong Kong. The exhibitions promote heritage, culture and environmental education.

CLP Pulse is housed in CLP’s iconic 80-year-old clock tower building on Argyle Street, which once served as the headquarters for CLP Power. Listed as a Grade 1 historic building by the Antiquities and Monuments Office in 2018, it is one of Hong Kong’s few remaining examples of international modernist architecture. Entry to the museum is free of charge, and complimentary guided tours and experiential activities are available.

From its opening in May up to the end of the year, CLP Pulse welcomed over 46,000 visitors. The museum also provides a permanent headquarters for the Hong Kong Heritage Project, which gives access to a rich and storied archive that encourages and facilitates scholarship in local history.



CLP Pulse, a unique cultural hub housed in CLP’s renovated clock tower building, promotes heritage, culture and green education for the benefit of the Hong Kong community.



The themed exhibition “ElectriCity” at CLP Pulse offers an extraordinary experience for visitors, enabling them to feel the impact of climate change and explore ways of navigating the journey to a zero-carbon future.

Case Study

Connecting the elderly with society

CLP Power has launched a series of social events and digital lessons in Hong Kong to help elderly people stay socially connected.

To bridge the digital divide and empower the elderly, CLP Power launched “Sharing the Festive Joy – Fun4Infinity” in the year. This programme teaches the elderly how to use commonly used mobile applications through digital device classes, provides them with practical opportunities to apply digital skills in their daily lives, and offers guided tours around local neighbourhoods. CLP Power collaborated with 4 NGO partners to organise more than 50 digital classes with practical activities for over 600 elderly people.

To celebrate the Tuen Ng Festival, Mid-Autumn Festival and Senior Citizens Day with the elderly, CLP Power organised visits to the Xiqu Centre and the Hong Kong Palace Museum to explore Chinese culture. Volunteers helped the elderly visitors to apply their newly acquired digital knowledge during the visit, for instance by using QR codes to order desserts and by playing online energy-saving games. Over 300 CLP volunteers took part in the digital classes and practical activities, sharing their love and care with the elderly in their digital journeys.



The Sharing the Festive Joy – Fun4Infinity programme empowers the elderly with digital technology, offering practical opportunities to bridge the digital divide.

CLP Power has four Hotmeal Canteens in Sham Shui Po, Kwun Tong and Kwai Tsing districts, which provide nutritious hot meals to people in need and offer a place for them to meet, socialise, and connect with the community. In 2023, the CLP Hotmeal Canteen programme served its one millionth hot meal to the community, and a celebration lunch was held in April to mark this milestone. CLP volunteers visit the Canteens regularly to help serve meals and organise thematic activities such as games and art workshops. These activities promote physical and mental health while demonstrating care to people in need.



The CLP Hotmeal Canteens have served up more than one million meals, at the same time providing a place for people to socialise and connect with the community.

The ‘Be Dementia Friendly’ programme was launched in the year, designed to help elderly people exhibiting early signs of dementia by providing interactive services that can delay cognitive decline. CLP organised five workshops during the year. In December, a trial run of the ‘Be Your Peer Community Power Journey’ led by trained retirees was organised for elderly participants in the ‘Be Dementia Friendly’ programme to interact with CLP volunteers and the community.

Case Study

💡

Providing opportunities for young people and nurturing future generations

In the face of the challenges encountered by fresh graduates and career starters, CLP Power is dedicated to addressing the working needs of local youth and providing support in collaboration with various partners to boost opportunities for youngsters.

In collaboration with the Correctional Services Department, CLP Power is helping young people in custody and those who have been released with their reintegration into society by organising career talks, interview skills workshops, caring visits, induction courses and special internships. Approximately 130 young inmates have benefited from the programme, gaining information on continuing their studies and exploring pathways in engineering.

CLP Power supported the government's Strive and Rise Programme 2022/23 by nominating 16 mentors, including graduate trainees, young engineers, and representatives from various business units. These mentors participated in a one-year mentorship programme, with 6 of the mentors pairing with underprivileged junior form students on a one-on-one basis. They accompanied the students in a wide range of activities, including 25 visits to CLP facilities such as the CLP E-Playground, CLP Learning Institute and Low Carbon Energy Education Centre, providing them with valuable life and study advice. CLP is continuing to support the Strive and Rise Programme 2023/24 by nominating 11 mentors to join the one-year mentorship programme.

CLP Power supported the Hong Kong Federation of Youth Groups for the CLP Energy for Brighter Tomorrows Award, providing scholarships for 20 young people with outstanding achievements in battling against adversity. Nine CLP Power colleagues acted as mentors for the students. Since its launch, a total of 100 students have been awarded scholarships.

In addition, the CLP Power Academy collaborated with education institutions in Hong Kong and overseas including the Vocational Training Council (VTC), Scotland's University of Strathclyde and Australia's RMIT University to offer a range of electrical and mechanical engineering courses for students from different educational backgrounds. More

than 2,100 students have benefitted from the courses offered by the academy since it was founded in 2017, highlighting the academy's role in nurturing young people and working adults, providing a career pathway for people without conventional academic qualifications and widening the engineering talent pool.

The CLP Power Academy launched a pioneering training course in 2022 for Hong Kong engineering personnel to gain high-voltage electrical qualifications in Mainland China in a joint initiative with the Guangzhou Industry and Trade Technician College and the VTC. The first cohort graduated in June 2023 and a new training course for low-voltage electrical work was launched in April 2023.

CLP Power is committed to promoting a low-carbon and energy-saving lifestyle through innovative tools and public education programmes. Its Power Kid Mobile application has been updated with a 3D interface, offering new games and expanded sections promoting messages of energy efficiency and low-carbon living to children. The updated application was launched at the annual Hong Kong Book Fair, which attracted over 35,000 visitors to the CLP booth across its seven days. The newly revamped application has been downloaded more than 11,000 times since its launch. In addition, a new 3D cartoon video featuring sustainable living habits was launched in 2023. CLP's graduate trainees and young engineers continued to visit local kindergartens to talk about the power generation journey, the safe use of electricity, the work life of engineers and to offer energy-saving tips. Approximately 50,000 children in over 600 kindergartens have been reached so far.

CLP's commitment to nurturing future generations extends to primary schools, with 17 primary schools having been accredited as Green Elites campuses under the CLP Green Elites Campus Accreditation Programme. This brings to almost 120 accredited schools under the programme, recognised for their efforts in promoting energy saving, renewable energy and environmental protection on campus.

Since its launch in 2016, the "Engineer in School Programme" has motivated secondary school students to save energy and explore careers in power engineering.

Case Study

💡

Enabling Growth and Engagement through Continued Community Support

As part of its commitment to community stewardship, CLP Power has rolled out a range of targeted initiatives to address the needs of different communities in Hong Kong.

CLP Power allocated HK\$6 million from its Community Energy Saving Fund in 2023 to launch the [E-Learning Assistance Programme](#). The programme provides new electronic learning devices, including iPads, internet mobile WiFi hotspots and data SIM cards, to 1,600 primary, secondary, and tertiary students from low-income families. The initiative aims to support young people needing electronic devices for online classes and e-learning.



CLP Power distributed e-learning devices to 1,600 underprivileged students to help them learn more effectively.

In addition, CLP Power launched the Substation Beautification Project to connect people with their communities by decorating substations with murals promoting energy conservation, carbon reduction and green living. The Substation Beautification Project this year was conducted in Yau Tsim Mong, Sham Shui Po and Kwun Tong districts. Non-profit making art organisations, ethnic minority families, senior citizens, and young people were engaged to collaborate in creating beautiful murals together.



Residents of all ages teamed up to beautify the substation in Shek Kip Mei with colourful messages about local heritage and the importance of a low-carbon lifestyle.

CLP China launched the 3-year 'Rural Vitalisation Programme' in 2023. In the first year, CLP China carried out 7 projects in 5 regions under the themes of ecological, talent and industrial/ agricultural vitalisation. The projects have benefitted more than 6,200 people. Also, the 'Knitting for the Community' programme was launched, bringing together CLP China volunteer group of employees and their families to knit over 600 scarves and accessories for the underprivileged in China.

A Volunteer Appreciation Ceremony was held in November 2023 to recognise the volunteering work of employees with NGOs and community partners from 2020 to 2022, a period in which employees collectively delivered close to 30,000 hours of volunteer service. The Volunteer Team adjusted its services in response to the pandemic, switching from door-to-door visits to calls to provide care for elderly people with early symptoms of dementia; and from dine-in hot meals to distributing meal coupons, takeaways and deliveries to the homes of people in need.

Our approach

GRI reference: 416-1, 416-2

CLP operates a transmission and distribution network in Hong Kong, as well as transmission networks in Shenzhen, China and in the northeastern part of India. Working near power supply lines may pose safety hazards. Both CLP's Hong Kong and Mainland China operations conduct regular construction site inspections and provide cable plans and safety talks to road

Regarding customer health and safety, CLP Power has Customer Service Centres conveniently located in its supply areas in Hong Kong that provide assistance on product safety, as well as advising on energy-efficient products, energy-saving tips and account management issues.



Maintaining proper Health, Safety and Environment management practices for transmission towers is important to keep the general public safe.

Nuclear safety

Our approach

CLP is the minority owner of two nuclear power stations in Mainland China, namely Daya Bay Nuclear Power Station and Yangjiang Nuclear Power Station. The power stations have adopted defence-in-depth principles to ensure multiple independent layers of safety protection.

SASB reference: IF-EU-540a.2

Nuclear risk management

The safe and steady operation of the two nuclear power stations is a top priority. The [defence-in-depth principle](#) of safety is applied in every area, including design, site selection, operation, radiation protection, environmental monitoring, and emergency preparedness. The safety principle of "As Low As Reasonably Achievable" is also applied.

The two nuclear power stations have each delivered good safety performances over the years due to:

- The adoption of best international practices, including the International Atomic Energy Agency Nuclear Safety Standards, in their operations;
- A well-trained and well-qualified workforce;
- Well-established safety practices and procedures; and
- Comprehensive risk analysis and mitigation.

Read more from the Audit & Risk Committee Report in the 2023 Annual Report



Nuclear waste management

Daya Bay Nuclear Power Station (Daya Bay) adheres to national policy and international practices for nuclear waste management. The station stores its spent nuclear fuel onsite in dedicated storage facilities.

The back-end management of the fuel cycle is performed onsite for a number of years before the spent fuel is passed on for reprocessing to a service provider licensed by the Chinese Government. The service provider is supervised by the National Nuclear Safety Administration, and its environmental impact is monitored by the Ministry of Ecology and Environment. The policy in Mainland China on reprocessing spent nuclear fuel is similar to that of a number of European countries.

Low- to intermediate-level solid radioactive waste is appropriately sealed and stored onsite in a dedicated facility on an interim basis, to ensure protection against unauthorised access. The waste is transferred to a final repository operated by a service provider, using the shallow burial method commonly adopted in the United States, France and the United Kingdom. The operation of the offsite repository is under the supervision of the national nuclear regulator and is subject to relevant nuclear safety regulations.

Monitoring and follow-up

Workers' exposure to radiation is closely monitored and managed by plant operators both collectively and at an individual level as part of operating protocols. Workers are exposed to most radiation during planned refuelling outages, when they need to work at the nuclear generating units, including carrying out inspection and maintenance activities in radiation-controlled areas. Radiation dosage levels typically reflect the number of planned outages carried out at the units.

Training and awareness

An onsite training school provides professional training on operational procedures for nuclear sites. The training aims to enhance nuclear safety by systematically minimising the chance of human error. There is a once-every-five-years requalification mechanism to ensure operator professionalism and competency in plant operation.

Initiatives and progress

The International Atomic Energy Agency (IAEA) and the Organisation for Economic Co-operation and Development (OECD) developed the International Nuclear and Radiological Event Scale (INES) to improve public understanding and awareness of the nature and significance of safety aspects of incidents, as well as to communicate to the public the safety significance of nuclear and radiological events in a consistent manner. Any event that happens in a nuclear power station that qualifies for the INES scale is considered as a Licensing Operational Event (LOE). Daya Bay continued to operate smoothly in 2023, with no LOE occurring during the year.

To ensure the provision of low-carbon and cost-competitive energy to Hong Kong, Daya Bay will continue to provide an additional 10% electricity output to Hong Kong from 2024 to 2028, in addition to the 70% of its electricity already committed to Hong Kong. This arrangement helps avoid substantial carbon dioxide emissions in the city while keeping the tariff stable.

CLP is committed to promoting education about nuclear and low-carbon energy. It sponsored The City University of Hong Kong to set up the CLP Power Low Carbon Energy Education Centre in 2017. Since then, the centre has been serving as an important platform for engaging with and educating the public about the benefits of low-carbon energy sources, including nuclear energy, and how they help address the challenge of climate change. There are five themed zones to introduce various types of low-carbon energy including wind, solar, hydro, gas and nuclear through interactive exhibits and tools. Guided tours and various low-carbon themed workshops are offered to visitors free of charge. In 2023, more than 9,000 visitors visited the centre, nearly double the number in 2022. Visitors included students, teachers, professional groups and the general public.

GRI reference: 306-3 (2016), 306-1, 306-2, 306-3

The average radiation dose rate for workers in 2023 was less than 0.4 mSv per person per year. By comparison, the background radiation dose rate from the natural environment in Hong Kong is 2.4 mSv per person per year.

