

**Independent practitioner’s limited assurance report
To the board of directors of CLP Holdings Limited**

We have undertaken a limited assurance engagement in respect of the selected environmental, social and governance data of CLP Holdings Limited (the “Company”) listed below and identified as the numbers shaded in orange in the Key performance metrics (Appendix I) appended to this report (the “Identified ESG Data”).

Identified ESG Data

The Identified ESG Data for the year ended 31 December 2021 is summarised below:

<p><u>Governance</u></p> <ul style="list-style-type: none"> • Convicted cases of corruption reported to the Audit & Risk Committee (cases) • Breaches of Code of Conduct reported to the Audit & Risk Committee (cases) <p><u>Safety</u></p> <p><i>Fatalities (number of personnel)</i></p> <ul style="list-style-type: none"> • Fatalities - employees only • Fatalities - contractors only • Fatalities - employees and contractors combined <p><i>Fatality Rate (number per 200,000 work hours)</i></p> <ul style="list-style-type: none"> • Fatality Rate - employees only • Fatality Rate - contractors only • Fatality Rate - employees and contractors combined <p><i>Days Away from Work Injuries (number of personnel)</i></p> <ul style="list-style-type: none"> • Days Away from Work Injuries - employees only • Days Away from Work Injuries - contractors only • Days Away from Work Injuries - employees and contractors combined <p><i>Lost Time Injury Rate (number per 200,000 work hours)</i></p> <ul style="list-style-type: none"> • Lost Time Injury Rate - employees only • Lost Time Injury Rate - contractors only • Lost Time Injury Rate - employees and contractors combined <p><i>High-consequence Injuries (number of personnel)</i></p> <ul style="list-style-type: none"> • High-consequence Injuries - employees only • High-consequence Injuries - contractors only • High-consequence Injuries - employees and contractors combined 	<p><u>Safety (Continued)</u></p> <p><i>Total Recordable Injury Rate (number per 200,000 work hours)</i></p> <ul style="list-style-type: none"> • Total Recordable Injury Rate - employees only • Total Recordable Injury Rate - contractors only • Total Recordable Injury Rate - employees and contractors combined <p><i>Work-related Ill Health (number of personnel)</i></p> <ul style="list-style-type: none"> • Work-related Ill Health - employees only <p><i>Lost Days (number of days)</i></p> <ul style="list-style-type: none"> • Lost Days - employees only <p><u>Environment</u></p> <p><i>Resource Use & Emissions</i></p> <ul style="list-style-type: none"> • Nitrogen oxides emissions (NO_x) (kt) • Sulphur dioxide emissions (SO₂) (kt) • Particulates emissions (kt) • Sulphur hexafluoride (SF₆) (kt) <p><i>Non-hazardous liquid waste (kl)</i></p> <ul style="list-style-type: none"> • Produced • Recycled <p><i>Non-hazardous solid waste (t)</i></p> <ul style="list-style-type: none"> • Produced • Recycled <p><i>Hazardous liquid waste (kl)</i></p> <ul style="list-style-type: none"> • Produced • Recycled <p><i>Hazardous solid waste (t)</i></p> <ul style="list-style-type: none"> • Produced • Recycled <p><i>Ash (kt)</i></p> <ul style="list-style-type: none"> • Produced • Recycled and sold <p><i>Gypsum (kt)</i></p> <ul style="list-style-type: none"> • Produced • Recycled and sold
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<p><u>Environment (Continued)</u> <i>Total water withdrawal (Mm³)</i> <i>Total water discharge (Mm³)</i> <i>Environmental compliance</i></p> <ul style="list-style-type: none"> • Environmental regulatory non-compliances resulting in fines or prosecutions (number) • Environmental licence limit exceedances & other non-compliances (number) <p><u>GHG emissions</u> <u>CLP Group</u></p> <ul style="list-style-type: none"> • Total CO₂e emissions – on an equity basis (kt) • CO₂e - Scope 1 (kt) • CO₂e - Scope 2 (kt) • CO₂e - Scope 3 (kt) <p><u>CLP Group’s generation and energy storage portfolio</u></p> <ul style="list-style-type: none"> • CO₂ – on an equity basis (kt) • CO₂e – on an equity basis (kt) • CO₂ – on an equity plus long-term capacity and energy purchase basis (kt) • CO₂e – on an equity plus long-term capacity and energy purchase basis (kt) • CO₂ – on an operational control basis (kt) • CO₂e – on an operational control basis (kt) <p><u>Climate Vision 2050</u> <i>CLP Group – GHG emissions intensity of generation and energy storage portfolio</i></p> <ul style="list-style-type: none"> • On an equity plus long-term capacity and energy purchase basis (kg CO₂e/kWh) • On an equity basis (kg CO₂e/kWh) <p><i>CLP Power Hong Kong – GHG emissions intensity of electricity sold</i></p> <ul style="list-style-type: none"> • CO₂e emissions intensity of electricity sold by CLP Power Hong Kong (kg CO₂e/kWh) • CO₂ emissions intensity of electricity sold by CLP Power Hong Kong (kg CO₂/kWh) 	<p><u>Asset management</u> <i>Generation and energy storage capacity by asset type (MW (%))</i> <i>Total generation and energy storage capacity – on an equity basis</i></p> <ul style="list-style-type: none"> • Coal • Gas • Nuclear • Wind • Hydro • Solar • Waste-to-energy • Energy Storage • Others <p><i>Total generation and energy storage capacity – on an equity plus long-term capacity and energy purchase basis</i></p> <ul style="list-style-type: none"> • Coal • Gas • Nuclear • Wind • Hydro • Solar • Waste-to-energy • Energy Storage • Others <p><i>Energy sent out by asset type (GWh (%))</i> <i>Total energy sent out – on an equity basis</i></p> <ul style="list-style-type: none"> • Coal • Gas • Nuclear • Wind • Hydro • Solar • Waste-to-energy • Energy Storage • Others
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<p>Asset management (Continued) Total energy sent out – on an equity plus long-term capacity and energy purchase basis</p> <ul style="list-style-type: none"> • Coal • Gas • Nuclear • Wind • Hydro • Solar • Waste-to-energy • Energy Storage • Others <p>Total energy sent out (GWh) – on an operational control basis Fuel use</p> <ul style="list-style-type: none"> • Coal consumed (for power generation) (TJ) • Gas consumed (for power generation) (TJ) • Oil consumed (for power generation) (TJ) 	<p>People Total employees (number) Total employees eligible to retire within the next five years (%) Voluntary staff turnover rate (%) - by region</p> <ul style="list-style-type: none"> • Hong Kong • Mainland China • Australia • India
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Our assurance was with respect to the year ended 31 December 2021 information only and we have not performed any procedures with respect to earlier periods or any other elements included in the 2021 Sustainability Report and, therefore, do not express any conclusion thereon.

