CLP Power

Information Highlights

2021

PREFACE

This information booklet is produced by CLP Power Hong Kong Limited to provide a range of company information to our customers and the wider community to further enhance information transparency and understanding of our electricity business in Hong Kong.

The booklet aims to present the company's annual performance across a number of areas including tariff, supply reliability, safety, environmental management, promotion of renewable energy and energy efficiency and conservation. It also includes a summary of cost data on our operating expenses and financial information. Unless otherwise specified, the information contained in this booklet is based on information available as of 31 December 2021.

In addition to this booklet, our *CLP Information Kit* explains the background of many of our activities and initiatives, which is available on the CLP website.

To understand CLP Group's business performance, please view our *Annual Report* and our *Sustainability Report* on the CLP website.

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1. About CLP Power

CLP Power Hong Kong Limited ("CLP Power") is a wholly-owned subsidiary of CLP Holdings Limited. CLP Holdings Limited is a company listed on the Hong Kong Stock Exchange and is one of the largest investor-owned power businesses in Asia.

CLP Power operates a vertically integrated power supply business in Hong Kong, covering electricity generation, transmission and distribution, and marketing and customer services.

The generating plants in Hong Kong are owned by Castle Peak Power Company Limited ("CAPCO"), in which CLP Power has a 70% interest.

CLP Power has been serving Hong Kong for 121 years and supplies highly reliable electricity to over 80% of Hong Kong's population.

|Overview of Business and Performance in 2021

Hong Kong's economy continued to recover from the impact of COVID-19 in 2021 due to rising vaccination rates and the Government's stimulus measures. CLP Power remained steadfast and continued to provide Hong Kong with a safe and highly reliable electricity supply.

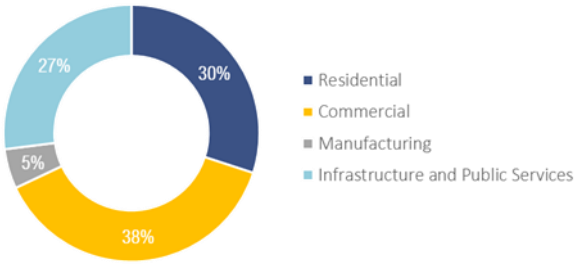
Electricity sales in Hong Kong rose 4.1% to 35,355 GWh as compared to 2020. Easing social restrictions and increased consumer spending spurred economic activity, lifting demand in all sectors. The infrastructure, public services and commercial sectors saw the biggest increases in demand as schools, social activities and government services gradually resumed normal after disruptions caused by the pandemic since 2020. Restaurants, shops and hotels saw increased activity from a low base at the beginning of 2021 as the COVID-19 situation eased. Record temperatures in March, May and September also contributed to higher electricity sales.

The number of customer accounts rose to 2.71 million in 2021, compared to 2.67 million a year earlier.

|Electricity Sales in 2021

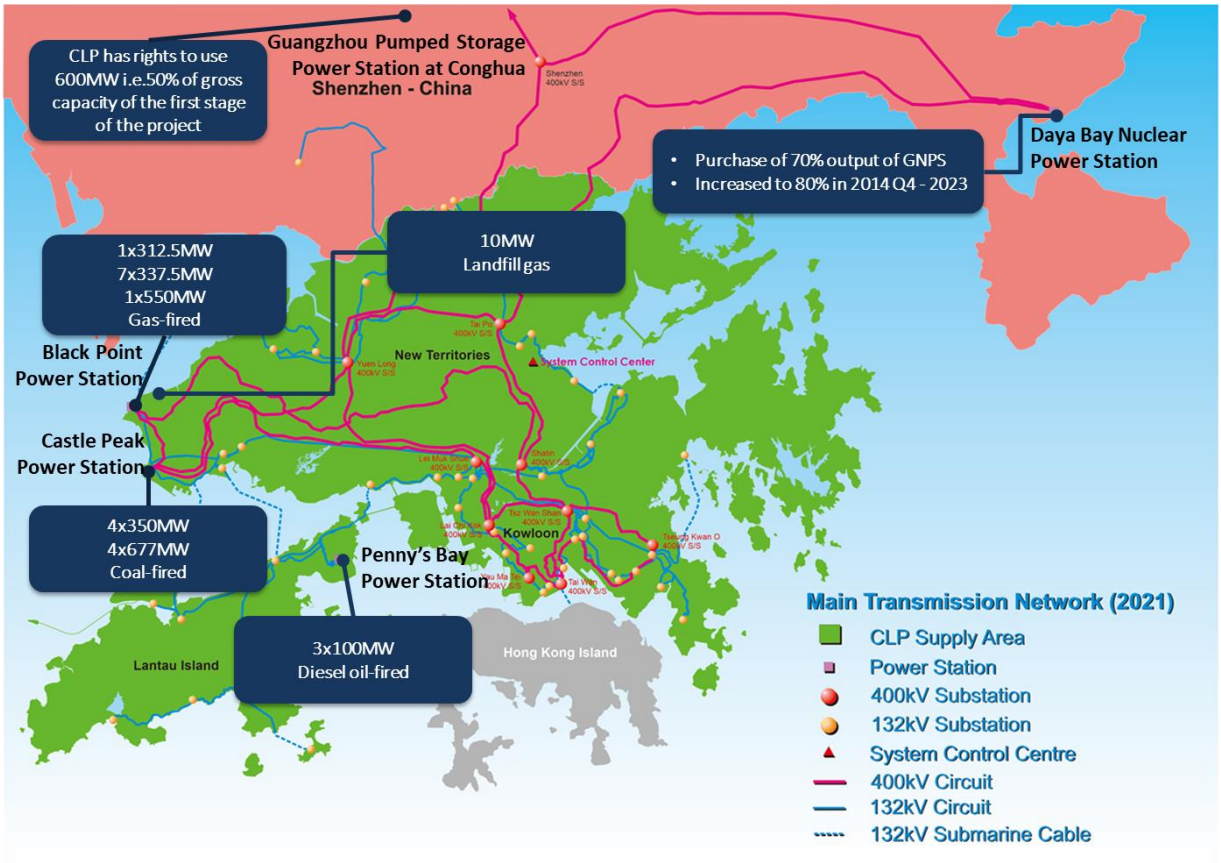
Year-on-Year Change	Increase/ (Decrease)	
	GWh	%
Residential	227	2.2
Commercial	545	4.2
Infrastructure and Public Services	571	6.2
Manufacturing	49	3.0

