Introduction

The CLP Group's vision is to be a leading responsible energy provider, from one generation to the next. To meet the evolving needs of energy users in a world being reshaped by decarbonisation and digitalisation, CLP strives to embrace new opportunities and expand its horizons as it fulfils its purpose to Power Brighter Tomorrows. In 2007, we were the first electric utility company headquartered in Asia to publish carbon intensity reduction targets out to 2050 in our Climate Vision 2050. Over the years, CLP committed to continually realign to meet latest climate science and industry best practice, as well as growing expectations of various stakeholders. In March 2024, we have further strengthened our science-based targets for 2030 with an updated trajectory that is closer-aligned to the international climate goals to limit global warming to 1.5°C, while keeping the same 2040 interim targets and commitment to achieve net-zero greenhouse gas emissions across our value chain by 2050 as we previously announced in late 2021. Meanwhile, we shall continue our efforts in realising phase out of coal-based assets before 2040. In addition, we have also updated scenario analysis to cover a 1.5°C scenario and the climate-related disclosures can be found in the updated Climate Vision 2050 publication and CLP Holdings 2023 Annual Report.

To reinforce CLP's sustainability leadership and commitment to transition to a low carbon economy as manifested in our Climate Vision 2050 and to respond to the increasing investor awareness of the climate change imperative, CLP established the Climate Action Finance Framework (CAFF) in July 2017 that sets out how CLP may raise Climate Action Bonds and use the proceeds of those bonds to invest in projects that are consistent with this strategy to respond to the climate change challenges. The establishment of CAFF allowed Castle Peak Power Company Limited (CAPCO) to issue the first US$500 million Energy Transition Bond to finance a more efficient combined-cycle gas turbine (CCGT) unit at Black Point Power Station, to reduce the carbon intensity of electricity generation. In 2019, CAPCO issued an inaugural HK$170 million New Energy Bond to fund the construction of the West New Territories Landfill gas energy generation project which allows offsetting of emissions from some of its coal-fired power generation units.

To extend sustainable financing beyond bond issuance, CLP updated CAFF in June 2020 to support a broader range of financial transactions that CLP has and continues to undertake to raise funding for its climate actions. CAPCO subsequently entered into a series of energy transition financing including US$350 million Energy Transition Bond and executed its inaugural HK$3.3 billion Energy Transition Loan facilities (including HK$2 billion export credit agency (ECA) covered banking facility) to finance the construction of an offshore liquefied natural gas (LNG) terminal in Hong Kong waters and its associated subsea pipeline and gas receiving station in 2020.

Riding on the successful financing arranged for the offshore LNG terminal project, CAPCO issued a US$300 million Energy Transition Bond and a total HK$5.3 billion Energy Transition Loans (including HK$1.6 billion ECA covered banking facility) to finance the construction of the second combined-cycle gas turbine generation unit (CCGT D2) at Black Point Power Station in 2021. In the same year, CLP Power Hong Kong Limited (CLP Power) issued a US$100 million New Energy Bond to support the continued rollout of smart meters in Hong Kong.

CAPCO subsequently arranged various financings under CAFF to refinance the matured commercial bank loans, including a HK$520 million 2-year Energy Transition Loan in 2022 and an offshore RMB300 million 2-year Energy Transition Bond in 2023 for its first CCGT unit (CCGT D1); and a total HK$1.3 billion Energy Transition Loans in 2023 for offshore LNG terminal. The commissioning of CCGT D1 in 2020 has enabled a significant reduction in the carbon intensity of CLP's electricity supply and together with the second CCGT unit, which is scheduled for full operation in 2024, are essential to CLP's plan to gradually phase out coal-fired generation units at Castle Peak A Power Station. The offshore LNG terminal went into service in July 2023, increasing the city's access to competitively priced natural gas from international markets. The construction of the two new CCGT generation units and offshore LNG terminal support the government's decarbonisation strategy as these units accelerate the transition to a cleaner electricity supply in Hong Kong with increased use of natural gas in the fuel mix.