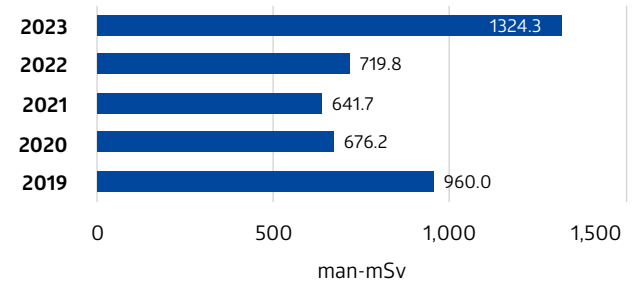
The charts on the right and below show the amounts of spent nuclear fuel and low- to intermediate-level radioactive nuclear waste from Daya Bay in recent years. The amounts of both types of waste are related to the number of planned refuelling outages in each year.

In 2023, Daya Bay carried out a 30-year planned outage, and the total quantity of spent nuclear fuel generated reflected this event.

Collective radiation dosage for workers

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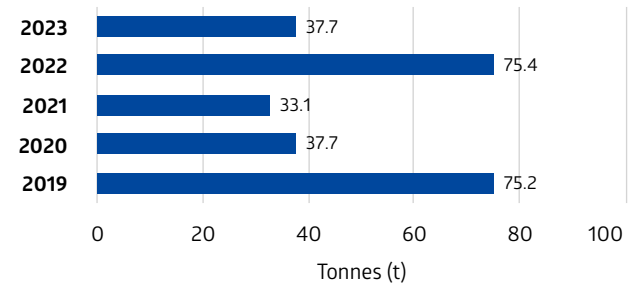
The collective radiation dosage for the year was 1324.3 man-mSv, greater than the 2022 level of 720 man-mSv, as there was a 30-year planned refuelling outage of a longer duration.



Spent nuclear fuel

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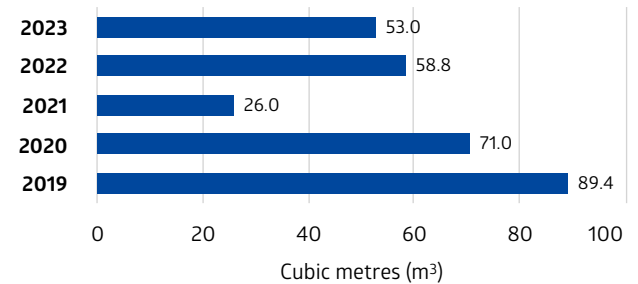
The amount of spent nuclear fuel in 2023 was at an expected level given the one planned refuelling outage, by comparison with two in 2022.



Solid radioactive nuclear waste

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There was a decrease in low- to intermediate -level nuclear waste in 2023, as compared with 2022, due to a 30-year planned refuelling outage of a longer duration.





ESG Data Table and GHG Accounting Methodology

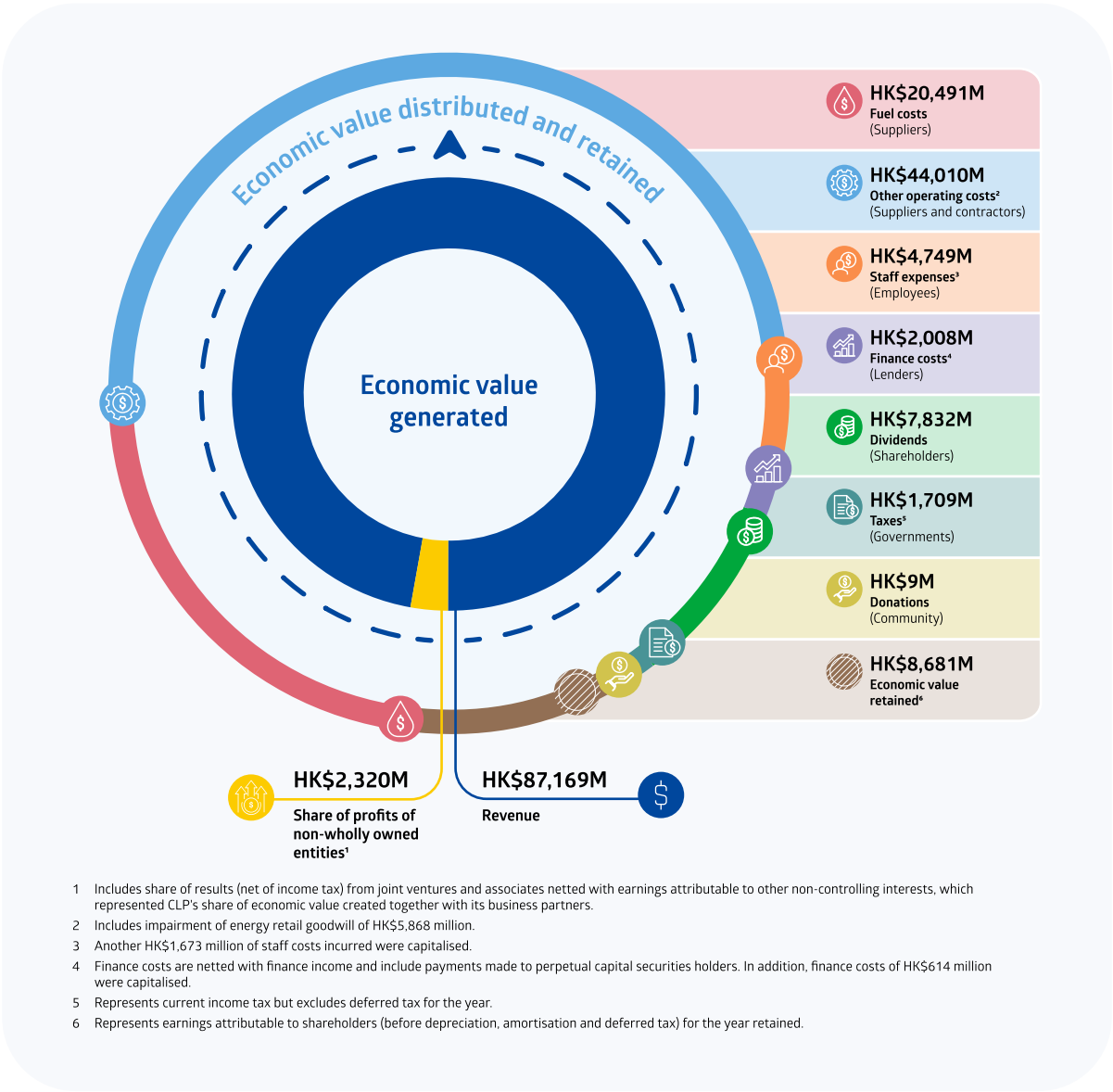
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Economic value generated and distributed

Bearing in mind different stakeholder interests, CLP emphasises value creation over the long term, and does this in a way that helps serve the communities in which it operates.

GRI reference: 201-1

One way to understand this emphasis is through the value created and distributed by CLP to different stakeholders. In 2023, 90.3% of the economic value generated by CLP was distributed to stakeholders, including employees, partners, capital providers and the community at large.



ESG data table

CLP continually improves by managing, monitoring and reporting its ESG performance. These tables present a quantitative overview of the Group's 2023 financial and non-financial performance. The disclosures are selected from the GRI Standards, The Hong Kong Stock Exchange's ESG Reporting Guide, SASB Standards for Electric Utilities, IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures, as well as other key performance data.

Detailed discussion of these metrics can be found in the corresponding [Respecting Nature](#) and [Serving our Stakeholders](#) sections.

The 2023 data shaded in orange has been independently verified by KPMG. The assurance scope of past years' data can be found in [previous sustainability reports](#).

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Read the reporting scope

Download the independent assurance statement

Financial information

Capital investment, operating earnings and revenue

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Total capital investment incurred by asset type (HK\$M(%))^{1,2,3}	15,674 (100%)	17,849 (100%)	15,411 (100%)	13,022 (100%)	12,028 (100%)	IFRS S1-35(c)
Transmission, distribution and retail	6,936 (44%)	6,379 (36%)	5,957 (39%)	4,810 (37%)	5,229 (43%)	
Coal	2,921 (19%)	2,280 (13%)	2,628 (17%)	3,638 (28%)	2,473 (21%)	
Gas	4,336 (28%)	6,713 (38%)	5,639 (37%)	3,445 (26%)	3,146 (26%)	
Nuclear	0 (0%)	0 (0%)	0 (0%)	0 (0%)	352 (3%)	
Wind	219 (1%)	1,721 (10%)				
Hydro	53 (0%)	29 (0%)	842 (6%)	455 (4%)	457 (4%)	
Solar	457 (3%)	34 (0%)				
Waste-to-energy	37 (0%)	1 (0%)	18 (0%)	7 (0%)	123 (1%)	
Others ⁴	715 (5%)	692 (4%)	327 (2%)	667 (5%)	248 (2%)	
Total operating earnings by asset type (HK\$M(%))^{1,5}	11,606 (100%)⁶	9,156 (100%) ⁶	10,972 (100%)	12,374 (100%)	12,138 (100%)	
Transmission, distribution and retail	6,127 (53%)⁶	6,534 (72%) ⁶	6,095 (56%)	5,751 (46%)	5,131 (42%)	
Coal	308 (3%)⁶	-1,478 (-16%) ⁶	763 (7%)	2,871 (23%)	2,503 (21%)	
Gas	2,164 (19%)⁶	1,466 (16%) ⁶	1,312 (12%)	1,510 (12%)	1,735 (14%)	
Nuclear	1,888 (16%)⁶	1,965 (22%) ⁶	1,908 (17%)	1,594 (13%)	1,688 (14%)	
Wind	615 (5%)⁶	428 (5%) ⁶	630 (6%)	567 (5%)	1,011 (8%)	
Hydro	101 (1%)⁶	112 (1%) ⁶				

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Solar	353 (3%) ⁶	4 (0%) ⁶				
Waste-to-energy	8 (0%) ⁶	9 (0%) ⁶	10 (0%)	8 (0%)	5 (0%)	
Others ⁴	42 (0%) ⁶	116 (1%) ⁶	254 (2%)	73 (1%)	65 (1%)	
Revenue by asset type (HK\$M(%))¹	87,169 (100%)	100,662 (100%)	83,959	79,590	85,689	
Transmission, distribution and retail	40,248 (46%)	39,169 (39%)	N/A	N/A	N/A	
Coal	13,800 (16%)	26,188 (26%)	N/A	N/A	N/A	
Gas	20,075 (23%)	21,657 (22%)	N/A	N/A	N/A	
Nuclear	6,943 (8%)	7,000 (7%)	N/A	N/A	N/A	
Wind	1,093 (1%)	1,950 (2%)	N/A	N/A	N/A	
Hydro	452 (1%)	507 (1%)	N/A	N/A	N/A	
Solar	623 (1%)	983 (1%)	N/A	N/A	N/A	
Waste to energy	56 (0%)	58 (0%)	N/A	N/A	N/A	
Others ⁴	3,879 (4%)	3,150 (3%)	N/A	N/A	N/A	

1 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.
2 Capital investment includes: i) capital expenditure in fixed assets, right-of-use assets, investment property and intangible assets; ii) changes in investments and advances to joint ventures and associates; and iii) acquisitions of assets and/or businesses.
3 On an accrual basis.
4 Others include oil, other businesses outside of power generation, transmission, distribution and retail, as well as corporate or enterprise items.
5 Before unallocated expenses.
6 Operating earnings in 2022 and 2023 are aligned where fair value movements are excluded.

Economic value generated, distributed and retained

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Economic value generated (HK\$M)						GRI 201-1
Revenue	87,169	100,662	83,959	79,590	85,689	
Share of profits of non-wholly owned entities ¹	2,320	2,036	1,129	1,608	1,828	
Economic value distributed (HK\$M)						
Fuel costs	20,491	26,603	18,506	15,753	16,712	
Other operating costs ²	44,010	59,505	39,922	35,774	48,654	
Staff expenses ³	4,749	4,668	5,107	4,844	4,535	
Finance costs ⁴	2,008	1,981	1,774	1,875	2,033	
Dividends	7,832	7,832	7,832	7,832	7,782	
Taxes ⁵	1,709	1,649	1,720	2,529	2,189	
Donations	9	10	15	27	21	
Economic value retained (HK\$M)⁶	8,681	450	10,212	12,564	5,591	

1 Includes share of results (net of income tax) from joint ventures and associates netted with earnings attributable to other non-controlling interests, which represented CLP's share of economic value created together with its business partners.
2 Includes impairment provision/reversal and other charges. In particular, amount included impairment of energy retail goodwill of HK\$5,868 million and HK\$6,381 million in 2023 and 2019 respectively, loss on sale of subsidiaries of HK\$4,312 million in 2022 and litigation settlement of HK\$1,110 million in 2021.
3 Another HK\$1,673 million (2022: HK\$1,509 million) of staff costs incurred were capitalised.
4 Finance costs are netted with finance income and include payments made to perpetual capital securities holders. In addition, finance costs of HK\$614 million (2022: HK\$466 million) were capitalised.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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5 Represents current income tax but excludes deferred tax for the year.
6 Represents earnings attributable to shareholders (before depreciation, amortisation and deferred tax) for the year retained.