Share of Total Sales



|Electricity Supply by CLP Power

(2021 Figures)



Generation	Transmission	Distribution	Retail
9,623MW installed capacity	16,400km of transmission and high voltage distribution lines	237 primary and >15,200 secondary substations	35,355 GWh supplied to Hong Kong in 2021 and about 2.71 million customer accounts

2. Scheme of Control Agreement

2.1 Introduction

CLP Power's electricity business in Hong Kong is regulated by the Hong Kong SAR Government ("the Government") under the Scheme of Control Agreement ("SCA").

Under this regulatory regime, power companies have the obligation to provide sufficient and reliable electricity supply in their service areas. Customers obtain quality electricity supply at a reasonable price and in an environmentally responsible manner, while the power companies earn a reasonable return in relation to the capital invested.

The SCA also provides an effective and stringent regulatory framework for the Government to monitor power companies' operating and financial performances. Operating performance covers supply reliability, operational efficiency, customer service and energy efficiency. Financial performance covers power companies' electricity-related capital investment, operating expenditure, fuel costs, rate of permitted return and tariff adjustment.

In April 2017, CLP Power and CAPCO ("the Companies") entered into a new SCA with the Government, effective from 1 October 2018 to 31 December 2033.

2.2 Regulatory Framework and Processes

The Government closely monitors the performances of the power companies under the SCA through the following reviews: Development Plan Review, Annual Tariff Review, Annual Auditing Review and Interim Review.

Development Plan Review

The Companies submit to the Government a detailed 5-year plan to meet electricity demand for the development of Hong Kong. The plan is to be approved by the Executive Council and covers the required capital expenditure, operating and fuel costs, projected electricity sales and the Basic Tariff rates.

Annual Tariff Review

The Companies submit to the Government a tariff proposal for the coming year before end of October each year. The proposal includes sales and maximum demand forecasts, total capital expenditure, total operating expenditure, cost of fuels and projected Basic Tariff rate etc.

Annual Auditing Review

The Companies submit detailed information to the Government before the end of March each year for auditing and reviewing the financial, technical and environmental performance for the preceding financial year.

Interim Review

A review is conducted every 5 years over the term of the SCA on SCA-related matters. Changes can be made by mutual agreement between the Companies and Government.

2.3 Key Features under SCA

2.3.1 Features Related to Tariff

- Basic Tariff

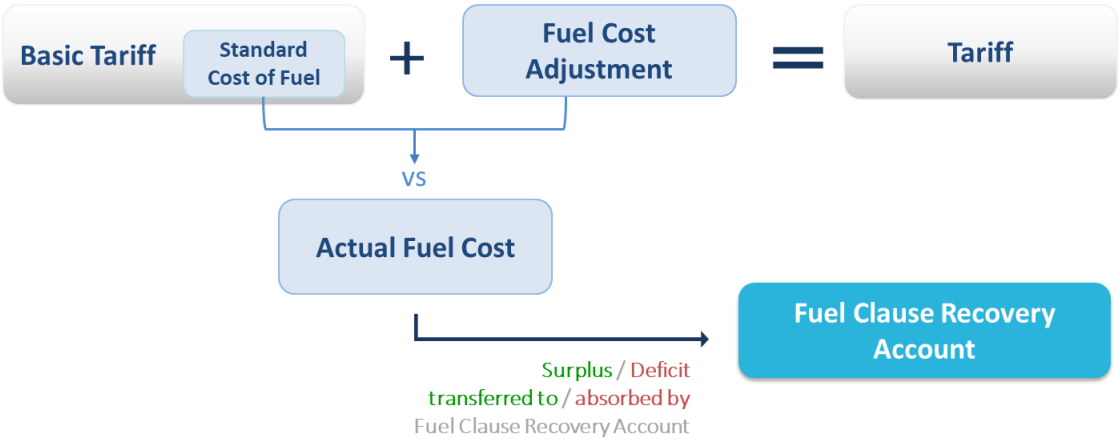
  It is set at a level to cover the total costs of electricity supply, including operating cost, standard cost of fuels and SCA return.