In addition to the sustainable financing the CLP group has achieved under CAFF, since 2021 CLP Power and CAPCO have started incorporating sustainability elements in banking facilities that support general business operation. Performance targets are linked to annual maximum output level for air emissions including sulphur dioxide, nitrogen oxides and respirable suspended particulates. As of 31 December 2023, CLP Power and CAPCO had a total of HK$13.2 billion emission reduction-linked facilities outstanding with fourteen banks. This represents 73% of total outstanding general purposes bank facilities arranged as of end 2023.

In Hong Kong, 62% of financing arranged in 2023 for CLP's SoC businesses were met by sustainable sources of funding (including use of proceeds funding under CAFF and emission reduction-linked facilities), about similar level in previous year of 68% as we have promptly secured sustainable financing to fund the decarbonisation projects in Hong Kong.

Climate Action Finance Framework

The objective of the CAFF is to support the transition to a low carbon economy by attracting socially responsible, sustainable financing, to support CLP's investments that reduce the carbon content of energy generated and increase the efficiency of energy usage.

CLP is committed to the higher standards on Environmental, Social and Governance (ESG) with references to the latest developments and advancements in ESG taxonomies across different geographic regions, to the extent they are applicable, and actively adapting CAFF as required to reflect the evolving expectations of stakeholders. CAFF was updated in 2020 which remain relevant to CLP's businesses as governed under CLP's robust ESG governance to align with the evolving ESG landscape, and will be further updated whenever necessary.

The CAFF formalises and governs project evaluation, monitoring and reporting the use of proceeds for Climate Action Finance Transactions (including bonds, loans and other forms of finance). There are two types of Climate Action Finance Transactions under the CAFF: New Energy Finance Transactions and Energy Transition Finance Transactions.

The Green Bond Principles (GBP), updated as of June 2021, and Green Loan Principles (GLP), updated as of February 2023, are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond and Loan markets by clarifying the approach for issuance of a Green Bond or Loan.

There are four core components of a Green Bond or Loan - Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting.

The table below summarises how CLP Climate Action Finance Transactions align with the GBP and GLP.

It is noted that the use of proceeds of the Energy Transition Finance Transactions is not included in the indicative list of Green Project categories under the use of proceeds section in the GBP and GLP, otherwise CLP Climate Action Finance Transactions issued under the CAFF align with both the GBP and GLP. Nevertheless, the use of proceeds of the Energy Transition Finance Transactions will be allocated towards climate actions that are supported by the host government and will deliver significant environmental benefits.

Components	Energy Transition Finance Transactions	New Energy Finance Transactions
Use of Proceeds	• Develop gas-fired power plants and associated enabling infrastructure to support the transition from coal-fired generation in markets with limited renewable energy resources • The conversion of coal fired power plants and the facilities or modifications associated with such conversion, which, in both cases, will result in carbon emission no more than 450gCO_2/kWh at baseload	• Renewable energy • Energy efficiency • Low carbon transport infrastructure
Process for Project Evaluation and Selection	• Business units propose projects for eligible use of proceeds and Climate Action Finance Transaction • Climate Action Finance Committee reviews and approves the eligibility of proposed use of proceeds and Climate Action Finance Transaction	
Management of Proceeds	• Proceeds of each Climate Action Finance Transaction are credited to dedicated bank accounts/deposits pending allocation to eligible projects • Use of proceeds tracked through business units' internal information system with individual register established for each Climate Action Finance Transaction	
Reporting	• Climate Action Finance Report issued on an annual basis disclosing the below information of Climate Action Finance Transactions not yet fully repaid: – Identity of issuing business unit – Type of Climate Action Finance Transactions entered into – Aggregate amounts of proceeds allocated – Remaining balance of unallocated proceeds – Estimation of beneficial impact of the use of proceeds – Information on projects with allocation of proceeds • The Climate Action Finance Report will be reviewed by the Climate Action Finance Committee and published within CLP's Sustainability Report	