Climate change

Greenhouse gas emissions

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
CLP Group ¹						
Total CO ₂ e emissions – on an equity basis (kt) ^{2,3}	52,988	60,223	65,017	62,138	71,720	GRI 305-1, 305-2, 305-3/ HKEx A1.2/ SASB IF- EU-110a.1, IF-EU-110a.2/ IFRS S2-29(a)
Scope 1 (kt) ⁴	38,163	44,141	47,690	45,105	50,047	
Scope 2 (kt)	229	220	236	244	250	
Scope 3 (kt)	14,597	15,861	17,091	16,790	21,424	
Category 1: Purchased goods and services	1,056	912	901	1,210	1,093	SASB IF- EU-110a.2
Category 2: Capital goods	816	902	1,488	685	1,347	
Category 3: Fuel- and energy-related activities	11,053	12,046	12,733	12,690	16,671	
Category 5: Waste generated in operations	46	56	80	63	101	
Category 6: Business travel	4	2	1	1	8	
Category 7: Employee commuting	4	5	4	2	4	
Category 11: Use of sold products	1,617	1,939	1,884	2,138	2,200	
CLP Group's generation and energy storage portfolio ^{3,4,5}						
CO ₂ – on an equity basis (kt) ⁶	38,051	44,019	47,574	44,987	N/A	GRI 305-1, 305-2/ HKEx A1.2
CO ₂ e – on an equity basis (kt) ⁶	38,241	44,235	47,813	N/A	N/A	
CO ₂ – on an equity plus long-term capacity and energy purchase basis (kt) ⁷	42,216	48,074	51,674	48,621	N/A	N/A
CO ₂ e – on an equity plus long-term capacity and energy purchase basis (kt) ⁷	42,439	48,323	51,941	N/A	N/A	
CO ₂ – on an operational control basis (kt) ^{6,8}	30,563	44,338	46,842	43,808	50,412	
CO ₂ e – on an operational control basis (kt) ^{6,8}	30,732	44,571	47,090	44,023	50,676	

1 Refers to a range of businesses, including generation and energy storage portfolio, transmission and distribution, retail and others.
2 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.
3 Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.
4 In accordance with the Greenhouse Gas Protocol, WE Station, which makes use of landfill gas from waste for power generation, is not included in CLP's Scope 1 CO₂ emissions and is reported separately in the Asset Performance Statistics. Its non-CO₂ GHG emissions (i.e. CH₄ and N₂O) are included in CLP's Scope 1 CO₂e emissions.
5 Starting from 2020, the portfolio includes energy storage assets and generation assets. Energy storage assets include pumped storage and battery storage. In previous years, the portfolio included generation assets only.
6 Numbers include Scope 1 and Scope 2 emissions.
7 Numbers include Scope 1, Scope 2 and Scope 3 Category 3 emissions (direct emissions from generation of purchased electricity that is sold to CLP's customers).
8 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Greenhouse gas emissions intensity

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
CLP Group – GHG emissions intensity of generation and energy storage portfolio ^{1,2,3}						
On an equity basis (kg CO ₂ e/kWh) ⁴	0.62	0.63	0.65	0.66	0.71	GRI 305-4/ HKEx A1.2/ IFRS S2-33(a)
On an equity plus long-term capacity and energy purchase basis (kg CO ₂ e/kWh) ⁵	0.54	0.55	0.57	0.57	0.63	
CLP Power Hong Kong – GHG emissions intensity of electricity sold ^{3,6}						
CO ₂ emissions intensity of electricity sold by CLP Power Hong Kong (kg CO ₂ /kWh)	0.39	0.39	0.39	0.37	0.49	
CO ₂ e emissions intensity of electricity sold by CLP Power Hong Kong (kg CO ₂ e/kWh)	0.39	0.39	0.39	0.37	0.50	

- Starting from 2020, the portfolio includes energy storage assets and generation assets. Energy storage assets include pumped storage and battery storage. In previous years, the portfolio included generation assets only.
- Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.
- In accordance with the Greenhouse Gas Protocol, WE Station, which makes use of landfill gas from waste for power generation, is not included in CLP's Scope 1 CO₂ emissions and is reported separately in the Asset Performance Statistics. Its non-CO₂ GHG emissions (i.e. CH₄ and N₂O) are included in CLP's Scope 1 CO₂e emissions.
- Numbers include Scope 1 and Scope 2 emissions.
- Numbers include Scope 1, Scope 2 and Scope 3 Category 3 emissions (direct emissions from generation of purchased electricity that is sold to CLP's customers).
- "Electricity sold" is the total electricity energy sold to CLP Power Hong Kong Limited's customers before the adjustment of Renewable Energy Certificates.

The 2023 data shaded in orange has been independently verified by KPMG. The assurance scope of past years' data can be found in previous sustainability reports.

Environment

Environmental compliance

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Environmental regulatory non-compliances resulting in fines or prosecutions (number) ^{1,2}	0	0	0	0	0	GRI 2-27
Environmental licence limit exceedances & other non-compliances (number) ^{1,2}	5	6	5	4	10	

- Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.
- Numbers include operating assets where CLP has operational control during the calendar year. Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.

Air pollutants

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Nitrogen oxides (NO _x) (kt) ^{1,2}	32.3	43.5	45.7	43.2	47.0	GRI 305-7/ HKEx A1.1/ SASB IF-EU-120a.1
Sulphur dioxide (SO ₂) (kt) ^{1,2}	40.6	48.9	52.7	48.0	44.7	
Particulates (kt) ^{1,2}	6.7	6.8	7.6	6.9	7.7	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Sulphur hexafluoride (SF ₆) (kt) ^{1,2}	0.004	0.003	0.004	0.003	N/A	
Mercury (t) ^{1,2}	0.22	0.52	0.31	N/A	N/A	SASB IF- EU-120a.1

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.
2 Numbers include operating assets where CLP has operational control during the calendar year. Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.

Waste

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Hazardous solid waste (t) ^{1,2,3}						
Produced	3,617	869	1,524	1,503	862	GRI 306-3/ HKEx A1.3
Recycled	331	493	520	523	201	
Hazardous liquid waste (kl) ^{1,2,3}						
Produced	1,935	1,103	1,017	1,091	1,578	
Recycled	684	797	947	1,069	1,536	
Non-hazardous solid waste (t) ^{1,2,3}						
Produced	12,326	12,702	24,481	17,901	13,344	GRI 306-3/ HKEx A1.4
Recycled	6,744	7,917	4,214	4,458	4,986	
Non-hazardous liquid waste (kl) ^{1,2,3}						
Produced	0	23	65	3	59	
Recycled	0	23	65	3	57	
By-products ^{1,2}						
Ash produced (kt)	1,045	3,066 ⁴	3,403	2,624	3,032	SASB IF- EU-150a.1
Ash recycled / sold (kt)	328	2,365	2,501	1,793	3,667	
Gypsum produced (kt)	52	286	367	334	441	
Gypsum recycled / sold (kt)	61	280	365	335	438	

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.
2 Numbers include operating assets where CLP has operational control during the calendar year. Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.
3 Waste categorised in accordance with local regulations.
4 Restated as per updated data for Mount piper in Australia.

Water

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Total water withdrawal (Mm³)^{1,2,3}	4,249.0	5,339.3	5,243.7	5,466.0	5,475.4	GRI 2.4, 303-3/ HKEx A2.2/ SASB IF- EU-140a.1
For cooling purpose						
Water withdrawal from freshwater resources	24.1	42.7	43.3	33.6	47.6	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Water withdrawal from marine water resources	4,217.4	5,287.0	5,190.3	5,421.7	5,415.4	
For non-cooling purposes						
Water withdrawal from freshwater resources	2.0	4.6	5.3	5.7	5.8	
Water withdrawal from municipal sources	5.4	5.0	4.8	4.9	6.7	
Total freshwater withdrawal from water stressed areas	0.01	N/A	N/A	N/A	N/A	SASB IF-EU-140a.1
Total water discharge (Mm³)^{1,2,3}	4,240.3	5,310.9	5,205.4	5,438.6	5,433.2	GRI 2.4, 303-4
From cooling process						
Treated wastewater to freshwater bodies	0	0	0	0	0	
Water discharge to marine water bodies	4,217.4	5,287.0	5,190.3	5,421.7	5,415.4	
Wastewater to other destinations	0	0	0	0	0	
From non-cooling processes						
Treated wastewater to freshwater bodies	19.7	21.0	11.9	13.7	14.4	
Treated wastewater to marine water bodies	1.7	1.6	1.3	1.5	1.7	
Wastewater to other destinations	1.5	1.3	1.9	1.6	1.7	
Wastewater to sewerage	0.03	0.04	0.03	0.03	0.03	
Total freshwater consumption of CLP Group's power generation (Mm³)¹	12.0	31.3	41.5	N/A	N/A	GRI 303-5/ SASB IF-EU-140a.1
Total freshwater consumption under water stressed areas (Mm ³) ¹	0.01	16.5	17.2	N/A	N/A	SASB IF-EU-140a.1
Freshwater intensity						
Freshwater intensity of CLP Group's power generation (m ³ /MWh) ^{1,2}	0.28	0.52	0.66	0.51	0.74	
Freshwater reused/recycled						
Freshwater reused/recycled volume (Mm ³) ^{1,2}	786	756	838	736	686	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.
2 Numbers include operating assets where CLP has operational control during the calendar year. Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.
3 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.

The 2023 data shaded in orange has been independently verified by KPMG. The assurance scope of past years' data can be found in previous sustainability reports.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Customers

Customer portfolio and electricity delivered- CLP Power Hong Kong Limited

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Total Hong Kong customers (number)	2,789,644	2,752,071	2,711,421	2,671,836	2,636,408	GRI EU3/SASB IF-EU-000.A
Residential	2,439,557	2,407,225	2,369,217	2,333,901	2,301,200	
Commercial	214,616	212,251	210,821	208,150	206,792	
Infrastructure and Public Services	118,548	115,404	113,956	112,245	110,841	
Manufacturing	16,923	17,191	17,427	17,540	17,575	
Total electricity delivered (GWh)	35,392	34,824	35,355	33,963	34,284	GRI EU3/SASB IF-EU-000.B
Residential	9,929	10,113	10,525	10,298	9,451	
Commercial	13,673	13,233	13,423	12,878	13,584	
Infrastructure and Public Services	10,196	9,863	9,742	9,171	9,586	
Manufacturing	1,594	1,615	1,665	1,616	1,663	

Customer portfolio- EnergyAustralia

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Total Australian customers (number)	2,441,460	2,462,537	2,442,683	2,449,401	2,480,781	GRI EU3
Commercial and Industrial	3,870	8,740 ¹	7,208	8,962	12,599	
Mass market	2,437,590	2,453,797	2,435,475	2,440,439	2,468,182	

1 The number was restated due to classification updates.

Availability and reliability- CLP Power Hong Kong Limited

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
System Average Interruption Frequency Index [SAIFI] ¹	0.27	0.27	0.21	0.19	0.17	SASB IF-EU-550a.2
System Average Interruption Duration Index [SAIDI] (hours) ¹	0.29	0.30	0.23	0.39	0.42	
Unplanned Customer Minutes Lost [CML] (minutes) ¹	5.98	5.69	0.99	9.77 ²	10.13 ³	

1 The numbers are derived by calculating the average of data from the most recent three years. For example, the figures under year 2023 are the 3-year averages of data from 2021 to 2023.

2 The 2018-2020 average would have been about 0.9 minutes without the severe impact of Mangkhut in September 2018.

3 The 2017-2019 average would have been about 1.3 minutes without the severe impact of Mangkhut in September 2018.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Access to electricity- CLP Power Hong Kong Limited

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Total disconnections for Hong Kong retail businesses (number)^{1,2,3}	6,520	4,859	4,943	4,999	4,643	
0 - 2 days	115	144	105	98	4,333	
3 - 7 days	721	739	796	506	170	
8 - 31 days	2,304	1,817	2,251	2,274	101	
≥ 32 days	3,380	2,159	1,791	2,121	39	

- 1 It refers to the disconnection orders completed due to heavily overdue payment.
- 2 It refers to the number of days required from the issuance of the disconnection orders to the completion of the disconnection orders.
- 3 It includes residential and commercial & industrial businesses.

Fuel use

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Coal consumed (for power generation) (TJ) ^{1,2,3}	250,177	394,274	426,190	403,379	485,453	GRI 302-1/ HKEx A2.1
Gas consumed (for power generation) (TJ) ^{1,2,3}	146,370	151,327	142,304	134,776	107,183	
Oil consumed (for power generation) (TJ) ^{1,2,3}	2,854	2,936	2,717	2,243	2,620	

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.
- 2 Numbers have been subject to rounding.
- 3 Numbers include operating assets where CLP has operational control during the calendar year. Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 numbers.