- Fuel Cost Adjustment

  Fuel Cost Adjustment is either a charge or rebate to cover the difference between the actual cost of fuels spent and the standard cost of fuels collected through the Basic Tariff.

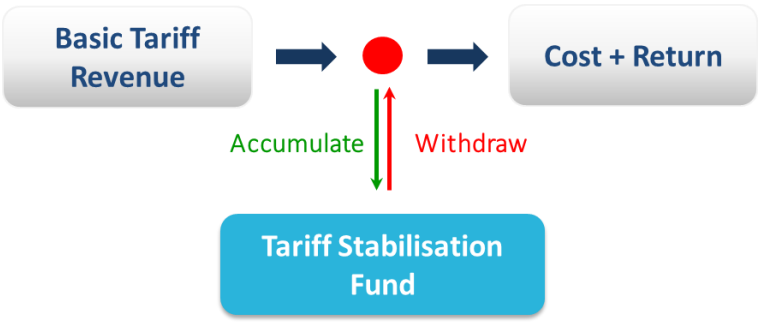
- Fuel Clause Recovery Account

  The Account which captures the difference between the actual cost of fuels and the fuel costs recovered through the standard cost of fuels included in Basic Tariff and Fuel Cost Adjustment.



- Tariff Stabilisation Fund ("TSF")

  The TSF aims to ameliorate tariff increases or stabilize tariff levels. If the gross tariff revenue collected exceeds or is less than the total revenue required, the amount will be added to, or deducted from, the TSF.



- Permitted Rate of Return

  Under the SCA, the Companies are permitted to earn a fixed rate of return on the total value of the average net fixed assets for that year. The permitted rate of return under the current SCA is 8%.

2.4 Performance Incentives and Penalties Schemes under the SCA

Performance Category	Measurement for Each Year/ Period	Adjustment to the Permitted Rate of Return	
		Maximum incentive for performance above the respective target	Maximum penalty for performance below the respective target
Operational and Customer Services	Supply reliability	+0.015%	-0.015%
	Operational efficiency	+0.01%	-0.01%
	Customer services	+0.01%	-0.01%
	Supply restoration	+0.015%	-0.015%
Energy Efficiency and Demand Response	Energy saving from audits	+0.1%	/
	Number of completed energy audits	+0.04%	/
	Number of buildings under New Eco-Building Fund	+0.02%	/
	Energy saving from New Eco-Building Fund	+0.1%	/
	Five-year energy saving	+0.1%	/
	Demand response reduction	+0.025%	/
Renewable Energy	Percentage of electricity generated from Renewable Energy Systems in CLP Power's service areas (excluding systems directly owned by the Government)	+0.05%	/
	Number of new Renewable Energy Systems connections	+0.0025%	/
	Number of new Renewable Energy Systems that generate electricity regularly	+0.0025%	/
	Number of new Renewable Energy Systems connections which generate electricity regularly in each five-year period	+0.01%	/
	Sales of renewable energy certificates ("RE Certificates")	See Note 1	

"Renewable Energy System" means an electricity generation system employing solar, wind, biomass, hydro, tidal, wave, geothermal, energy from waste (including landfill gas or sewage gas) or such other energy sources that are secure and inexhaustible (in the sense that there is no problem of reserve being depleted) as may be mutually agreed by the Companies and the Government.

Note 1: The RE Certificate Sales Incentive Amount for a year is 10% of the total revenue generated from sales of RE Certificates by CLP Power to customers.

3. Tariff Information

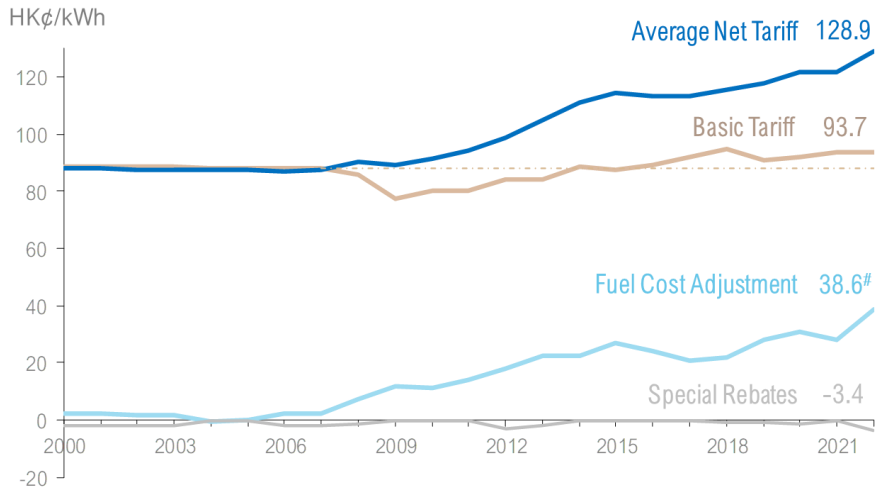
3.1 Tariff Components

Tariffs paid by our customers consist of two main components:

- The Basic Tariff which covers the total costs of electricity supply, including operating cost, standard cost of fuels and SCA return.
- The Fuel Cost Adjustment which is either a charge or rebate to cover any fuel costs above or below the standard cost of fuels already included in the Basic Tariff.

3.2 Tariff Adjustment

Components Unit: HK¢/kWh	2022	2021	Change
Average Basic Tariff	93.7	93.7	-
Fuel Cost Adjustment#	38.6	28.1	+10.5
Rent and Rates Special Rebate	-1.3	-	-1.3
2022 Special Rebate	-2.1	-	-2.1
Average Net Tariff	128.9	121.8	+7.1

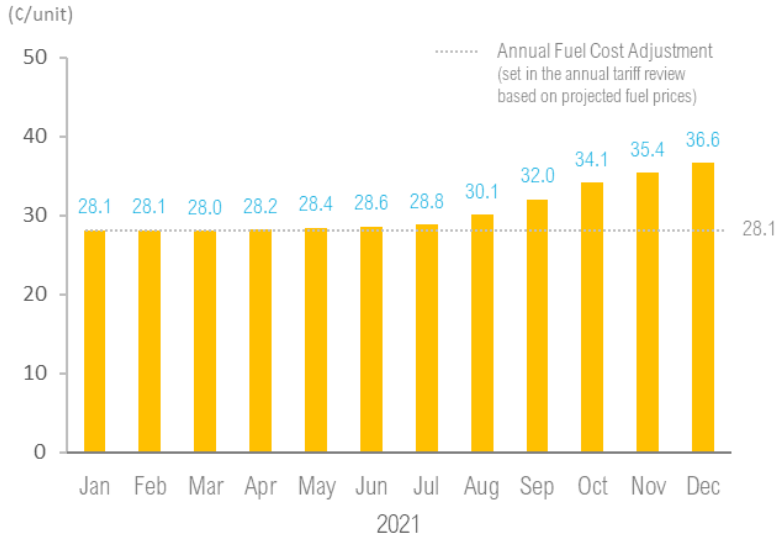


Figures of Fuel Cost Adjustment shown are the rates announced in the respective annual tariff reviews

|Monthly Fuel Cost Adjustment for 2021

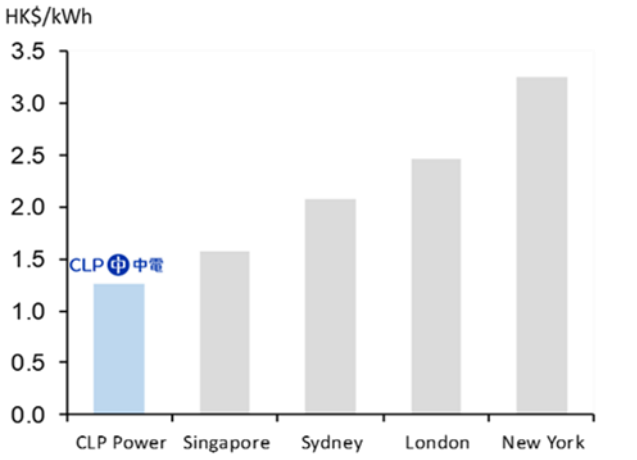
Under the current SCA, the Fuel Cost Adjustment is automatically adjusted on a monthly basis to reflect changes in actual price of fuel used. This arrangement is more transparent and reflects fuel price changes in a more timely manner. The below chart shows the actual monthly fuel cost adjustment in 2021.

More information on monthly Fuel Cost Adjustment can be found on our website.



3.3 A Reasonable Tariff

CLP Power's tariff level is reasonable and competitive compared to other key metropolitan cities in the world.



Remarks:
Comparison based on average monthly domestic consumption of 275kWh
Tariff and exchange rate in Jan 2022

4. Supply Reliability

A reliable power supply for our customers at home and at work is an important pre-requisite for Hong Kong to maintain its competitiveness and attractiveness for organisations to set up their businesses. Maintaining high reliability is critical for our customers in an economy which is built around service industries that depend on a reliable electricity supply, in a densely populated smart city urban environment which demands an ultra-high level of reliability.