Criteria

The criteria used by the Company to prepare the Identified ESG Data is set out in the Reporting Scope and Data Verification (the “Criteria”) (Appendix II) appended to this report.

The Company’s Responsibility for the Identified ESG Data

The Company is responsible for the preparation of the Identified ESG Data in accordance with the Criteria. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of Identified ESG Data that is free from material misstatement, whether due to fraud or error.

Inherent limitations

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability between entities. In addition, greenhouse gas (“GHG”) quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Identified ESG Data based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised), *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, and, in respect of greenhouse gas emissions, International Standard on Assurance Engagements 3410, *Assurance Engagements on Greenhouse Gas Statements*, issued by the International Auditing and Assurance Standards Board. These standards require that we plan and perform this engagement to obtain limited assurance about whether the Identified ESG Data is free from material misstatement.

A limited assurance engagement involves assessing the suitability in the circumstances of the Company's use of the Criteria as the basis for the preparation of the Identified ESG Data, assessing the risks of material misstatement of the Identified ESG Data whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Identified ESG Data. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above we:

- made inquiries of the persons responsible for the Identified ESG Data;
- understood the process for collecting and reporting the Identified ESG Data;
- performed limited substantive testing on a selective basis of the Identified ESG Data; and
- considered the disclosure and presentation of the Identified ESG Data.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether the Company's Identified ESG Data has been prepared, in all material respects, in accordance with the Criteria.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Company's Identified ESG Data for the year ended 31 December 2021 is not prepared, in all material respects, in accordance with the Criteria.