Generation and energy storage capacity

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
On an equity basis						
Total generation and energy storage capacity by asset type (MW(%))^{1,2}	18,123 (100%)	17,970 (100%)	20,018 (100%)	19,691 (100%)	19,238 (100%)	GRI EU 1
Coal	8,486 (46.8%)	8,486 (47.2%)	10,795 (53.9%)	10,765 (54.7%)	10,765 (56.0%)	
Gas	4,938 (27.2%)	4,934 (27.5%)	4,666 (23.3%)	4,600 (23.4%)	4,194 (21.8%)	
Nuclear	1,600 (8.8%)	1,600 (8.9%)	1,600 (8.0%)	1,600 (8.1%)	1,600 (8.3%)	
Wind ³	1,827 (10.1%)	1,680 (9.3%)	1,747 (8.7%)	1,521 (7.7%)	1,521 (7.9%)	
Hydro ³	489 (2.7%)	489 (2.7%)	489 (2.4%)	489 (2.5%)	489 (2.5%)	
Solar ³	548 (3.0%)	554 (3.1%)	499 (2.5%)	499 (2.5%)	451 (2.3%)	
Waste-to-energy ³	7 (0.0%)	7 (0.0%)	7 (0.0%)	7 (0.0%)	7 (0.0%)	
Energy storage	18 (0.1%)	10 (0.1%)	5 (0.0%)	0 (0.0%)	N/A	
Others	210 (1.2%)	210 (1.2%)	210 (1.0%)	210 (1.1%)	210 (1.1%)	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
On an equity plus long-term capacity and energy purchase basis						
Total generation and energy storage capacity by asset type (MW(%)) ^{1,2}	23,291 (100%)	23,068 (100%)	25,108 (100%)	24,752 (100%)	24,015 (100%)	
Coal	9,719 (41.7%)	9,719 (42.1%)	12,027 (47.9%)	11,997 (48.5%)	11,997 (50.0%)	
Gas	6,093 (26.2%)	6,089 (26.4%)	5,813 (23.2%)	5,717 (23.1%)	5,139 (21.4%)	
Nuclear	2,685 (11.5%)	2,685 (11.6%)	2,685 (10.7%)	2,685 (10.8%)	2,685 (11.2%)	
Wind ⁴	2,391 (10.3%)	2,264 (9.8%)	2,331 (9.3%)	2,105 (8.5%)	2,049 (8.5%)	
Hydro ⁴	489 (2.1%)	489 (2.1%)	489 (1.9%)	489 (2.0%)	489 (2.0%)	
Solar ⁴	842 (3.6%)	848 (3.7%)	793 (3.2%)	793 (3.2%)	745 (3.1%)	
Waste-to-energy ⁴	10 (0.0%)	10 (0.0%)	10 (0.0%)	10 (0.0%)	10 (0.0%)	
Energy storage	763 (3.3%)	665 (2.9%)	660 (2.6%)	655 (2.6%)	N/A	
Others	300 (1.3%)	300 (1.3%)	300 (1.2%)	300 (1.2%)	900 (3.7%)	

- 1 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.
- 2 Starting from 2020, a new "Energy Storage" asset category is added, under which pumped storage and battery storage are included. In previous years, assets under the "Others" category included oil-fired generation assets and pumped storage.
- 3 Renewables include wind, hydro, solar and waste-to-energy. The total capacity of renewables on an equity basis is 2,871 MW (15.8%) in 2023.
- 4 Renewables include wind, hydro, solar and waste-to-energy. The total capacity of renewables on an equity plus long-term capacity and energy purchase basis is 3,732 MW (16.0%) in 2023.

Energy sent out

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
On an equity basis						
Total energy sent out by asset type (GWh(%)) ^{1,2,3}	62,052 (100%)	69,726 (100%)	73,113 (100%)	68,699 (100%)	70,949 (100%)	GRI EU 2/ HKEX A2.1/ SASB IF- EU-000.D/
Coal	30,364 (48.9%)	37,031 (53.1%)	42,002 (57.4%)	39,438 (57.4%)	44,596 (62.9%)	
Gas	13,817 (22.3%)	14,435 (20.7%)	13,233 (18.1%)	12,390 (18.0%)	9,979 (14.1%)	
Nuclear	12,128 (19.5%)	12,346 (17.7%)	12,302 (16.8%)	11,192 (16.3%)	10,888 (15.3%)	
Wind ⁴	3,164 (5.1%)	3,146 (4.5%)	2,959 (4.0%)	2,886 (4.2%)	2,924 (4.1%)	
Hydro ⁴	1,626 (2.6%)	1,835 (2.6%)	1,668 (2.3%)	1,879 (2.7%)	1,758 (2.5%)	
Solar ⁴	920 (1.5%)	901 (1.3%)	922 (1.3%)	898 (1.3%)	805 (1.1%)	
Waste-to-energy ⁴	32 (0.1%)	29 (0.0%)	27 (0.0%)	15 (0.0%)	0 (0.0%)	
Energy storage	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
Others	0 (0.0%)	1 (0.0%)	0 (0.0%)	1 (0.0%)	0 (0.0%)	
On an equity plus long-term capacity and energy purchase basis						
Total energy sent out by asset type (GWh(%)) ^{1,2,3}	79,512 (100%)	87,360 (100%)	91,183 (100%)	85,949 (100%)	88,573 (100%)	
Coal	32,418 (40.8%)	39,027 (44.7%)	43,995 (48.2%)	41,118 (47.8%)	48,512 (54.8%)	
Gas	19,203 (24.2%)	19,507 (22.3%)	18,461 (20.2%)	17,157 (20.0%)	13,073 (14.8%)	
Nuclear	20,098 (25.3%)	20,836 (23.9%)	20,962 (23.0%)	19,923 (23.2%)	19,400 (21.9%)	
Wind ⁵	4,688 (5.9%)	4,709 (5.4%)	4,611 (5.1%)	4,445 (5.2%)	4,474 (5.0%)	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Hydro ⁵	1,626 (2.0%)	1,835 (2.1%)	1,668 (1.8%)	1,879 (2.2%)	1,758 (2.0%)	
Solar ⁵	1,480 (1.9%)	1,472 (1.7%)	1,524 (1.7%)	1,522 (1.8%)	1,467 (1.7%)	
Waste-to-energy ⁵	45 (0.1%)	42 (0.0%)	38 (0.0%)	22 (0.0%)	0 (0.0%)	
Energy storage	-46 (-0.1%)	-69 (-0.1%)	-75 (-0.1%)	-118 (-0.1%)	N/A	
Others	1 (0.0%)	2 (0.0%)	1 (0.0%)	1 (0.0%)	-109 (-0.1%)	
On an operational control basis						
Total energy sent out (GWh) ^{3,6}	43,073	60,475	62,967	58,918	N/A	

- Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.
- Starting from 2020, a new "Energy Storage" asset category has been added, under which pumped storage and battery storage are included. In previous years, assets under the "Others" category included oil-fired generation assets and pumped storage.
- Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2023 number.
- Renewables include wind, hydro, solar and waste-to-energy. The total sent out of renewables on an equity basis is 5,743 GWh (9.3%) in 2023.
- Renewables include wind, hydro, solar and waste-to-energy. The total sent out of renewables on an equity plus long-term capacity and energy purchase basis is 7,840 GWh (9.9%) in 2023.
- Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.

Customer satisfaction – CLP Power Hong Kong Limited

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Customer satisfaction score						
CLP	74	72	73	74	72	
All public utilities in the energy sector	74	73	74	74	73	
Public service organisations	74	73	73	74	73	

Customer satisfaction – EnergyAustralia

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Customer service						
Calls handled by EnergyAustralia (number)	1,537,970	1,418,676	1,440,277	1,696,233	1,856,845	
Complaints received by EnergyAustralia (number)	16,594	13,259	14,643	17,049	20,937	

The 2023 data shaded in orange has been independently verified by KPMG. The assurance scope of past years' data can be found in previous sustainability reports.

Our people

Employee headcount and type

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total ¹						
Total employee headcount (number)	8,041	8,318	8,116	8,060	7,960	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Full-time (number)	7,882	8,154	7,930	7,865	7,754	
Part-time (number)	159	164	186	195	206	
Permanent (average %)	85.4	85.7	87.0	87.6	87.8	
Fixed-term contract (average %)	14.6	14.3	13.0	12.4	12.2	
Hong Kong						
Total employee headcount (number)	5,163	4,954	4,771	4,689	4,604	GRI 2-7/ HKEx B1.1
Full-time (number)	5,158	4,948	4,770	4,688	4,603	
Part-time (number)	5	6	1	1	1	
Permanent (average %)	83.0	81.4	83.5	85.1	85.4	
Fixed-term contract (average %)	17.0	18.6	16.5	14.9	14.6	
Mainland China						
Total employee headcount (number)	702	663	627	609	607	
Full-time (number)	702	663	627	609	607	
Part-time (number)	0	0	0	0	0	
Permanent (average %)	70.1	75.2	75.6	75.3	71.6	
Fixed-term contract (average %)	29.9	24.8	24.4	24.7	28.4	
Australia						
Total employee headcount (number)	2,176	2,251	2,281	2,320	2,280	
Full-time (number)	2,022	2,093	2,096	2,126	2,075	
Part-time (number)	154	158	185	194	205	
Permanent (average %)	95.9	95.6	95.1	94.0	94.5	
Fixed-term contract (average %)	4.1	4.4	4.9	6.0	5.5	
India ¹						
Total employee headcount (number)	N/A	450	437	442	469	
Full-time (number)	N/A	450	437	442	469	
Part-time (number)	N/A	0	0	0	0	
Permanent (average %)	N/A	96.3	97.4	98.4	98.8	
Fixed-term contract (average %)	N/A	3.7	2.6	1.6	1.2	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Contractor FTE and type

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total (full-time equivalent)^{1,2}						
Total contractor	8,081.6	10,519.4	9,911.3	9,707.7	11,123.9	
Labour supply ³	1,066.6	1,157.2	1,329.9	1,423.9	1,573.0	
Service contractor ⁴	7,014.9	9,362.2	8,581.5	8,283.8	9,550.9	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Hong Kong (full-time equivalent)²						GRI 2-8
Total contractor	5,784.3	5,434.0	5,202.8	4,949.9	6,372.6	
Labour supply ³	904.1	970.2	1,153.5	1,261.8	1,309.0	
Service contractor ⁴	4,880.1	4,463.9	4,049.3	3,688.1	5,063.6	
Mainland China (full-time equivalent)²						
Total contractor	558.8	331.2	576.0	361.2	363.2	
Labour supply ³	24.0	24.0	23.5	13.8	13.0	
Service contractor ⁴	534.8	307.2	552.5	347.4	350.2	
Australia (full-time equivalent)²						
Total contractor	1,738.5	1,301.5	1,368.0	1,926.5	1,856.2	
Labour supply ³	138.5	107.5	101.1	83.1	172.5	
Service contractor ⁴	1,600.0	1,194.0	1,266.9	1,843.4	1,683.7	
India (full-time equivalent)^{1,2}						
Total contractor	N/A	3,452.6	2,764.6	2,470.1	2,531.9	
Labour supply ³	N/A	55.5	51.8	65.2	78.5	
Service contractor ⁴	N/A	3,397.1	2,712.8	2,404.9	2,453.4	

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
- 2 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.
- 3 Labour supply refers to manpower supplied by contractor companies under labour supply agreements. Reporting is based on quarterly averages.
- 4 Estimated service contractor full-time equivalent (FTE) is calculated based on the number of man-hours incurred and market-specific average working hours.

Total staff turnover rate

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Hong Kong (%)	10.8	11.7	N/A	N/A	N/A	GRI 401-1/ HKEx B1.2
By age group						
Below 30	10.9	12.5	N/A	N/A	N/A	
30-39	12.0	10.6	N/A	N/A	N/A	
40-49	7.8	8.7	N/A	N/A	N/A	
50 and above	11.9	14.5	N/A	N/A	N/A	
By gender						
Male	10.1	11.3	N/A	N/A	N/A	
Female	13.3	13.2	N/A	N/A	N/A	
Mainland China (%)	7.0	5.4	N/A	N/A	N/A	
By age group						
Below 30	6.3	9.5	N/A	N/A	N/A	
30-39	6.3	4.3	N/A	N/A	N/A	
40-49	4.5	0.5	N/A	N/A	N/A	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
50 and above	11.8	10.7	N/A	N/A	N/A	
By gender						
Male	7.6	5.0	N/A	N/A	N/A	
Female	4.1	7.1	N/A	N/A	N/A	
Australia (%)	19.1	24.8	N/A	N/A	N/A	
By age group						
Below 30	31.6	24.8	N/A	N/A	N/A	
30-39	20.2	25.9	N/A	N/A	N/A	
40-49	18.3	26.1	N/A	N/A	N/A	
50 and above	13.0	21.3	N/A	N/A	N/A	
By gender						
Male	18.1	23.1	N/A	N/A	N/A	
Female	20.5	27.1	N/A	N/A	N/A	
India (%) ¹	N/A	12.9	N/A	N/A	N/A	
By age group						
Below 30	N/A	37.5	N/A	N/A	N/A	
30-39	N/A	12.0	N/A	N/A	N/A	
40-49	N/A	13.0	N/A	N/A	N/A	
50 and above	N/A	6.2	N/A	N/A	N/A	
By gender						
Male	N/A	12.8	N/A	N/A	N/A	
Female	N/A	13.7	N/A	N/A	N/A	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Voluntary staff turnover rate

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Hong Kong (%) ^{1,2}	5.4	6.6	4.6	3.1	2.4	GRI 401-1/ HKEx B1.2
By age group						
Below 30	8.2	8.1	7.4	6.3	4.4	
30-39	8.9	9.1	5.6	4.3	4.9	
40-49	5.4	7.2	5.2	2.6	1.9	
50 and above	1.7	4.1	3.0	1.8	1.1	
By gender						
Male	4.5	5.7	4.4	2.5	1.8	
Female	8.4	9.8	5.4	5.4	4.9	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Mainland China (%)^{1,2}	2.6	2.3	2.3	1.3	2.0	
By age group						
Below 30	6.3	8.3	6.7	1.4	8.4	
30-39	5.0	3.4	1.9	2.9	1.9	
40-49	0.0	0.0	2.5	0.5	0.5	
50 and above	0.0	0.0	0.0	0.0	0.0	
By gender						
Male	2.7	2.4	2.1	1.4	2.4	
Female	2.5	1.8	2.9	0.9	0.0	
Australia (%)^{1,2}	15.2	18.8	16.1	7.7	12.9	
By age group						
Below 30	27.7	21.4	25.5	13.6	19.3	
30-39	17.6	22.0	19.0	7.4	14.2	
40-49	13.1	17.9	11.2	6.2	11.5	
50 and above	9.8	13.0	13.1	7.1	8.3	
By gender						
Male	14.2	17.6	16.4	7.1	12.6	
Female	16.8	20.5	15.7	8.5	13.4	
India (%)^{1,2,3}	N/A	10.6	6.9	4.7	6.6	
By age group						
Below 30	N/A	29.5	12.5	5.6	7.4	
30-39	N/A	10.6	7.5	5.7	9.3	
40-49	N/A	10.4	4.8	4.7	2.9	
50 and above	N/A	3.4	5.1	0.0	0.0	
By gender						
Male	N/A	10.4	6.6	4.3	6.4	
Female	N/A	12.0	9.4	7.4	7.5	