Governance of the CAFF

All eligible projects of the CAFF undergo a rigorous review and approval process within a robust, transparent framework and clear guidelines. CLP has established a Climate Action Finance Committee (the Committee) at the ultimate parent holding company level with the responsibility for governing the CAFF, including approval of Climate Action Finance Transaction and determination of the eligibility of proposed use of proceeds. The Committee consists of senior management from different functions including sustainability, treasury and legal departments. CLP Group Treasury & Project Finance acts as the secretariat of the Committee to provide the necessary support.

Second party opinion

DNV GL, an independent consultant and a leading provider of sustainable finance independent assessment, has provided a second party opinion on the CAFF. It is DNV GL's opinion that there are clear environmental benefits for the investments to be funded under the CAFF.

Conclusion of DNV GL Second Party Opinion (2020)

DNV GL notes that the Use of Proceeds of the New Energy Finance Transactions are included in the indicative list of sectors included in the section 1 of Green Bond Principles and Green Loan Principles whilst the Use of Proceeds of Energy Transition Finance Transactions are not. DNV GL concludes that the project selection, funds-tracking and reporting procedures set out in the CAFF meet the criteria established in the Protocol and are aligned with sections 2, 3 and 4 of the Green Bond Principles 2018 and Green Loan Principles 2020.

Based on the information provided by CLP and the work undertaken, it is DNV GL's opinion that the CAFF meets the criteria established in the Protocol and there are clear environmental benefits for the investments to be funded under the CAFF.

See CLP Climate Action Finance Framework

See DNV GL Second Party Opinion Report

Climate Action Finance Transaction Portfolio

CLP arranged in total HK$19 billion Climate Action Finance Transactions to support investments in qualified projects which help reduce carbon emissions and increase energy efficiency. During 2023, CAPCO arranged a two-year offshore RMB300 million fixed rate private placement bond to partially refinance commercial bank loans for the D1 gas-fired generation project and; in total HK$1.3 billion one-year and two-year bank loan facilities in May and June, to refinance commercial loan for the offshore LNG terminal project. These transactions carry the energy transition label under CAFF as the underlying projects supports the government's decarbonization strategy and CLP's commitment in Climate Vision 2050 to phase out coal-fired generation before 2040.

The below table summarises all Climate Action Finance Transactions under CAFF as of 31 December 2023:

Summary of Climate Action Bonds

Issuer	Project	Type	Issue Date	Tenor (years)	Nominal Issued Amount	Coupon (per annum)	Listing	ISIN/ Common Code
Castle Peak Power Finance Company Limited	CCGT D1	Energy Transition	25 July 2017	10	US$500 million	3.25%	The Stock Exchange of Hong Kong	XS1648263926
			10 May 2023	2	Offshore RMB300 million	2.98%	Not Listed	HK0000924818
	Landfill Gas Renewable Energy Generation	New Energy	9 July 2019	25	HK$170 million	2.80%	Not Listed	202355293
	Offshore LNG Terminal	Energy Transition	22 June 2020	10	US$350 million	2.20%	The Stock Exchange of Hong Kong	XS2190958301
	CCGT D2	Energy Transition	3 March 2021	10	US$300 million	2.125%	The Stock Exchange of Hong Kong	XS2307742267
CLP Power Hong Kong Financing Limited	Smart Metering	New Energy	21 July 2021	10	US$100 million	2.25%	The Stock Exchange of Hong Kong	XS2366836133