Our report has been prepared for and only for the board of directors of the Company and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the content of this report.



PricewaterhouseCoopers
Certified Public Accountants
Hong Kong, 28 February 2022

Appendix I: Key performance metrics



CLP continually improves by managing, monitoring and reporting its ESG performance. These tables present a quantitative overview of the Group's 2021 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 and ISSB's Climate-related Disclosures Prototype, as well as other key performance data.

Detailed discussion of these metrics can be found in the corresponding [Standard ESG Disclosures](#) sections.

The 2021 data shaded in orange has been independently verified by PricewaterhouseCoopers. The assurance scope of past years' data can be found in [previous Sustainability Reports](#).

[Read the reporting scope](#) →

[Download the independent assurance statement](#) ↗

Governance	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Convicted cases of corruption reported to the Audit & Risk Committee (cases)	0	0	0	0	0	GRI 205-3 / HKEx B7.1
Breaches of Code of Conduct reported to the Audit & Risk Committee (cases)	18	25	31	20	28	

Financial information	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Total capital investment incurred by asset type (HK\$M(%))^{1,2,3}	15,411 (100%)	13,022 (100%)	12,028 (100%)	12,851 (100%)	N/A	ISSB 13-e
Transmission, distribution and retail	5,957 (39%)	4,810 (37%)	5,229 (43%)	4,953 (39%)	N/A	
Coal	2,628 (17%)	3,638 (28%)	2,473 (21%)	3,040 (24%)	N/A	
Gas	5,639 (37%)	3,445 (26%)	3,146 (26%)	4,098 (32%)	N/A	
Nuclear	0 (0%)	0 (0%)	352 (3%)	0 (0%)	N/A	
Renewables ⁴	860 (6%)	462 (4%)	580 (5%)	714 (5%)	N/A	
Others	327 (2%)	667 (5%)	248 (2%)	46 (0%)	N/A	
Total operating earnings by asset type (HK\$M(%))⁵	10,638 (100%)	12,374 (100%)	12,138 (100%)	15,145 (100%)	14,189 (100%)	
Transmission, distribution and retail	5,612 (53%)	5,751 (46%)	5,131 (42%)	7,427 (49%)	8,392 (59%)	
Coal ⁶	1,020 (10%)	2,871 (23%)	2,503 (21%)	3,370 (22%)	3,994 (28%)	
Gas ⁶	1,326 (12%)	1,510 (12%)	1,735 (14%)	1,533 (10%)		
Nuclear	1,908 (18%)	1,594 (13%)	1,688 (14%)	1,720 (11%)	913 (7%)	
Renewables ⁷	519 (5%)	575 (5%)	1,016 (8%)	924 (7%)	629 (4%)	
Others	253 (2%)	73 (1%)	65 (1%)	171 (1%)	261 (2%)	

Financial information	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Economic value generated, distributed and retained (HK\$M)						GRI 201-1
Economic value generated						
Revenue	83,959	79,590	85,689	91,425	92,073	
Share of profits of non-wholly owned entities ⁸	1,129	1,608	1,828	1,509	609	
Economic value distributed						
Fuel costs	18,506	15,753	16,712	17,187	15,473	
Other operating costs ⁹	39,922	35,774	48,654	43,604	46,325	
Staff expenses ¹⁰	5,107	4,844	4,535	4,449	4,195	
Finance costs ¹¹	1,774	1,875	2,033	2,107	2,278	
Dividends	7,832	7,832	7,782	7,630	7,352	
Taxes ¹²	1,720	2,529	2,189	3,565	2,094	
Donations	15	27	21	18	14	
Economic value retained¹³	10,212	12,564	5,591	14,374	14,951	