1 Voluntary staff turnover refers to employees leaving the organisation voluntarily and does not include dismissal, retirement, company-initiated termination or end of contract.
2 Includes permanent employees only, except for Mainland China where both permanent and fixed-term contract employees are included due to local employment legislation.
3 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

New hire

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total (number)¹	1,168	1,415	1,029	711	857	GRI 401-1
By age group						
Below 30	461	667	342	237	309	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
30-39	410	457	402	241	300	
40-49	202	197	204	145	158	
50 and above	95	94	81	88	90	
By gender						
Male	794	930	686	515	552	
Female	374	485	343	196	305	
Hong Kong (number)	747	731	524	408	348	
By age group						
Below 30	337	308	208	172	157	
30-39	256	265	187	125	121	
40-49	117	109	93	69	48	
50 and above	37	49	36	42	22	
By gender						
Male	516	504	368	308	239	
Female	231	227	156	100	109	
Mainland China (number)	75	71	45	29	43	
By age group						
Below 30	31	27	24	10	16	
30-39	31	35	16	10	25	
40-49	11	9	4	8	2	
50 and above	2	0	1	1	0	
By gender						
Male	62	50	37	25	36	
Female	13	21	8	4	7	
Australia (number)	346	543	433	255	423	
By age group						
Below 30	93	298	106	53	116	
30-39	123	126	182	93	138	
40-49	74	76	103	67	104	
50 and above	56	43	42	42	65	
By gender						
Male	216	323	260	166	242	
Female	130	220	173	89	181	
India (number) ¹	N/A	70	27	19	43	
By age group						
Below 30	N/A	34	4	2	20	
30-39	N/A	31	17	13	16	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
40-49	N/A	3	4	1	4	
50 and above	N/A	2	2	3	3	
By gender						
Male	N/A	53	21	16	35	
Female	N/A	17	6	3	8	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Employees eligible to retire within the next five years

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total (%) ^{1,2}	14.3	14.1	14.6	14.5	13.9	GRI EU15
Hong Kong (%) ²	17.3	18.8	20.1	20.4	19.5	
Mainland China (%) ²	15.9	15.7	15.1	13.4	14.5	
Australia (%) ²	7.8	6.7	6.6	5.7	5.4	
India (%) ^{1,2}	N/A	5.5	5.0	5.1	4.8	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

2 The percentages given refer to permanent employees within each region, who are eligible to retire within the next five years.

Technical trainees intake

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total (number) ¹	106	132	89	79	75	
Male	84	100	71	68	64	
Female	22	32	18	11	11	
Hong Kong (number)	95	94	66	66	61	
Male	76	79	52	58	51	
Female	19	15	14	8	10	
Mainland China (number)	0	3	0	0	4	
Male	0	2	0	0	4	
Female	0	1	0	0	0	
Australia (number)	11	18	17	13	10	
Male	8	12	16	10	9	
Female	3	6	1	3	1	
India (number) ¹	N/A	17	6	0	0	
Male	N/A	7	3	0	0	
Female	N/A	10	3	0	0	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Average training hours per employee

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total (hours) ¹	44.1	46.2	51.6	42.5	40.1	GRI 404-1/ HKEx B3.2
By gender (hours)						
Male	51.4	53.6	58.2	47.7	44.8	
Female	24.4	26.0	33.3	27.6	26.8	
By professional category (hours)						
Managerial	27.2	23.0	29.5	26.8	26.0	
Professional	32.5	33.5	41.2	34.9	35.0	
General & technical staff	59.6	63.9	65.8	52.2	47.1	
By region (hours)						
Hong Kong	52.0	56.3	60.8	49.5	47.6	
Mainland China	72.3	85.6	77.8	66.8	66.1	
Australia	16.9	11.1	26.8	23.2	22.1	
India ¹	N/A	62.1	48.8	33.8	23.2	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Percentage of employees trained

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Hong Kong (%)	97.8	99.1	97.8	98.4	92.3	HKEx B3.1
By gender						
Male	98.3	99.4	98.4	98.4	94.9	
Female	96.1	98.2	95.3	98.7	82.2	
By professional category						
Managerial	93.1	94.6	90.6	96.0	80.6	
Professional	97.0	99.3	97.8	99.2	93.1	
General & technical staff	99.3	99.6	98.7	98.1	93.1	
Mainland China (%)	99.3	95.9	100.0	100.0	100.0	
By gender						
Male	99.1	97.1	100.0	100.0	100.0	
Female	100.0	90.5	100.0	100.0	100.0	
By professional category						
Managerial	100.0	100.0	100.0	100.0	100.0	
Professional	98.7	92.4	100.0	100.0	100.0	
General & technical staff	99.7	98.3	100.0	100.0	100.0	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Australia (%)	100.0	100.0	100.0	100.0	100.0	
By gender						
Male	99.9	100.0	100.0	100.0	100.0	
Female	100.0	100.0	100.0	100.0	100.0	
By professional category						
Managerial	100.0	100.0	100.0	100.0	100.0	
Professional	100.0	100.0	100.0	100.0	100.0	
General & technical staff	99.9	100.0	100.0	100.0	100.0	
India (%)¹	N/A	94.2	95.9	69.9	81.4	
By gender						
Male	N/A	94.1	95.6	70.4	80.9	
Female	N/A	95.2	98.1	66.0	85.5	
By professional category						
Managerial	N/A	86.8	96.8	58.6	87.9	
Professional	N/A	95.7	95.1	74.9	86.3	
General & technical staff	N/A	94.1	96.7	66.2	66.4	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Gender distribution of Group Executive Committee (GEC) members

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Male (%) ¹	83.3	73.3	69.2	64.3	64.3	GRI 405-1
Female (%) ¹	16.7	26.7	30.8	35.7	35.7	

1 Includes Executive Director (Chief Executive Officer).

Gender distribution of employees

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total (%)^{1,2}						
Male	72.8	73.3	73.7	74.0	74.0	
Female	27.2	26.7	26.3	26.0	26.0	
Hong Kong (%)						
Male	76.7	77.3	78.3	79.3	79.4	
Female	23.3	22.7	21.7	20.7	20.6	
Mainland China (%)						
Male	81.9	82.5	83.6	82.9	82.5	
Female	18.1	17.5	16.4	17.1	17.5	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Australia (%)²						
Male	60.6	59.4	58.7	58.4	57.9	
Female	39.4	40.6	41.3	41.6	42.1	
India (%)¹						
Male	N/A	86.0	87.6	88.0	88.3	
Female	N/A	14.0	12.4	12.0	11.7	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
2 Data of other gender identities is tracked. It is statistically insignificant and is not separately disclosed.

Gender distribution by region and professional category

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Hong Kong (%)						
Managerial - male	74.0	72.0	71.1	74.4	75.7	
Managerial - female	26.0	28.0	28.9	25.6	24.3	
Professional - male	72.8	73.2	74.5	75.7	75.2	
Professional - female	27.2	26.8	25.5	24.3	24.8	
General & technical staff - male	81.4	82.3	83.1	83.3	83.5	
General & technical staff - female	18.6	17.7	16.9	16.7	16.5	
Mainland China (%)						
Managerial - male	76.9	76.0	77.8	84.8	78.9	
Managerial - female	23.1	24.0	22.2	15.2	21.1	
Professional - male	80.4	82.7	85.0	84.3	85.2	
Professional - female	19.6	17.3	15.0	15.7	14.8	
General & technical staff - male	83.5	82.8	82.9	81.9	81.0	
General & technical staff - female	16.5	17.2	17.1	18.1	19.0	
Australia (%)						
Managerial - male	62.1	62.9	61.4	63.8	68.6	
Managerial - female	37.9	37.1	38.6	36.3	31.4	
Professional - male	57.3	56.6	56.8	55.9	54.5	
Professional - female	42.7	43.4	43.2	44.1	45.5	
General & technical staff - male	65.0	62.7	61.1	61.4	61.0	
General & technical staff - female	35.0	37.3	38.9	38.6	39.0	
India (%)¹						
Managerial - male	N/A	89.5	90.3	89.7	90.9	
Managerial - female	N/A	10.5	9.7	10.3	9.1	
Professional - male	N/A	89.5	90.2	91.2	89.1	
Professional - female	N/A	10.5	9.8	8.8	10.9	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
General & technical staff - male	N/A	81.7	84.1	84.3	84.9	
General & technical staff - female	N/A	18.3	15.9	15.7	15.1	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Gender diversity targets

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Women in Leadership (%) ^{1,2}	29.1	29.1	30.5	27.3	24.2	
Women in Engineering (%) ^{1,3}	13.3	13.0	12.3	11.5	11.4	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

2 Leadership positions are defined as positions at Korn Ferry Reference Level 19 and above.

3 Employees with a bachelors' degree or above qualification in engineering.

Employee age distribution

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Group total (%)^{1,2}						
Below 30	15.4	14.7	12.8	13.1	13.6	
30-39	30.6	31.5	30.6	29.7	29.3	
40-49	25.3	25.4	26.5	26.2	26.2	
50 and above	28.8	28.4	30.2	31.0	30.9	
Hong Kong (%)						
Below 30	17.2	16.3	14.0	13.8	13.6	
30-39	29.0	27.4	25.5	23.6	22.7	
40-49	22.9	23.8	24.5	24.6	25.4	
50 and above	30.9	32.5	36.0	38.0	38.3	
Mainland China (%)						
Below 30	15.1	13.6	13.2	12.5	14.0	
30-39	34.5	35.7	33.8	33.8	34.6	
40-49	28.5	28.1	30.0	32.7	32.1	
50 and above	21.9	22.6	23.0	21.0	19.3	
Australia (%)²						
Below 30	11.1	12.5	11.4	12.6	13.4	
30-39	33.1	34.9	35.9	36.6	37.1	
40-49	29.9	28.7	29.8	28.1	26.6	
50 and above	25.8	23.9	22.9	22.7	22.9	
India (%)¹						
Below 30	N/A	8.9	5.7	10.2	14.9	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
30-39	N/A	54.0	54.2	51.8	49.0	
40-49	N/A	22.7	25.0	24.2	23.9	
50 and above	N/A	14.4	15.1	13.8	12.2	

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
- 2 Numbers has been subject to rounding.

Employee average length of service

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Number of years						
Hong Kong	13.2	14.1	15.4	16.3	16.8	
Mainland China	11.8	12.1	12.3	12.0	11.4	
Australia	7.9	7.6	7.4	7.1	5.2	
India ¹	N/A	8.1	8.1	7.6	7.2	

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Group safety performance

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Employees ^{1,2}						
Fatalities (number of personnel) ^{3,4}	0	0	0	0	0	GRI 403-2/ HKEx B2.1
Fatality Rate (number per 200,000 work hours) ^{5,6}	0.00	0.00	0.00	0.00	0.00	GRI 403-2/ HKEx B2.1/ SASB IF- EU-320a.1
Days Away From Work Injuries (number of personnel) ^{4,7}	2	6	4	12	7	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours) ^{6,8}	0.03	0.07	0.05	0.13	0.07	
High-consequence Injuries (number of personnel) ⁹	0	0	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours) ^{6,10}	0.13	0.17	0.14	0.25	0.19	GRI 403-2/ SASB IF- EU-320a.1
Work-related Ill Health (number of personnel) ^{4,11}	3	4	1	0	0	GRI 403-10/ HKEx B2.1
Lost Days (number of days) ¹²	125	176	304	443	464	GRI 403-2/ HKEx B2.2
Contractors ^{1,2}						
Fatalities (number of personnel) ^{3,4}	0	0	0	0	1	GRI 403-2/ HKEx B2.1

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Fatality Rate (number per 200,000 work hours) ^{5,6}	0.00	0.00	0.00	0.00	0.01	GRI 403-2/ HKEx B2.1/ SASB IF- EU-320a.1
Days Away From Work Injuries (number of personnel) ^{4,7}	8	15	10	10	19	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours) ^{6,8}	0.09	0.11	0.08	0.09	0.14	
High-consequence Injuries (number of personnel) ⁹	1	2	1	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours) ^{6,10}	0.22	0.31	0.29	0.37	0.52	GRI 403-2/ SASB IF- EU-320a.1
Employees and contractors combined^{1,2}						
Fatalities (number of personnel) ^{3,4}	0	0	0	0	1	GRI 403-2/ HKEx B2.1
Fatality Rate (number per 200,000 work hours) ^{5,6}	0.00	0.00	0.00	0.00	0.00	GRI 403-2/ HKEx B2.1/ SASB IF- EU-320a.1
Days Away From Work Injuries (number of personnel) ^{4,7}	10	21	14	22	26	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours) ^{6,8}	0.06	0.10	0.07	0.11	0.11	
High-consequence Injuries (number of personnel) ⁹	1	2	1	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours) ^{6,10}	0.18	0.25	0.23	0.32	0.38	GRI 403-2/ SASB IF- EU-320a.1

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years. Moreover, in November 2022, CLP sold its 70% interest in the coal-fired Fanchanggang Power Station, which has been excluded from CLP's reporting scope since then.
2 The system of rules applied in recording and reporting accident statistics complies with the International Labour Organization (ILO) Code of Practice on Recording and Notification of Occupational Accidents and Diseases.
3 Refers to the number of fatalities as a result of work-related injury.
4 Starting from 2021, the unit is changed from the number of cases to the number of personnel.
5 Refers to the number of fatal injuries per 200,000 work hours in the year.
6 Rates are normalised to 200,000 work hours, which approximately equals to the number of hours worked by 100 people in one year.
7 Starting from 2021, "Days Away From Work Injuries" replaces "Lost Time Injury". Days Away From Work Injuries refers to the number of personnel who sustain a work-related injury and are unfit to perform any work on any day after the occurrence of the injury. "Any day" is any calendar day which includes rest days, weekend days, leave days, public holidays or days after ceasing employment. It does not include the day the injury incident occurred. "Days Away From Work Injuries" excludes fatalities which were included in "Lost Time Injury". Numbers prior to 2021 are the previously reported numbers for "Lost Time Injury".
8 Refers to the number of Days Away From Work Injuries and Fatalities per 200,000 work hours in the year.
9 Refers to the number of personnel who sustain life threatening or life-altering work-related injury. It is a subset of Days Away From Work Injuries.
10 Refers to the number of Total Recordable Injuries per 200,000 work hours in the year. Total Recordable Injuries include Fatalities, Days Away From Work Injuries, Restricted Work Injuries, and Medical Treatment Injuries.
11 Starting from 2021, "Work-related Ill Health" replaces "Occupational Disease". Work-related Ill Health includes the diseases listed in the ILO List of Occupational Diseases, work-related mental illnesses and work-related disorders. Numbers prior to 2021 are the previously reported numbers for "Occupational Disease".
12 Starting from 2021, "Lost Days" replaces "Days Lost". "Lost Days" is the sum total of calendar days (consecutive or otherwise) after the days on which the work-related injuries and work-related ill health occurred. "Days Lost" accounts the working days instead of calendar days. Numbers prior to 2021 are the previously reported numbers for "Days Lost".