Summary of Climate Action Loans

Borrower	Project	Type	Agreement Date	Tenor (years)	Facility Amount (HK$' million)	Reference Code
Castle Peak Power Company Limited	Offshore LNG Terminal	Energy Transition	14 September 2020	15	1,795	ETL02
			24 May 2023	1	243	ETL06
			24 May 2023	2	296	ETL07
			2 June 2023	1	300	ETL08
			2 June 2023	2	243	ETL09
			7 June 2023	1	243	ETL10
	CCGT D2	Energy Transition	4 March 2021	3	3,670	ETL03
			30 June 2021	15	1,600	ETL04
	CCGT D1	Energy Transition	24 February 2022	2	520	ETL05

Use of Proceeds Reporting

Bond proceeds were applied at the outset of the bond tenor to replace bank debt bridge facilities designated to specific projects and the remaining balance was credited to dedicated bank account/deposits pending settlement of future project related payments.

Bank facilities were drawn at the outset of the loan tenor to replace bank debt bridge facilities designated to specific projects and the undrawn portion would be utilised upon settlement of project related payment.

As at the reporting date of 31 December 2023, the use of the bond and loan proceeds are illustrated in the table below:

			In HK$'million				
			Allocated[1]				
Project	Type	ISIN/ Common/ Reference Code	Finance	Refinance	Total	Unallocated[1]	Issued Amount/ Facility Amount
CCGT D1	Energy Transition	XS1648263926	3,453 (88%)	449 (12%)	3,902 (100%)	-	3,902 (100%)
		HK0000924818	-	339 (100%)	339 (100%)		339 (100%)
		ETL05	-	520 (100%)	520 (100%)	-	520 (100%)
Landfill Gas Renewable Energy Generation	New Energy	202355293	120 (71%)	50 (29%)	170 (100%)	-	170 (100%)
Offshore LNG Terminal	Energy Transition	XS2190958301	1,546 (57%)	1,167 (43%)	2,713 (100%)	-	2,713 (100%)
		ETL02	-	1,651 (100%)	1,651 (100%)	-	1,651 (100%)
		ETL06	-	-	-	243 (100%)	243 (100%)
		ETL07	13 (4%)	283 (96%)	296 (100%)	-	296 (100%)
		ETL08	-	300 (100%)	300 (100%)	-	300 (100%)
		ETL09	243 (100%)	-	243 (100%)	-	243 (100%)
		ETL10	70 (29%)	-	70 (29%)	173 (71%)	243 (100%)
CCGT D2	Energy Transition	XS2307742267	2,011 (86%)	315 (14%)	2,326 (100%)	-	2,326 (100%)
		ETL03	2,443 (67%)	-	2,443 (67%)	1,227 (33%)	3,670 (100%)
		ETL04	-	-	-	1,600 (100%)	1,600 (100%)
Smart Metering	New Energy	XS2366836133	-	777 (100%)	777 (100%)	-	777 (100%)
	Total		**9,899 (52%)**	**5,851 (31%)**	**15,750 (83%)**	**3,243 (17%)**	**18,993 (100%)**

1 *Information has been subject to independent limited assurance by PwC*

Reporting Criteria

Following section 6 of the CAFF – "Reporting on Use of Proceeds", for each CLP Climate Action Finance Transaction, the followings are disclosed:

- identity of the CLP Group Business Unit that has entered into a CLP Climate Action Finance Transaction;
- type of CLP Climate Action Finance Transaction entered into (i.e. Energy Transition Finance Transaction or New Energy Finance Transaction);
- aggregate amounts of proceeds allocated;
- estimation of beneficial impact of the use of proceeds;
- the remaining balance of unallocated proceeds at the reporting period end;
- a Climate Action Finance Transaction is added to this report when the transaction was entered into during the reporting period; and
- a Climate Action Finance Transaction is removed from this report when the bond or loan has been fully repaid.

Assurance of Climate Action Finance Report

CLP has engaged PricewaterhouseCoopers (PwC) as an independent assurance provider to provide assurance that selected information in this report has been prepared in line with the CLP Climate Action Finance Framework.