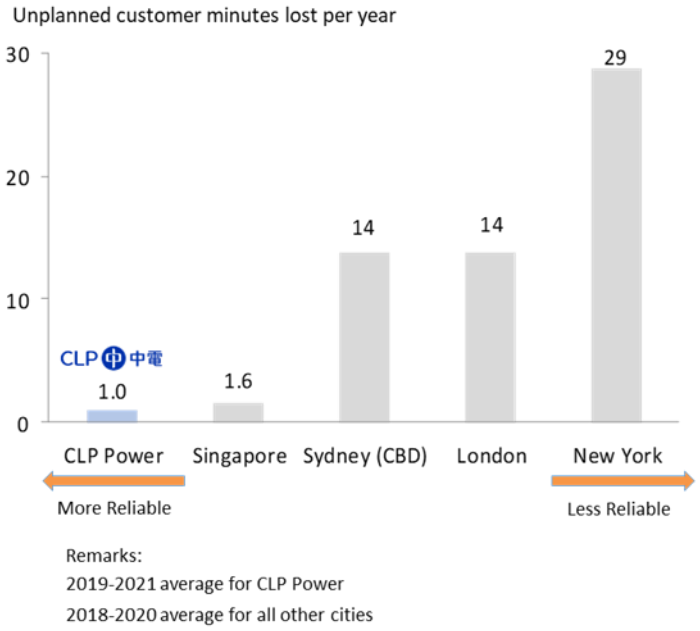
4.1 Reliability Performance

CLP Power provides reliable electricity supply in Hong Kong at a world-class reliability of over 99.999%.

|Supply Reliability Performance Indicators

Supply Reliability Performance Indicators	
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 (2019-2021) was 0.21, meaning customers experienced a power interruption approximately once in five years during this period. This was slightly higher than last year's three-year rolling average of 0.19.
System Average Interruption Duration Index (SAIDI) The average duration of interruptions each customer may encounter in a given year.	• The three-year average SAIDI (2019-2021) was 0.23 hours, including both planned and unplanned interruptions. This was lower than last year's three-year rolling average of 0.39 hours.
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 (2019-2021) of unplanned CML was about 0.99 minutes, which was lower than the 9.77 minutes recorded in 2020. About 8.85 minutes of unplanned CML was due to the severe impact of Super Typhoon Mangkhut in September 2018, without which the 2020 performance would have been about 0.92 minutes.

|Unplanned Customer Minutes Lost (Unplanned CML)



4.2 Sufficient Generating Capacity

Reserve capacity is essential to cater for any loss of generating capacity due to planned maintenance and unforeseen outages even at peak load. CLP Power sets the level of reserve margin by making reference to the maximum electricity demand as one of the most important indicators for planning and operations. This is in line with best practice adopted in the electricity industry all over the world.

5. Environmental Performance

5.1 Emissions Management

Through a combination of emissions reduction technologies and changes to our fuel mix including the introduction of natural gas, nuclear power, low-emission coal and the addition of sophisticated emissions control facilities, we have achieved significant emissions reduction and successfully met the increasingly stringent emissions caps for our power plants set by the Government.

From 2010 to 2011, we retrofitted by phases the largest four units of the coal-fired Castle Peak Power Station with large-scale desulphurisation and nitrogen oxide reduction facilities which have significantly improved the emissions performance of the station.

Since 2015, turbine upgrades have been carried out on seven of the eight gas-fired power generation units at the Black Point Power Station resulting in a reduction of its nitrogen oxides emissions. The remaining one gas-fired generation unit at the Black Point Power Station will receive similar upgrades in early 2022.

The 550MW Combined Cycle Gas Turbine (CCGT) gas-fired generation unit D1 at Black Point Power Station has been in operation since mid-2020. It has enabled an increase in the use of natural gas to about 50% of our fuel mix in Hong Kong since 2020, and substantially reduced the proportion of coal power used in generating power. The 10MW West New Territories Landfill Gas Power Generation project which began operations since 2020, has also increased the amount of renewable energy we generate in Hong Kong.

We continued to make progress with the construction of D2, a second CCGT unit at the power station using similarly emission-efficient technologies, due to go into service in 2023. Both projects will help facilitate the phase out of coal-fired power generation capacity at Castle Peak A Power Station and support the ongoing lower-carbon transition of Hong Kong's electricity supply.

A reduction of more than 90% in SO2, NOx and RSP emissions and 23% in carbon emissions have been achieved since 1990, while electricity demand has grown by over 80% during the same period.