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Regional safety performance

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Hong Kong^{1,2}						
Employees						
Fatalities (number of personnel)	0	0	0	0	0	GRI 403-2/ HKEx B2.1
Fatality Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.00	0.00	GRI 403-2/ HKEx B2.1/ SASB IF- EU-320a.1
Days Away from Work Injuries (number of personnel)	1	2	0	4	4	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	0.02	0.04	0.00	0.09	0.09	
High-consequence Injuries (number of personnel)	0	0	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	0.11	0.12	0.02	0.21	0.19	GRI 403-2/ SASB IF- EU-320a.1
Work-related Ill Health (number of personnel)	0	0	0	0	0	GRI 403-10/ HKEx B2.1
Lost Days (number of days)	8	16	0	119	246	GRI 403-2/ HKEx B2.2
Contractors						
Fatalities (number of personnel)	0	0	0	0	0	GRI 403-2/ HKEx B2.1
Fatality Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.00	0.00	GRI 403-2/ HKEx B2.1/ SASB IF- EU-320a.1
Days Away from Work Injuries (number of personnel)	5	9	4	5	15	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	0.07	0.13	0.07	0.10	0.21	
High-consequence Injuries (number of personnel)	0	0	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	0.15	0.16	0.14	0.30	0.51	GRI 403-2/ SASB IF- EU-320a.1
Mainland China¹						
Employees						
Fatalities (number of personnel)	0	0	0	0	0	GRI 403-2/ HKEx B2.1
Fatality Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.00	0.00	GRI 403-2/ HKEx B2.1/ SASB IF- EU-320a.1

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Days Away from Work Injuries (number of personnel)	0	0	0	2	0	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.19	0.00	
High-consequence Injuries (number of personnel)	0	0	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	0.00	0.30	0.00	0.19	0.10	GRI 403-2/ SASB IF-EU-320a.1
Work-related Ill Health (number of personnel)	0	0	0	0	0	GRI 403-10/ HKEx B2.1
Lost Days (number of days)	0	0	19	59	0	GRI 403-2/ HKEx B2.2
Contractors						
Fatalities (number of personnel)	0	0	0	0	0	GRI 403-2/ HKEx B2.1
Fatality Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.00	0.00	GRI 403-2/ HKEx B2.1/ SASB IF-EU-320a.1
Days Away from Work Injuries (number of personnel)	0	0	0	1	0	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.10	0.00	
High-consequence Injuries (number of personnel)	0	0	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	0.00	0.00	0.08	0.49	0.00	GRI 403-2/ SASB IF-EU-320a.1
Australia ¹						
Employees						
Fatalities (number of personnel)	0	0	0	0	0	GRI 403-2/ HKEx B2.1
Fatality Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.00	0.00	GRI 403-2/ HKEx B2.1/ SASB IF-EU-320a.1
Days Away from Work Injuries (number of personnel)	1	4	4	6	3	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	0.05	0.18	0.18	0.25	0.10	
High-consequence Injuries (number of personnel)	0	0	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	0.19	0.28	0.45	0.46	0.31	GRI 403-2/ SASB IF-EU-320a.1

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Work-related Ill Health (number of personnel)	3	4	1	0	0	GRI 403-10/HKEx B2.1
Lost Days (number of days)	117	160	285	265	218	GRI 403-2/HKEx B2.2
Contractors						
Fatalities (number of personnel)	0	0	0	0	0	GRI 403-2/HKEx B2.1
Fatality Rate (number per 200,000 work hours)	0.00	0.00	0.00	0.00	0.00	GRI 403-2/HKEx B2.1/SASB IF-EU-320a.1
Days Away from Work Injuries (number of personnel)	3	3	5	2	2	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	0.19	0.26	0.40	0.11	0.12	
High-consequence Injuries (number of personnel)	1	1	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	0.64	0.86	0.97	0.44	0.62	GRI 403-2/SASB IF-EU-320a.1
India ¹						
Employees						
Fatalities (number of personnel)	N/A	0	0	0	0	GRI 403-2/HKEx B2.1
Fatality Rate (number per 200,000 work hours)	N/A	0.00	0.00	0.00	0.00	GRI 403-2/HKEx B2.1/SASB IF-EU-320a.1
Days Away from Work Injuries (number of personnel)	N/A	0	0	0	0	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	N/A	0.00	0.00	0.00	0.00	
High-consequence Injuries (number of personnel)	N/A	0	0	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	N/A	0.00	0.00	0.00	0.00	GRI 403-2/SASB IF-EU-320a.1
Work-related Ill Health (number of personnel)	N/A	0	0	0	0	GRI 403-10/HKEx B2.1
Lost Days (number of days)	N/A	0	0	0	0	GRI 403-2/HKEx B2.2
Contractors						
Fatalities (number of personnel)	N/A	0	0	0	0	GRI 403-2/HKEx B2.1

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Fatality Rate (number per 200,000 work hours)	N/A	0.00	0.00	0.00	0.00	GRI 403-2/HKEx B2.1/SASB IF-EU-320a.1
Days Away from Work Injuries (number of personnel)	N/A	3	1	2	0	GRI 403-2
Lost Time Injury Rate (number per 200,000 work hours)	N/A	0.07	0.03	0.07	0.00	
High-consequence Injuries (number of personnel)	N/A	1	1	N/A	N/A	GRI 403-9
Total Recordable Injury Rate (number per 200,000 work hours)	N/A	0.44	0.41	0.46	0.68	GRI 403-2/SASB IF-EU-320a.1

- 1

The system of rules applied in recording and reporting accident statistics complies with the International Labour Organization (ILO) Code of Practice on Recording and Notification of Occupational Accidents and Diseases.
- 2

Starting from 2022, regional data in Hong Kong includes data from CLP Power, CLPe Holdings and CLP Holdings. Before that data in CLP Holdings included data from CLPe and CLP Holdings, while data in Hong Kong included data from CLP Power. The change reflects the new operating model in CLP in 2022.

The 2023 data shaded in orange has been independently verified by KPMG. The assurance scope of past years' data can be found in previous sustainability reports.

Partners

Contributions to organisations

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Lobbying, interest representation or similar (HK\$M) ¹	0	0	0	0	0	GRI 415-1
Local, regional or national political campaigns, organisations or candidates (HK\$M) ¹	0	0	0	0	0	
Trade associations or tax-exempt groups (e.g. think tanks) (HK\$M) ^{1,2}	8.05	8.69	14.12	8.90	8.04	
Others (e.g. spending related to ballot measures or referendums) (HK\$M) ¹	0	0	0	0	0	

- 1

Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
- 2

Includes contributions to trade associations or tax-exempt groups that seek to influence public policy in the form of memberships, donations or sponsorship. The scope was reviewed in 2023.

Code of Conduct

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Total number of breaches of Code of Conduct reported to the Audit & Risk Committee (cases) ¹	12	10	18	25	31	

- 1

Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Anti-corruption

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Convicted cases of corruption reported to the Audit & Risk Committee (cases) ¹	0	0	0	0	0	GRI 205-3/ HKEx B7.1

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Supplier distribution

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Total suppliers by region (number)¹	4,215	6,127	5,659	5,777	6,362	GRI 2-6/ HKEx B5.1
Australia	1,853	1,894	1,942	2,216	2,215	
Mainland China	1,090	1,257	1,216	1,142	1,166	
Hong Kong	1,030	1,058	1,025	1,013	1,000	
India	3	1,667	1,197	1,134	1,704	
Others (Asia Pacific)	63	64	67	70	77	
Europe	96	105	112	121	118	
America	78	88	98	78	77	
Rest of the world	2	1	2	3	5	

1 There are a few multinational companies having transactions in more than one regions through their local offices, but we combine the local offices and treat one multinational companies as one supplier in our supply base.

Payments to suppliers

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Total payment to suppliers by region (HK\$M)	42,023	54,794	43,997	36,544	36,746	GRI 204-1
Australia	10,831	12,727	10,617	8,526	8,356	
Mainland China	15,346	19,937	17,226	15,577	11,603	
Hong Kong	10,205	9,233	8,296	8,501	8,888	
India	24	4,343	2,977	1,999	3,104	
Others (Asia Pacific)	3,905	5,821	3016	960	3,093	
Europe	1,300	1,854	1630	753	1,234	
America	409	878	232	221	458	
Rest of the world	3	1	3	5	10	

The 2023 data shaded in orange has been independently verified by KPMG. The assurance scope of past years' data can be found in previous sustainability reports.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Community

Community investment

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Community programmes implemented (number) ¹	458	481	443	468	663	GRI 415-1

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

Community spending

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Community spending by theme (%) ^{1,2}						
Education and Development	6	5	6	11	18	
Community Wellbeing	31	30	35	28	9	
Environment	58	61	56	57	68	
Arts and Culture	2	2	1	2	2	
Community Engagement	3	2	2	2	3	
Community spending by region (%) ^{1,2}						
Hong Kong	98	94	90	84	81	
Mainland China	1	1	1	2	1	
Australia	1	2	2	5	10	
India ¹	N/A	3	7	9	8	
Southeast Asia & Taiwan	0	0	0	0	0	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

2 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.

Donations

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Amount donated for charitable and other purposes (HK\$M) ^{1,2}	9.18	10.02	15.09	27.00	20.98	

1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.

2 Numbers have been subject to rounding.

Time and expertise contributed

	2023	2022	2021	2020	2019	GRI/HKEx/SASB/IFRS
Volunteer hours from CLP staff and family members (hours) ^{1,2}	16,701	19,329	16,541	10,973	20,015	
Skill-based (%) ^{1,3}	4.7	12.2	0.4	0.8	0.5	

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Non skill-based (%) ^{1,4}	95.3	87.8	99.6	99.2	99.5	

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
- 2 Numbers have been subject to rounding.
- 3 Refers to volunteering work that requires electrical engineering skills or licenses.
- 4 Refers to hands-on, generic services that do not require professional electrical engineering skills or licenses.

Beneficiaries

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Beneficiaries (number)¹						
Direct beneficiaries	626,000+	1,305,000+	1,580,000+	918,000+	615,000+	
Organisations benefitted ²	291	280	232	263	401	
Beneficiaries by theme (%)^{1,3}						
Education and Development	46.7	15.9	13.0	26.5	63.1	
Community Wellbeing	22.7	72.1	63.0	65.0	20.3	
Environment	25.7	9.9	23.9	8.3	16.1	
Arts and Culture	4.9	2.1	0.1	0.2	0.5	

- 1 Apraava Energy ceased to be a subsidiary and is now accounted for as a joint venture. Apraava Energy is excluded in the figures for 2023, but included in figures for 2022 and prior years.
- 2 Includes professional bodies, academic institutes, NGOs and community groups.
- 3 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.