See PwC Assurance Report

Project Updates

CCGT D1 Generation Unit

CAPCO's Combined-Cycle Gas Turbine (CCGT) Generation Unit (D1)	
Location	Black Point Power Station (BPPS), Hong Kong
Plant Performance Information	Adopting the latest advanced H-Class CCGT technology, the CCGT D1 unit has an installed capacity of 550MW and is more efficient than the existing eight older BPPS CCGT units adopting F-Class CCGT technology
Beneficial Environmental Impact	• CO_2 emission intensity of 346 gCO_2/kWh in 2023[1,2,3] • Estimated CO_2 avoidance of 1,067 kT in 2023[1,2,4]

1 The reporting of carbon emission intensity and estimation of carbon emission avoidance was for the period from 1 January 2023 to 31 December 2023.
2 Information has been subject to independent limited assurance by PwC.
3 CO_2 emission intensity is the actual CO_2 emission from D1 divided by the electricity sent-out from D1.
4 Methodology and assumptions used in estimating CO_2 emissions avoidance:

The CO_2 avoidance is the difference in CO_2 emission by Black Point Power Station (BPPS) and Castle Peak Power Station (CPPS) with D1 and without D1. For the scenario of "with D1" in CLP's electricity generation system, the CO_2 emissions by BPPS and CPPS were based on the actual figures recorded, using gross generation values. For the scenario of "without D1", the CO_2 emissions by BPPS and CPPS were estimated on monthly basis based on their respective estimated hourly electricity generation multiplied by their respective actual carbon emission intensity (gCO_2/kWh) in that month. The electricity generation by BPPS and CPPS was estimated hourly based on the actual electricity demand and plant dispatch requirements to meet the customers load demand environmentally, reliably and economically in the hour.

Project Status
The project was completed and commenced operation since October 2020.

Landfill Gas Energy Generation

CAPCO's Landfill Gas Renewable Energy Generation at West New Territories (WENT) Landfill (WE Station)	
Location	WENT Landfill, Tuen Mun, Hong Kong
Installed Capacity	10MW
Plant Performance Information	Installation of 5x2MW landfill gas (LFG) generator sets at WE Station to utilize the excess LFG of around 4,500m^3/hour for electricity generation in support of local renewable energy (RE) development.
Beneficial Environmental Impact	• RE generation of 46 GWh in 2023[1,2,3] • Estimated CO_2 avoidance achieved in 2023: 24 kT[1,2,4]

1 The reporting of RE generation and the estimation of carbon emission avoidance was for the period from 1 January 2023 to 31 December 2023.
2 Information has been subject to independent limited assurance by PwC.
3 The annual renewable energy generated was based on the actual electricity generation from LFG generation units as recorded by CLP.
4 Methodology and assumptions used in estimating CO_2 emissions avoidance:

Since the RE generation from WE Station had displaced the electricity generation that would have been required from the existing fossil fuel plants at CPPS and BPPS if the LFG generation units at WE Station were not commissioned, the avoidance of the associated CO_2 emission was estimated on monthly basis from the displaced electricity generation multiplied by the average actual carbon emission intensity of BPPS and CPPS in that month.

Project Status
The project was completed and commenced operation since March 2020.