5.2 Emissions Performance

1990
Installed electrostatic precipitators at Castle Peak Power Station

1993
Installed Low NOx burners at Castle Peak Power Station

1994
Import Nuclear from Daya Bay

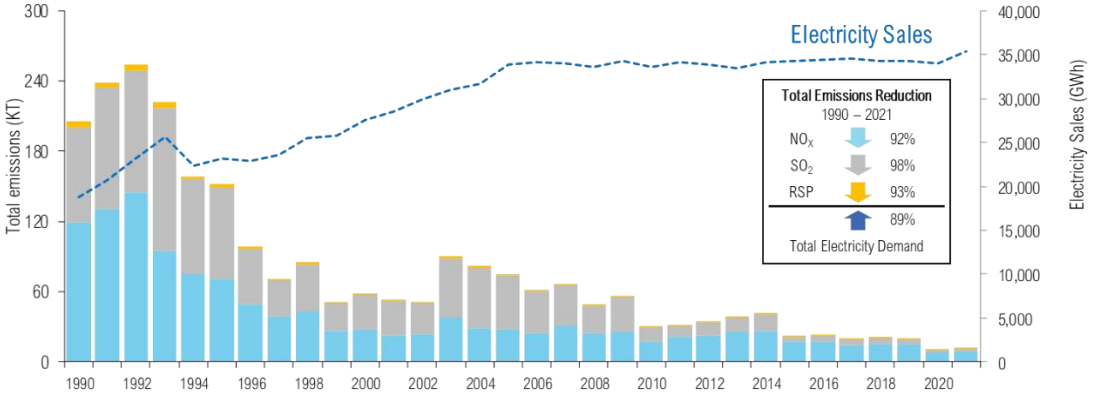
1996
Natural gas - fired Black Point Power Station established

2005
Increased use of Ultra Low Sulphur Coal

2010-2011
Castle Peak Power Station Emissions Control Equipment commissioned

2013
Black Point Power Station began using West-East Pipeline Gas for power generation

From 2020
Commissioning of a new CCGT unit to meet further tightening emission caps



|Emissions Performance of CLP's Power Stations in Hong Kong in 2021

Total Emissions					
Power Station	Carbon Emissions (kT)	Air Emissions (kT)			
	CO_2e	SO_2	NO_x	Particulates (Total)	Particulates (Respirable)
Black Point C	5,566	0.05	1.78	0.09	0.09
Black Point D	1,271	0.016	0.17	0.02	0.02
Castle Peak A	277	0.23	0.35	0.018	0.012
Castle Peak B	6,603	1.62	7.13	0.25	0.17
Penny's Bay	0.74	0.000003	0.001	0.00002	0.00002

Emissions Intensity					
Power Station	Carbon Emissions (kg/kWh, sent-out basis)	Air Emissions (kg/kWh, sent-out basis)			
	CO_2e	SO_2	NO_x	Particulates (Total)	Particulates (Respirable)
Black Point C	0.401	0.000004	0.00013	0.00001	0.00001
Black Point D	0.358	0.000004	0.00005	0.00001	0.00001

Castle Peak A	1.555	0.00131	0.00195	0.00010	0.00007
Castle Peak B	1.021	0.00025	0.00110	0.00004	0.00003
Penny's Bay	1.305	0.00000	0.00175	0.00003	0.00003

|CO_2e Emissions Intensity of Electricity Sold by CLP Power Hong Kong

CO_2e Emissions Intensity of Electricity Sold by CLP Power Hong Kong[1,2] (kg CO_2e/ kWh)	2017	2018	2019	2020	2021
	0.51	0.51	0.50	0.37	0.39

[1] CO_2e emission intensity was calculated by annual total CO_2e emissions of CAPCO power stations and the total electricity sold to CLP Power Hong Kong's customers before the adjustment of Renewable Energy Certificates.

[2] 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 CO_2 emissions and reported separately in the Asset Performance Statistics. Its non-CO_2 GHG emissions (i.e. CH4 and N_2O) is included in CLP's Scope 1 CO_2e emissions.

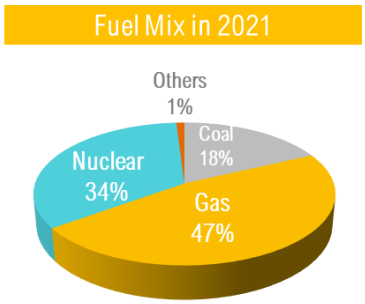
|5-year Key Operating Statistics

	2017	2018	2019	2020	2021
Installed capacity, MW	8,913	8,963	8,988	9,573	9,623
System maximum demand Local, MW#	7,155	7,036	7,206	7,264	7,477
Thermal efficiency, % based on units sent out	37.1	36.7	37.5	40.8	41.3
Plant availability, %	84.6	86.4	86.4	87.5	84.4

Taking into account the effect of the customer successful demand response programmes designed to reduce peak electricity usage, the maximum demand would have been higher at 7,269 MW in 2019, 7,369MW in 2020 and 7,551 in 2021.

5.3 Fuel Mix

It is critical for CLP Power to manage the fuel mix carefully to ensure fuel security, maintain a reliable electricity supply and meet the emissions caps. We will continue to work closely with the Government, our business partners and the community to support the Government's environmental policy for achieving better air quality.