- 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 additions to fixed assets, right-of-use assets, investment property, intangible assets, investments in and advances to joint ventures and associates, and acquisition of business/asset.
- 3 On an accrual basis.
- 4 Renewables include wind, hydro, solar and waste-to-energy. Waste-to-energy is not considered as non-carbon emitting energy. Numbers of waste-to-energy included in renewables since 2019 are as follows: 2019 - HK\$123 million; 2020 - HK\$7 million; 2021 - HK\$18 million.
- 5 Before unallocated expenses.
- 6 Starting from 2018, operating earnings of coal and gas are reported separately.
- 7 Renewables include wind, hydro, solar and waste-to-energy. Waste-to-energy is not considered as non-carbon emitting energy. Numbers of waste-to-energy included in renewables since 2019 are as follows: 2019 - HK\$5 million; 2020 - HK\$8 million; 2021 - HK\$10 million.
- 8 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.
- 9 Includes impairment provision/reversal and other charges. In particular, amount included litigation settlement of HK\$1,110 million and impairment of retail goodwill of HK\$6,381 million in Australia in 2021 and 2019 respectively.
- 10 Another HK\$1,402 million (2020: HK\$1,386 million) of staff costs incurred were capitalised.
- 11 Finance costs are netted with finance income and include payments made to perpetual capital securities holders. In addition, finance costs of HK\$317 million (2020: HK\$306 million) were capitalised.
- 12 Represents current income tax but excludes deferred tax for the year.
- 13 Represents earnings attributable to shareholders (before depreciation, amortisation and deferred tax) for the year retained.

Safety	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Fatalities (number of personnel)^{1,2,3}						GRI 403-2 / HKEx B2.1
Fatalities - employees only	0	0	0	1	0	
Fatalities - contractors only	0	0	1	1	4	
Fatalities - employees and contractors combined	0	0	1	2	4	
Fatality Rate (number per 200,000 work hours)^{1,4,5}						GRI 403-2 / HKEx B2.1 / SASB IF- EU-320a.1
Fatality Rate - employees only	0.00	0.00	0.00	0.01	0.00	
Fatality Rate - contractors only	0.00	0.00	0.01	0.01	0.03	
Fatality Rate - employees and contractors combined	0.00	0.00	0.00	0.01	0.02	

Safety	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Days Away From Work Injuries (number of personnel)^{1,3,6}						GRI 403-2
Days Away From Work Injuries - employees only	4	12	7	11	11	
Days Away From Work Injuries - contractors only	10	10	19	11	16	
Days Away From Work Injuries - employees and contractors combined	14	22	26	22	27	
Lost Time Injury Rate (number per 200,000 work hours)^{15,7}						
Lost Time Injury Rate - employees only	0.05	0.13	0.07	0.13	0.13	
Lost Time Injury Rate - contractors only	0.08	0.09	0.14	0.09	0.14	
Lost Time Injury Rate - employees and contractors combined	0.07	0.11	0.11	0.10	0.13	
High-consequence Injuries (number of personnel)¹⁸						GRI 403-9
High-consequence Injuries - employees only	0	N/A	N/A	N/A	N/A	
High-consequence Injuries - contractors only	1	N/A	N/A	N/A	N/A	
High-consequence Injuries - employees and contractors combined	1	N/A	N/A	N/A	N/A	
Total Recordable Injury Rate (number per 200,000 work hours)^{15,9}						GRI 403-2 / SASB IF- EU-320a.1
Total Recordable Injury Rate - employees only	0.14	0.25	0.19	0.19	0.21	
Total Recordable Injury Rate - contractors only	0.29	0.37	0.52	0.29	0.36	
Total Recordable Injury Rate - employees and contractors combined	0.23	0.32	0.38	0.25	0.29	
Work-related Ill Health (number of personnel)^{13,10}						GRI 403-10 / HKEx B2.1
Work-related Ill Health - employees only	1	0	0	1	0	
Lost Days (number of days)¹¹						GRI 403-2 / HKEx B2.2
Lost Days - employees only	304 ¹²	443 ¹³	464 ¹⁴	249	252	

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 Refers to the number of fatalities as a result of work-related injury.

3 Starting from 2021, the unit is changed from the number of cases to the number of personnel.

4 Refers to the number of fatal injuries per 200,000 work hours in the year.

5 Rates are normalised to 200,000 work hours, which approximately equals to the number of hours worked by 100 people in one year.