Offshore LNG Receiving Terminal

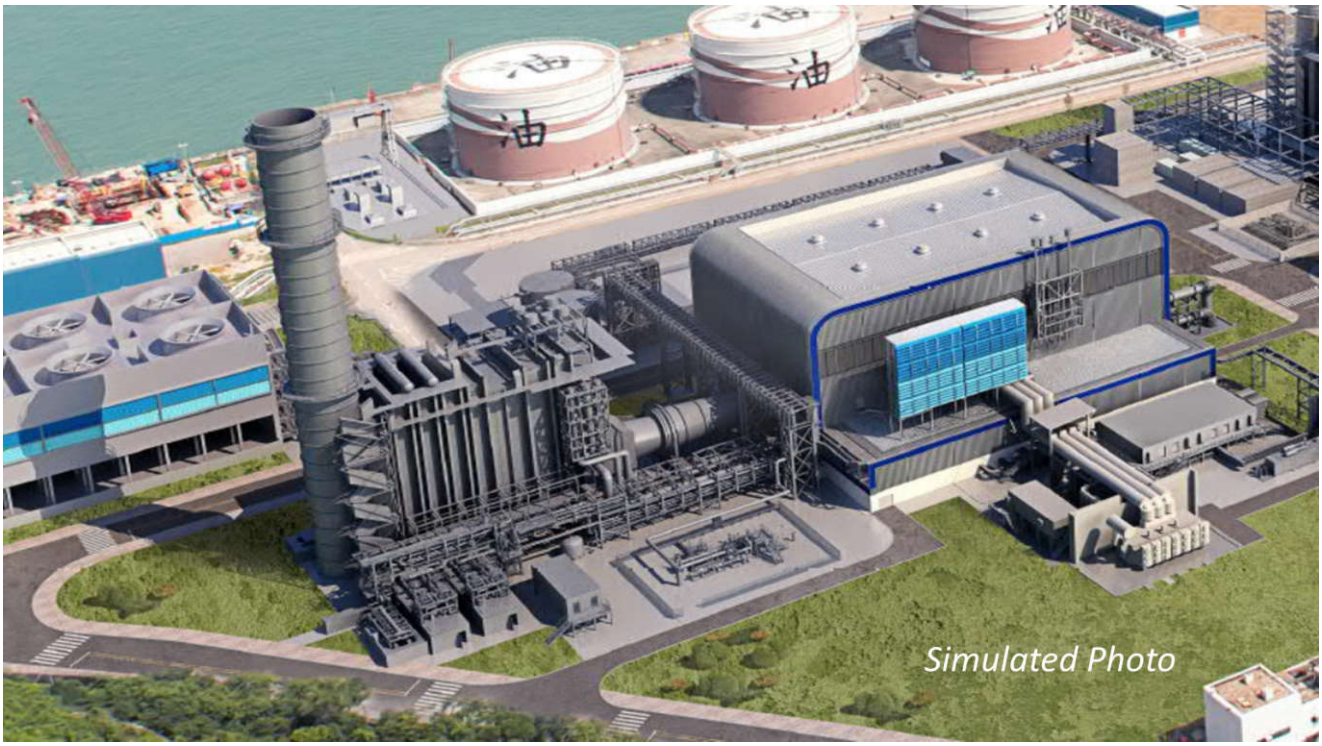
CAPCO's Hong Kong Offshore LNG Terminal (HKOLNGT)	
Location	Offshore waters to the east of the Soko Islands, Hong Kong
Plant Performance Information	The terminal is built to provide reliable and secure supply of natural gas at competitive prices for CAPCO's gas-fired generation units, and to support Government's energy policies for reducing carbon intensity. Major facilities of the project include: • A double berth jetty with LNG unloading equipment • A Floating Storage and Regasification Unit (FSRU) with LNG storage tanks and regasification equipment • A subsea pipeline connecting the jetty and a gas receiving station at Black Point Power Station
Beneficial Environmental Impact	Estimated CO_2 avoidance of 201 kT in 2023[1,2,3]

1 The reporting of carbon emission intensity and estimation of carbon emission avoidance was for the period from 3 July 2023 to 31 December 2023.
2 Information has been subject to independent limited assurance by PwC.
3 Methodology and assumptions used in estimating CO_2 emissions avoidance:

The CO_2 avoidance is the difference in CO_2 emission by Black Point Power Station (BPPS) and Castle Peak Power Station (CPPS) with HKOLNGT and without HKOLNGT. For the scenario of "with HKOLNGT", the electricity generated by BPPS and CPPS units were the actual figures recorded including gas supply from HKOLNGT to meet the electricity demand, For the scenario of "without HKOLNGT", the electricity generated by BPPS units were constrained by the maximum contract quantities of other gas sources available. CPPS units were required to generate to make up the balance of energy demand. The CO_2 emission is estimated based on BPPS and CPPS's respective replacement generation multiplied by their respective actual carbon emission intensity (g CO_2/kWh) in that month, with consideration of a host of other factors such as load demand and operating regime of generating units.