6. Renewable Energy and Energy Efficiency and Conservation

6.1 Promotion of Renewable Energy and Energy Efficiency and Conservation

The current SCA marks another milestone towards a greener, smarter and low-carbon environment. In support of the Government's environmental policy to address climate change, a series of new initiatives have been introduced in the current SCA. These include the Feed-in Tariff Scheme and Renewable Energy Certificates to encourage participation from various sectors of the community to support local Renewable Energy (RE) development. Other initiatives include New Eco Building Fund, Community Energy Saving Fund and energy audits to help our customers achieve demand side management, energy saving, and enhancing public education.

|RE Feed-in Tariff (FiT) Scheme

The FiT Scheme encourages the development of RE by allowing customers to connect RE systems to the grid and sell the electricity generated back to CLP Power at favourable rates. It is applicable to electricity produced by solar and wind power systems with a generating capacity of up to 1MW. Customer embedded RE systems with a generating capacity exceeding 1 MW may also be considered on a case-by-case basis. FiT rates are adjusted based on the review with the Government, whereas new rates will be applied to new applications of RE systems.

|Renewable Energy Certificates (RECs)

Any residential or commercial and industrial customer with a CLP Power electricity account is eligible to purchase RECs. Each unit of electricity carried in a REC represents electricity produced by local renewable energy sources including solar power, wind power, and waste-to-energy projects, generated or purchased (such as through the Feed-in Tariff scheme) by CLP Power. Revenue generated from the sale of RECs will contribute towards part of the price of purchasing renewable energy through the FiT Scheme, helping minimise the cost of electricity as a whole.

|Eco Building Fund

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

|CLP Community Energy Saving Fund

Under the current SCA, 65% of the incentives earned by the Companies by helping customers save energy will be

allocated to the CLP Community Energy Saving Fund. The fund began operations in January 2019 to carry out a territory-wide energy efficiency and conservation campaign, encouraging residential customers to live low-carbon lifestyles, subsidising business customers to replace electrical equipment with more energy efficient models, and at the same time supporting the underprivileged.

|Energy Audit

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

6.2 Renewable Energy and Energy Efficiency and Conservation Related Performance

CLP Power is committed to promoting Energy Efficiency and Conservation (EE&C) and the development of RE in Hong Kong. The related performance in the reporting period from 1 January 2020 to 31 December 2020 is summarised below.

|Energy Audit

In the reporting period, we conducted 628 energy audits for our commercial and industrial customers. The energy savings achieved in the period was over 50 GWh.

|New Eco Building Fund

Since October 2018, the New Eco Building Fund was launched to subsidise retrofit projects which improve the energy efficiency in the communal areas of residential blocks, commercial buildings, industrial buildings and composite buildings and their nearby ancillary facilities. In the reporting period, 721 buildings were verified. The energy saving achieved in the period was over 50 GWh.

|Renewable Energy

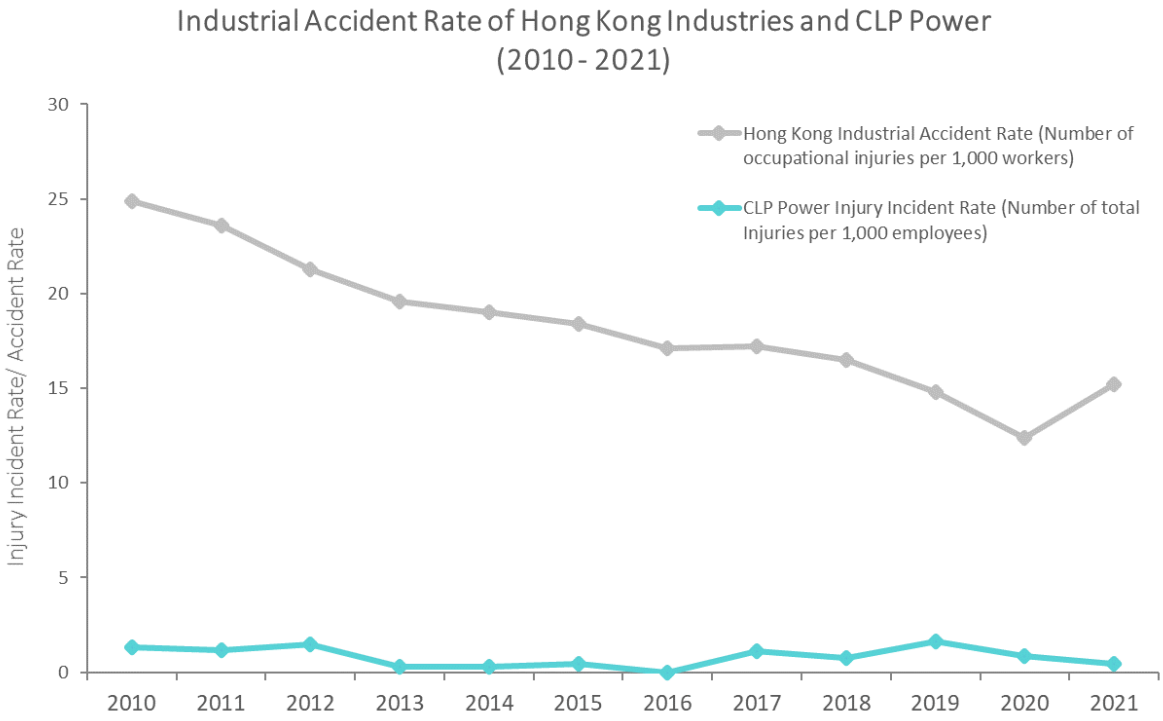
Over 4,100 new Renewable Energy Systems were connected to CLP Power's electricity grid during the reporting period. Up to the end of the reporting period, the total renewable energy generation in our supply area was around 74 GWh.