Nuclear safety

	2023	2022	2021	2020	2019	GRI/HKEx/ SASB/IFRS
Workers						
Collective radiation dosage for workers (man-mSv)	1,324.3	719.8	641.7	676.2	960.0	
Nuclear-related waste						
Spent nuclear fuel (t)	37.7	75.4	33.1	37.7	75.2	
Low- to intermediate-level radioactive nuclear waste (m³)	53.0	58.8	26.0	71.0	89.4	

Apraava Energy

Climate change

2023	
Greenhouse gas emissions	
CLP Group's generation and energy storage portfolio	
CO ₂ (kt)	6,924
CO ₂ e (kt)	6,958

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Environment

2023	
Environmental compliance	
Environmental regulatory non-compliances resulting in fines or prosecutions (number)	0
Environmental licence limit exceedances & other non-compliances (number)	11
Air pollutants	
Nitrogen oxides (NO _x) (kt) ¹	9.0
Sulphur dioxide (SO ₂) (kt) ¹	5.8
Particulates (kt) ¹	1.0
Sulphur hexafluoride (SF ₆) (kt) ¹	0
Mercury (t) ¹	0.02
Waste produced and recycled	
Hazardous solid waste (t)^{1,2}	
Produced	155
Recycled	26
Hazardous liquid waste (kl)^{1,2}	
Produced	17
Recycled	17
Non-hazardous solid waste (t)^{1,2}	
Produced	779
Recycled	721
Non-hazardous liquid waste (kl)^{1,2}	
Produced	0
Recycled	0
By-products	
Ash produced (kt) ¹	2,122
Ash recycled / sold (kt) ¹	2,135
Gypsum produced (kt) ¹	114
Gypsum recycled / sold (kt) ¹	114
Water	
Total water withdrawal (Mm³)^{1,3}	14.4
For cooling purpose	
Water withdrawal from freshwater resources	14.2
Water withdrawal from marine water resources	0
For non-cooling purposes	
Water withdrawal from freshwater resources	0.3
Water withdrawal from municipal sources	0
Total freshwater withdrawal from water stressed areas	14.4

Economic value generated and distributed	ESG data table	GHG accounting methodology
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	2023
Total water discharge (Mm³)^{1,3}	0
From cooling process	
Treated wastewater to freshwater bodies	0
Water discharge to marine water bodies	0
Wastewater to other destinations	0
From non-cooling processes	
Treated wastewater to freshwater bodies	0
Treated wastewater to marine water bodies	0
Wastewater to other destinations	0
Wastewater to sewerage	0
Total freshwater consumption of Apraava's power generation (Mm³)	14.4
Total freshwater consumption under water stressed areas (Mm³)	14.4
Freshwater intensity	
Freshwater intensity of Apraava's power generation (m³/MWh)	1.44
Freshwater reused/recycled	
Freshwater reused/recycled volume (Mm³)	104.7

- 1 Numbers at asset level have been aggregated and then rounded.
- 2 Waste categorised in accordance with local regulations.
- 3 Numbers have been subject to rounding. Any discrepancies between the total shown and the sum of the amounts listed are due to rounding.

Customers

	2023
Fuel use	
Coal consumed (for power generation) (TJ) ^{1,2}	77,355
Oil consumed (for power generation) (TJ) ^{1,2}	30
Total energy sent out (GWh) ^{1,2}	10,047

- 1 Numbers have been subject to rounding.
- 2 Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2023 numbers.

Our people

	2023
Total employee headcount (number)	492
Voluntary staff turnover rate (%)¹	9.4
Employee eligible to retire in the next five years (%)²	4.3

2023	
Safety performance	
Employees³	
Fatalities (number of personnel) ⁴	0
Fatality Rate (number per 200,000 work hours) ^{5,6}	0.00
Days Away From Work Injuries (number of personnel) ⁷	0
Lost Time Injury Rate (number per 200,000 work hours) ^{5,8}	0.00
High-consequence Injuries (number of personnel) ⁹	0
Total Recordable Injury Rate (number per 200,000 work hours) ^{5,10}	0.22
Work-related Ill Health (number of personnel) ¹¹	0
Lost Days (number of days) ¹²	0
Contractors³	
Fatalities (number of personnel) ⁴	1
Fatality Rate (number per 200,000 work hours) ^{5,6}	0.02
Days Away From Work Injuries (number of personnel) ⁷	2
Lost Time Injury Rate (number per 200,000 work hours) ^{5,8}	0.07
High-consequence Injuries (number of personnel) ⁹	2
Total Recordable Injury Rate (number per 200,000 work hours) ^{5,10}	0.47
Employees and contractors combined³	
Fatalities (number of personnel) ⁴	1
Fatality Rate (number per 200,000 work hours) ^{5,6}	0.02
Days Away From Work Injuries (number of personnel) ⁷	2
Lost Time Injury Rate (number per 200,000 work hours) ^{5,8}	0.07
High-consequence Injuries (number of personnel) ⁹	2
Total Recordable Injury Rate (number per 200,000 work hours) ^{5,10}	0.45

1 Voluntary staff turnover refers to employees leaving the organisation voluntarily and does not include dismissal, retirement, company-initiated termination or end of contract.
2 The percentages given refer to permanent employees, who are eligible to retire within the next five years.
3 The system of rules applied in recording and reporting accident statistics complies with the International Labour Organization (ILO) Code of Practice on Recording and Notification of Occupational Accidents and Diseases.
4 Refers to the number of fatalities as a result of work-related injury.
5 Refers to the number of fatal injuries per 200,000 work hours in the year.
6 Rates are normalised to 200,000 work hours, which approximately equals to the number of hours worked by 100 people in one year.
7 "Days Away From Work Injuries" has replaced "Lost Time Injury". Days Away From Work Injuries refers to the number of personnel who sustains work-related injury and is unfit to perform any work on any day after the occurrence of the injury. "Any day" is any calendar day which includes rest days, weekend days, leave days, public holidays or days after ceasing employment. It does not include the day the injury incident occurred. "Days Away From Work Injuries" excludes fatalities which were included in "Lost Time Injury".
8 Refers to the number of Days Away From Work Injuries and Fatalities per 200,000 work hours in the year.
9 Refers to the number of personnel who sustain life-threatening or life-altering work-related injury. It is a subset of Days Away From Work Injuries.
10 Refers to the number of Total Recordable Injuries per 200,000 work hours in the year. Total Recordable Injuries include Fatalities, Days Away From Work Injuries, Restricted Work Injuries, and Medical Treatment Injuries.
11 Work-related Ill Health includes the diseases listed in the ILO List of Occupational Diseases, work-related mental illnesses and work-related disorders.
12 "Lost Days" is the sum total of calendar days (consecutive or otherwise) after the days on which the work-related injuries and work-related ill health occurred.

Economic value generated and distributed	ESG data table	GHG accounting methodology
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Community

2023	
Programmes	
Community programmes implemented (number)	61
Spending	
Community spending by theme (%)¹	
Education and Development	9
Community Wellbeing	72
Environment	14
Arts and Culture	0
Community Engagement	5
Donations	
Amount donated for charitable and other purposes (HK\$M)	0
Time and expertise contributed	
Volunteer hours from CLP staff and family members (hours) ¹	3,395
Skill-based (%) ²	0.1
Non skill-based (%) ³	99.9
Beneficiaries	
Beneficiaries (number)	
Direct beneficiaries	130,000+
Organisations benefitted ⁴	12
Beneficiaries by theme (%)¹	
Education and Development	7.9
Community Wellbeing	80.1
Environment	12.0
Arts and Culture	0.0

1 Numbers have been subject to rounding.

2 Refers to volunteering work that requires electrical engineering skills or licenses.

3 Refers to hands-on, generic services that do not require professional electrical engineering skills or licenses.

4 Includes professional bodies, academic institutes, NGOs and community groups.

Code of Conduct and Anti-corruption

2023	
Code of Conduct	
Total number of breaches of Code of Conduct reported to the Audit & Risk Committee (cases)	5
Anti-corruption	
Convicted cases of corruption reported to the Audit & Risk Committee (cases)	0

GHG accounting methodology

GRI reference: 302-2, 305-1, 305-2, 305-3, 305-4, 305-5

Greenhouse gas (GHG) reporting guideline

A Group-wide GHG Reporting Guideline was first developed in 2007 to specify the collection and compilation methodology of the Group's GHG data. The Guideline was developed with reference to the following international standards and guidelines:

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI);
- The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard;
- The Greenhouse Gas Protocol: Technical Guidance for Calculating Scope 3 Emissions (Version 1);
- The 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories;
- The relevant IPCC Assessment Report;
- The International Standard for GHG Emissions ISO 14064-1: Greenhouse Gases; and
- Methodologies agreed with local authorities.

The CLP GHG Reporting Guideline is reviewed in accordance with CLP internal practices and updated with the latest references at least once every three years. The current Guideline was last updated in 2020.

CLP's GHG emissions inventory covers six GHGs specified in the Kyoto Protocol, including carbon-dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), and sulphur hexafluoride (SF₆). Perfluorocarbons (PFCs) are also included but not used in CLP's operations. Nitrogen trifluoride (NF₃), the seventh mandatory gas added under the second Kyoto Protocol, was also considered for inclusion, but after evaluation was deemed immaterial to CLP's operations. The GHG reporting scope definitions for GHG emissions are available [here](#).

Focus has been given to sulphur hexafluoride (SF₆), an insulating gas commonly used in switchgears and transmission lines. CLP is aware of its high global warming potential and therefore is vigilant in controlling SF₆ leakage throughout the life cycle of electrical equipment, and actively exploring ways to reduce the use of SF₆ in its business. For example, in Hong Kong in 2022, a field trial on non-SF₆ gas switchgears at distribution level has started and availability

of proven non-SF₆ gas equipment at transmission level will be closely monitored.

Compilation bases

CLP reports the GHG emissions of its generation and energy storage portfolio on three consolidation bases to provide a comprehensive overview of its carbon footprint and progress in decarbonisation efforts. The three bases are:

- **Equity basis:** This includes the electricity generated by CLP's assets. It accounts for the Scope 1 and Scope 2 GHG emissions according to CLP's equity share in the portfolio. The equity basis reflects economic interest, indicating the extent of GHG risks and opportunities CLP has from assets in which it holds a majority or minority share.
- **Equity and long-term capacity and energy purchases:** This includes both electricity generated by CLP's assets as well as the electricity purchased through capacity, energy purchase agreements and spot purchase. It allows stakeholders to better understand the GHG intensity of the electricity CLP delivers to customers. In addition to the GHG emissions from the equity basis, it also includes the direct GHG emissions from the generation of purchased electricity.
- **Operational control:** This represents the total GHG emissions from generation assets where CLP has direct influence and control on operational matters. CLP has been disclosing its combined total Scope 1 and Scope 2 GHG emissions on this basis for over a decade, and will continue to demonstrate its long-term progress.

Conscious of emissions along the value chain, in 2019, the Company conducted a review of its Scope 3 emissions and started to disclose Scope 3 emissions to present a more comprehensive picture of its footprint along the value chain. Scope 3 emissions typically represent less than 40% of CLP's GHG emissions.

Calculation methodologies

Scope 1 & Scope 2 GHG emissions

The Scope 1 emissions and location-based Scope 2 emissions are calculated in accordance with CLP’s GHG Reporting Guideline outlined above.

Annually, CLP obtains emission factors from each business unit’s local government and authority in their respective

jurisdictions. In cases where local emission factors are not available, other recognised sources are referenced.

Scope 3 GHG emissions

The table below summaries the Scope 3 categories that were identified as relevant to CLP, and how their emissions are calculated.

Scope 3 GHG emissions categories relevant to CLP

Scope 3 category	Relevance to CLP	Calculation and emission factors
1: Purchased goods and services Emissions from the extraction, production and transportation of goods and services purchased or acquired.	a) Products-related emissions relate to the upstream emissions of EnergyAustralia’s natural gas retail business, including the emissions from upstream gas production and transmission, and distribution leakage in the State pipeline systems. b) Non-products-related emissions relate to the upstream emissions of CLP’s purchased goods and services other than natural gas for retail business.	- Assessed using the average-data method. The quantities of natural gas supplied are multiplied by State-based upstream emission factors to calculate the emissions. - Emission factors source: Australia’s National Greenhouse Accounts Report 2023.
2: Capital goods Emissions from the extraction, production and transportation of capital goods purchased or acquired.	Relates to the upstream emissions of CLP’s purchased capital goods, mainly for infrastructure construction and facility upgrades.	- Assessed using the spend-based method. Country-based WIOD factors are applied to the financial spend on the purchase of capital goods. - Emission factors source: WIOD Release 2016.
3: Fuel- and energy-related activities Emissions related to the extraction, production and transportation of fuels and energy purchased or acquired.	Includes the upstream emissions of purchased fuels and electricity for CLP’s power generation. Includes the direct emissions from the generation of purchased electricity that is sold to CLP’s customers.	- Assessed using the average-data method. - Upstream emissions (Well-to-tank, WTT) of purchased fuels and electricity are calculated by using volumes of purchased fuels and electricity and country-based WTT emission factors, where available. Where such volumes are not available, the ratio of the WTT emission factor to direct emission factor for each fuel type is applied to the Scope 1 and Scope 2 emissions of the generation assets. - Emission factors source: Australia’s National Greenhouse Accounts Report 2023, and 2023 UK Government GHG Conversion Factors for Company Reporting. - Direct emissions and upstream emissions from the generation of purchased electricity that is sold to CLP’s customers are assessed using the supplier-specific method. This involves using emissions data of generation assets whose capacity and energy are purchased by CLP to meet customer

Scope 3 category	Relevance to CLP	Calculation and emission factors
	Includes the upstream emissions from the generation of purchased electricity that is sold to CLP's customers.	demand. The calculation multiplies the percentages of capacity and energy purchased by CLP with direct emissions and upstream emissions (WTT) of the generation assets. - Emissions from the generation of purchased electricity that is sold to CLP's customers also include the emissions from the net electricity purchased by EnergyAustralia from the Australian Energy Market Operator (AEMO). This is assessed using the average-data method, which involves estimating emissions by using grid average emission factors, and is calculated through multiplying the net electricity purchased from AEMO with State-based emission factors. - Emission factors source: Australia's National Greenhouse Accounts Report 2023, and 2023 UK Government GHG Conversion Factors for Company Reporting.
5: Waste generated in operations Emissions from the disposal and treatment of waste generated.	Emissions from fuel ash and gypsum as both represent the most significant waste material generated.	- Assessed using the waste-type specific method based on waste produced by type. - Calculated through applying emission factors to quantities of fuel ash and gypsum generated at CLP's coal-fired power stations, considering the disposal method. - Emission factors source: 2023 UK Government GHG Conversion Factors for Company Reporting.
6: Business travel Emissions from the transportation of employees for business-related activities.	Air travel is the most material source of emissions from business travel.	- Assessed using the distance-based method. - Air travel emissions for CLP's operations in Hong Kong and Australia are directly calculated using flight distance by travel classes multiplied by corresponding emission factors. Emissions from the other regions of operations are calculated through extrapolation based on CLP's financial spend on business travel. - Emission factors source: 2023 UK Government GHG Conversion Factors for Company Reporting.
7: Employee commuting Emissions from the transportation of employees between their homes and their worksites.	Relates to the emissions of CLP's employees in commuting to offices and worksites. This typically includes emissions from automobile travel, bus travel, etc.	- Calculated through the number of CLP's employees, estimated travel mode and average distance travelled by region. - Emission factors source: 2023 UK Government GHG Conversion Factors for Company Reporting.
11: Use of sold products Emissions from the end-use of products sold.	Relates to the downstream emissions of EnergyAustralia's natural gas retail business, including the emissions from the combustion of natural gas supplied to customers.	- Calculated through multiplying the quantities of natural gas supplied to customers by State-based emission factors. - Emission factors source: Australia's National Greenhouse Accounts Report 2023.