Progress in 2023
The terminal went into service and received its first long-term contracted LNG cargo in July 2023.

CCGT D2 Generation Unit



CAPCO's Second New Combined-Cycle Gas Turbine (CCGT) Generation Unit (D2)	
Location	Black Point Power Station (BPPS), Hong Kong
Plant Performance Information	Adopting the latest advanced H-Class CCGT technology with a modified and enhanced version of D1 unit, the second new CCGT unit (D2) has an installed capacity of around 600MW and is more efficient than the existing eight older BPPS CCGT units adopting F-Class CCGT technology
Estimation of Beneficial Environmental Impact	• Expected around 0.4 to 1 million tons of CO_2 emissions avoided per year • Expected carbon emission intensity to be significantly below the 450g CO_2/kWh baseload emissions threshold as set out in CAFF

Progress in 2023

- Engineering, procurement and construction work for CCGT D2 is now substantially completed.
- Hot commissioning commenced in late 2023.
- CCGT D2 scheduled to be in full operation in 2024.

Project site overview

Cooling tower

Turbine hall overview

Smart Meters

CLP Power's Smart Meter Project	
Location	Hong Kong
Project Performance Information	The project aligns with the strategy of the HK Government and CLP to promote energy efficiency through demand-side management solutions, and to support Hong Kong's transformation into a smart city. The project scope mainly involves replacement of the electro-mechanical meters used by residential and Small & Medium Enterprise (SME) customers with smart meters. With the enhancement of the existing smart metering platform, it is expected to cover installation of over 2.8 million smart meters. The provision of timely and meaningful consumption information facilitated by smart meters via web portals or mobile devices helps arouse customers' awareness and equip them with right tools to better manage energy consumption. CLP Power customers with smart meters can benefit from energy conservation during times of peak power demand in the hot summer months through the Summer Saver Rebate programme. Customers participating in the scheme receive notifications to alert them to save energy during specified times, and will be able to earn reward points by achieving reduction targets for those periods.
Beneficial Environmental Impact	• Estimated annual energy savings of 31,328 MWh in 2023[1,2] • Estimated CO_2 avoidance achieved in 2023: 12.2 kT[1,2]

1 The reporting of estimated annual energy savings and the estimation of carbon emission avoidance was for the period of 1 January 2023 to 31 December 2023.
2 Methodology and assumptions used in estimating annual energy savings and CO_2 emissions avoidance:

Along with the rollout of smart meters, CLP introduces its Energy-Saving Missions by inviting residential customers with smart meters to participate in reducing energy consumption for a reward to their energy saving effort, which is envisioned to eventually engage all residential customers connected with smart meters. This programme associated with smart meters is one of the key drivers in changing customers' energy consumption behaviour. For estimation of energy savings in 2023, CLP targeted a focused group of close to 950,000 residential customers with smart meters who have participated in the Energy-Saving Missions in 2023 and adopted a saving factor of 0.8% in energy consumption which is based on a study performed on smart meters customer behaviour. This saving factor is then applied towards the average annual energy consumption of the residential customers (based on sales per residential customers in Hong Kong of 4,070 kWh) to derive the estimated annual energy savings. Avoidance of CO_2 emission is then calculated by multiplying the energy savings with the actual emission intensity of CLP Power in 2023 (0.39 kg/kWh).

Progress in 2023

- As of December 2023, over 2.23 million smart meters were connected in Hong Kong, covering different districts in CLP supply area, accounting for about 80% of CLP Power's customers.
- The roll out is scheduled based on factors including meter age, cost efficient replacement works and supply reliability and is targeted to be completed by 2025.