7. Safety and Health

Safety is always the Number One priority in CLP Power. Stringent safety guidelines are well in place and strictly enforced by staff and contractors to ensure safety in all work processes and at all facilities.

To ensure a safe working environment for our staff and contractors, we proactively conduct safety inspections and risk assessments to upkeep our safety performance.

7.1 Safety Performance



(1) The Hong Kong Industrial Accident Rate is sourced from Labour Department Occupational Safety and Health Statistics Bulletin (Issue No.22, published in August 2022)

8. Customer Excellence

CLP Power is committed to providing our customers with the best quality service and value. We continuously improve both our productivity and efficiency for the benefit of our customers.

We assess our performance regularly and report our achievements to establish a performance pledge on a yearly basis. The table below shows our targets and performance in 2021.

Performance Standards	2021 Targets	2021 Results
Reliability of electricity supply	>99.99%	Target met
Notify customers 3 working days in advance of planned outage	>99%	Target met
Average arrival time for loss of supply inspection	<28 minutes#	Target met
Average supply restoration time after fault outage	<2 hours#	Target met
Provide appointments for installation inspections within 3 working days	96.50%	Target met
Carry out site investigations on consumption enquiries within 3 working days	98%	Target met
Keep appointments to visit customers for supply applications within a 1.5-hour time slot	99.4%	Target met
Connect and supply electricity within the same day after satisfactory installation inspection	99.98%	Target met
Reconnect supply within the same day of payment of outstanding charges	95%	Target met
Answer Emergency Service Hotline in less than 9 seconds	90% of answering time	Target met
Answer Enquiries Hotline in less than 9 seconds	80% of answering time	Target met
Average queuing time for customer service enquiries at Customer Service Centres	Within 3.5 minutes	Target met

Excluding incidents occurred during severe weather conditions or in remote locations (e.g. islands without regular transportation).

9. Financial Performance

9.1 Scheme of Control Financial & Operating Statistics

Operating earnings of CLP Power's electricity business rose 4.7% from 2020 to HK$8,189 million in 2021.

|Scheme of Control Financial and Operational Information (Extract from Annual Report)

Scheme of Control Statement

Five-Year Summary: Scheme of Control Financial & Operating Statistics

9.1.1 Scheme of Control Statement

CLP Power Hong Kong Limited and Castle Peak Power Company Limited

	2021 HK$M	2020 HK$M
SoC revenue	**45,379**	**41,905**
Expenses		
Operating costs	**5,186**	**5,170**
Fuel	**15,667**	**13,790**
Purchases of nuclear electricity	**5,678**	**5,582**
Provision for asset decommissioning	**111**	**141**
Depreciation	**5,434**	**5,011**
Operating interest	**857**	**976**
Taxation	**2,100**	**1,904**
	35,033	**32,574**
Profit after taxation	**10,346**	**9,331**
Interest on increase in customers' deposits	**–**	**–**
Interest on borrowed capital	**1,018**	**1,111**
Adjustment for performance incentives	**(438)**	**(416)**
Profit for SoC	**10,926**	**10,026**
Transfer to Tariff Stabilisation Fund	**(1,072)**	**(519)**
Permitted return	**9,854**	**9,507**
Deduct interest on/ Adjustment for		

Increase in customers' deposits as above	–	–
Borrowed capital as above	**1,018**	**1,111**
Performance incentives as above	**(438)**	**(416)**
Tariff Stabilisation Fund to Rate Reduction Reserve	**3**	**18**
	583	**713**
Net return	**9,271**	**8,794**
CESF contribution	**(208)**	**(201)**
Net return after CESF contribution	**9,063**	**8,593**

9.1.2 Tariff Stabilisation Fund and Fuel Clause Recovery Account

Balance as at 31 Dec (HK$m)	2021	2020
Tariff Stabilisation Fund	3,109	2,019
Fuel Clause Recovery Account	(1,116)	346

9.2 Segregated Annual Cost Data

9.2.1 Operating Expenses

Year 2021 (HK$m)	Generation	Non-Generation[#]
Costs by Segment		
Operating Expenses (Note 1)	5,121	6,467
Fuel	15,667	0
Purchases of nuclear electricity	5,678	0
Total	26,466	6,467

Note 1: includes direct, indirect costs and depreciation

9.2.2 Net Fixed Assets Movement

Year 2021 (HK$m)	Generation	Non-Generation[#]
Opening balance (1/1/2021)	38,167	82,356
Total Capital Expenditure for 2021	6,376	4,846
Closing balance (31/12/2021)	41,546	84,281

[#] Cost data pertaining to Transmission & Distribution and Customer Services