The following categories were identified as not relevant to CLP, and hence not included in the Scope 3 emissions profile for reporting.

Scope 3 categories that are not considered relevant to CLP

Scope 3 category	Explanation
4: Upstream transportation and distribution Emissions from the transportation and distribution of purchased goods and services.	The emissions are covered in Category 1 as the financial spend on transportation and distribution is embedded in the financial spend on purchased goods and services.
8: Upstream leased assets Emissions from the operation of assets leased by the reporting company, i.e. lessee.	CLP does not operate leased generation assets. The emissions of leased offices are included in CLP's Scope 2 emissions.
9: Downstream transportation and distribution Emissions from the transportation and distribution of products sold between operations and the end consumer, in vehicles and facilities not owned or controlled or paid for by the reporting company.	Electricity and gas are the main products of CLP. Transportation and distribution of the products does not involve vehicles or facilities not owned or controlled by the Group.
10: Processing of sold products Emissions from the processing of intermediate products sold by downstream companies, e.g. manufacturers.	With electricity and gas being CLP's main products, they are end products without a further processing requirement.
12: End-of-life treatment of sold products Emissions from the disposal and treatment of products sold at the end of their life.	With electricity and gas being CLP's main products, there is no end-of-life treatment requirement.
13: Downstream leased assets Emissions from the operation of assets owned by the reporting company (lessor) and leased to other entities.	Leasing is not a main business for CLP.
14: Franchises Emissions from the operation of franchises.	CLP does not have any franchising business.
15. Investments Emissions from operation of investments.	CLP reports Scope 3 emissions on an equity basis. This category applies to CLP only when an operational control basis is adopted and therefore does not apply.

Glossary

Air emissions	The emission of air pollutants such as sulphur dioxide (SO ₂), nitrogen oxides (NO _x) and particulate matter (PMs).
Availability	The fraction of a given operating period in which a generating unit is available without outages and capacity reductions. This is also known as the Equivalent Availability Factor.
Baseload	An operating regime of power generation at a reasonably constant rate to serve continuous system load, and not designed to respond to peak demands or emergencies.
Capacity purchase	Additional third-party owned power generation capacity contracted by CLP under long-term agreements to meet customer demand. Some of these agreements may confer CLP rights to use the generation assets and exercise dispatch control as if they belonged to the Group.
Capital investments	Includes additions to fixed assets, right-of-use assets and intangible assets, investments in and advances to joint ventures and associates, and acquisition of businesses.
Carbon credit	A carbon credit is a tradeable instrument which represents either: (a) a permit which gives the holder the right to emit one tonne of carbon dioxide or equivalent greenhouse gas (tCO₂e) into the atmosphere; or (b) a certificate from a project that represents the removal or avoidance of one tCO₂e from the atmosphere. CLP Carbon Credits (https://www.clpcarboncredits.com) are generated from renewable energy sources and can be used to offset carbon emissions generated by governments, organisations or individuals.
Carbon neutral	When the greenhouse gas emissions associated with an activity or entity are balanced by carbon removal elsewhere, such as carbon credits, carbon sinks or storage, and renewable energy certificates.
Circular Economy	Circular Economy is defined in general as a framework that can address the global challenges of climate change, biodiversity loss, waste, and pollution, which is achieved through three principles – eliminating waste and pollution, circulating products and materials at their highest value and regenerating nature. Embracing the Circular Economy, an utility company can contribute to the transition to a more sustainable and resilient energy and resource management system by adopting cleaner technologies, promoting resource efficiency and investing in nature conservation.
Climate Action Finance Framework (CAFF)	Launched in 2017, CAFF supports the transition to a low-carbon economy by attracting socially responsible, sustainable financings, and to support CLP's investments that reduce the carbon content of energy generated and increase the efficiency of energy usage. The CAFF formalises and governs project evaluation, management of proceeds and reporting for Climate Action Finance Transactions, including bonds, loans and other forms of finance.
Climate Vision 2050	CLP's Climate Vision 2050 sets out the blueprint of the Group's transition to net-zero greenhouse gas emissions leading up to mid-century. Launched in 2007 with a focus on the ambition to mitigate CLP's climate impact, Climate Vision 2050 has been instrumental in informing CLP's business strategy and guiding its investment decision-making.
Combined-cycle gas turbine (CCGT)	A technology used in gas-fired generation to enable significantly higher efficiency by utilising residual heat from a gas turbine exhaust to run a steam turbine and generate additional electricity.
Decarbonisation	Decarbonisation of the power sector primarily refers to the reduction in the greenhouse gas emissions from electricity generation, and providing lower-carbon energy services and solutions to customers. At CLP it is measured by the reduction in carbon intensity, which is expressed in kilograms of carbon dioxide per kilowatt hour of electricity sent-out.

Decentralised generation / distributed generation	Refers to electrical generation and storage performed by a variety of technologies of a smaller scale located close to the load they serve. In contrast, centralised generation is the large-scale generation of electricity serving multi-loads connected to the transmission network.
Demand response	Demand response programmes encourage participating customers to commit to short-term reductions in electricity demand, helping energy suppliers to keep the grid running optimally during high load periods.
Digitalisation	The application of new information technologies including artificial intelligence and data analytics to help electric utilities develop new customer-centric services and improve operations.
Distributed energy	Distributed energy includes power generated from sources such as solar panels and wind turbines located close to the users, as well as controllable loads or storage such as electric vehicles and batteries.
Electricity sent-out	Gross electricity generated by a power plant less self-generated auxiliary power consumption, measured at the connecting point between the generating unit and transmission line.
Energy-as-a-Service	A business strategy of energy companies to provide a more diverse range of value-adding energy services and solutions such as consultancy, energy management and distributed energy resources to customers, in addition to basic utility services.
Energy attribute certificates (EACs)	EACs are a category of contractual instrument that conveys certain information (or attributes) about the energy generated, including the resources used to create it, the emissions associated with its production, the location of the facility that generated the unit of energy and when the unit of energy was produced. EACs are usually issued for renewable energy. Currently, CLP offers two types of EACs, namely Green Electricity Certificates (GECs) and Renewable Energy Certificates (RECs). See definitions of both in this Glossary.
Energy purchase	Electricity purchased by CLP to meet customer demand under long-term agreements from power plants not owned by CLP, and without existing capacity purchase agreements with the Group.
Energy security	The uninterrupted availability of energy sources.
Energy transition	The transition of the global energy sector from fossil-fuel based energy systems to low- or zero-carbon sources.
Energy transition enablers	Non-generation products or services that facilitate the energy transition, including energy storage, transmission and distribution, electric vehicle charging points and smart meters, amongst others.
Equity basis	An approach set out by the GHG Protocol Corporate Standard for an organisation to consolidate GHG emissions for the purpose of accounting and reporting GHG emissions. On this basis, the organisation accounts for GHG emissions from operations according to its equity share in the operations.
Feed-in Tariff (FiT)	Payable by Hong Kong power companies under the SoC Agreement to purchase electricity from approved renewable energy projects. Find out more at https://www.clp.com.hk/en/business/low-carbon-solutions/renewable-energy/feed-in-tariff-business
Flue gas desulphurisation (FGD) facility	Equipment used to remove sulphur oxides from the combustion gases of a boiler plant before discharge to the atmosphere.
Generation capacity	The maximum amount of power that a generator is rated to produce. Also known as installed capacity or nameplate capacity.

Green Electricity Certificates (GECs)	GECs refer to the energy attribute corresponding to the electricity sold by renewable energy projects. In Mainland China, the origin of GECs are certified by National Energy Administration Renewable Information Management Centre.
Greenhouse gas (GHG)	The emission of gases that contribute to the greenhouse effect causing a changing climate. CLP's GHG emissions inventory covers the six GHGs specified in the Kyoto Protocol. Nitrogen trifluoride (NF₃), the seventh mandatory gas added under the second Kyoto Protocol was deemed immaterial to CLP's operations after an evaluation. The GHG Protocol Corporate Standard classifies an organisation's GHG emissions into three 'Scopes'. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 are indirect emissions (not included in Scope 2) that occur in the value chain of the organisation.
Just transition	For energy companies, the transition to a net-zero economy directly impacts individuals, workers, and communities. A just transition seeks to mitigate negative impacts on people while effectively harnessing opportunities to deliver equitable and inclusive outcomes.
Megatrends	Large, transformative global forces that define the future by having a far-reaching impact on business, economies, industries, societies and individuals. A megatrend is distinguished from other trends in that it cannot be stopped or significantly altered, even by powerful actors such as governments. Megatrend analysis is an important tool for companies aiming to drive sustainable growth as competition increases and new disruptive ideas and concepts affect entire industries.
Microgrids	Localised networks with generation, energy storage and load entities, that can operate in tandem with an existing grid or independently. They can potentially be deployed to meet the energy needs of remote areas cost-effectively, foregoing the expense of transmission grids.
National Electricity Market (NEM)	Australia's NEM is a wholesale spot market connecting six regional market jurisdictions – Queensland, New South Wales, the Australian Capital Territory, Victoria, South Australia and Tasmania.
Nature	Nature is the natural world, with an emphasis on the diversity of living organisms (including people) and their interactions among themselves and with their environment. In the context of corporations, these interactions includes ecosystems providing different ecosystems services, and corporation's operational impacts and financial implications that arise from nature loss.
Net-zero greenhouse gas emissions	When greenhouse gas emissions are reduced, and the residual emissions are balanced by the removal of an equivalent amount of greenhouse gases from the atmosphere.
Non-carbon energy/non-carbon emitting energy	Energy from power sources that adds no extra carbon to the atmosphere, such as wind, solar, hydro and nuclear energy. It does not include waste-from-energy and other forms of biomass.
Operational control basis	An approach set out by the GHG Protocol Corporate Standard for an organisation to consolidate GHG emissions for the purpose of accounting and reporting GHG emissions. On this basis, the organisation accounts for 100 percent of the GHG emissions from operations over which it has operational control, but does not account for GHG emissions from operations in which it owns an interest but has no control.
Offtake	A long-term agreement to purchase electricity from another generator. See capacity purchase.
Particulate matter (PM)	Microscopic solids or liquid droplets in the air.

Peaking plant	A power generating station that is normally used to produce extra electricity during peak load times.
Phase out coal-fired generation capacity	In CLP's context, phasing out coal-fired generation capacity refers to: (a) the retirement and closure of a coal-fired power asset; (b) the move away from a build-operate-transfer coal-fired project before the end of the contract term or according to the terms of the project; or (c) the divestment from a coal-fired asset.
Photovoltaic panels	Photovoltaic (PV) panels convert solar energy into DC electricity.
Power Purchase Agreement (PPA)	A long-term electricity supply agreement specifying deliverables such as the capacity allocation, the quantity of electricity to be supplied and financial terms.
Pumped storage	A method used for large-scale storage of power. During non-peak times, electricity is used to pump water to a reservoir. During peak times, the reservoir releases water for hydroelectric generation.
Renewable energy	Energy that is generated from renewable resources, which are naturally replenished on a human timescale, including sunlight, geothermal heat, wind, tides, water, waste-to-energy and various forms of biomass.
Renewable Energy Certificates (RECs)	In Hong Kong, RECs represent all the environmental attributes associated with electricity produced by local renewable sources in Hong Kong including solar, wind and landfill gas, purchased or generated by CLP Power Hong Kong Limited (CLP Power).
Scheme of Control Agreement (SCA)	The SCA with the Hong Kong Government provides a regulatory framework for the city's electricity industry, enabling CLP Power Hong Kong to operate its facilities and plan new investments to meet the electricity demand of customers, as well as environmental objectives.
Science-based target	A target for greenhouse gas reductions that is in line with the goals of the Paris Agreement to limit any global temperature increase to wellhttps://sustainabledevelopment.un.org below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C.
Start-up accelerator	A programme that offers support, including financing and mentorship, to facilitate the development of start-up companies.
Sustainable Development Goals (SDGs)	The 17 SDGs, adopted by all United Nations Member States in 2015, are the blueprint to achieve a better and more sustainable future for all. Find out more on https://sdgs.un.org/ .
Utilisation	Gross generation by a power plant unit in a given period as a fraction of the gross maximum generation. Also known as Gross Capacity Factor.
Waste-to-energy	A form of renewable energy generation using waste such as landfill gas.



CLP Holdings Limited
中電控股有限公司

8 Laguna Verde Avenue
Hung Hom, Kowloon, Hong Kong
Tel: (852) 2678 8111
Fax: (852) 2760 4448

www.clpgroup.com
Stock Code: 00002