6 Starting from 2021, "Days Away From Work Injuries" replaces "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". Numbers prior to 2021 are the previously reported numbers for "Lost Time Injury".

7 Refers to the number of Days Away From Work Injuries and Fatalities per 200,000 work hours in the year.

8 Refers to the number of personnel who sustains life threatening or life-altering work-related injury. It is a subset of Days Away From Work Injuries.

9 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.

10 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".

11 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".

12 19 out of 304 days were carried forward from one incident in 2020.

13 188 out of 443 days were carried forward from one incident in the past.

14 158 out of 464 days were carried forward from three incidents in the past.

Environment	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Resource Use & Emissions^{1,2,3}						
Nitrogen oxides emissions (NO _x) (kt)	45.7	43.2	47.0	60.9	59.3	GRI 305-7 / HKEx A1.1 / SASB IF-EU-120a.1
Sulphur dioxide emissions (SO ₂) (kt)	52.7	48.0	44.7	76.1	81.6	
Particulates emissions (kt)	7.6	6.9	7.7	8.5	8.3	
Sulphur hexafluoride (SF ₆) (kt)	0.004	0.003	N/A	N/A	N/A	
Non-hazardous liquid waste (kl) ⁴						GRI 306-2 / HKEx A1.4
Produced	65	3	59	52	103	
Recycled	65	3	57	52	103	
Non-hazardous solid waste (t) ⁴						
Produced	24,481	17,901	13,344	11,471	20,334	
Recycled	4,214	4,458	4,986	3,990	3,790	
Hazardous liquid waste (kl) ⁴						GRI 306-2 / HKEx A1.3
Produced	1,017	1,091	1,578	1,685	1,420	
Recycled	947	1,069	1,536	1,648	1,384	
Hazardous solid waste (t) ⁴						
Produced	1,524	1,503	862	1,435	857	
Recycled	520	523	201	631	469	
Ash (kt)						SASB IF-EU-150a.1
Produced	3,403	2,624	3,032	3,419	3,005	
Recycled and sold	2,501	1,793	3,667	2,263	1,745	
Gypsum (kt)						
Produced	367	334	441	253	156	
Recycled and sold	365	335	438	250	161	
Total water withdrawal (Mm³)⁵	5,160.0	5,162.7 ⁶	5,219.9 ⁶	5,153.6	4,480.6	GRI 2-4, 303-3 / HKEx A2.2 / SASB IF-EU-140a.1
For cooling purpose						
Water withdrawal from freshwater resources	42.5	35.1	45.7	53.3	47.6	
Water withdrawal from marine water resources	5,107.4	5,117.0 ⁶	5,161.7 ⁶	5,087.3	4,421.7	
For non-cooling purposes						
Water withdrawal from freshwater resources	5.3	5.7	5.8	6.0	4.9	
Water withdrawal from municipal sources	4.8	4.9	6.7	7.0	6.4	

Environment	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Total water discharge (Mm³)^{5,7}	5,122.5	5,133.8 ⁶	5,179.6 ⁶	5,103.2	4,437.7	GRI 2-4, 303-4
From cooling process						
Treated wastewater to freshwater bodies	0	0	0	0	0	
Water discharge to marine water bodies	5,107.4	5,117.0 ⁶	5,161.7 ⁶	5,087.3	4,421.7	
Wastewater to other destinations	0	0	0	0.02	0.05	
From non-cooling processes						
Treated wastewater to freshwater bodies	11.9	13.7	14.4	12.3	12.3	
Treated wastewater to marine water bodies	1.3	1.5	1.7	1.6	1.6	
Wastewater to other destinations	1.9	1.6	1.7	1.9	2.0	
Wastewater to sewerage	0.03	0.03	0.03	0.03	0.02	
Environmental compliance^{1,2}						GRI 2-27
Environmental regulatory non-compliances resulting in fines or prosecutions (number)	0	0	0	0	0	
Environmental licence limit exceedances & other non-compliances (number)	9	4	10	2	13	

1 Numbers include operating assets where CLP has operational control during the calendar year.

2 Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2021 numbers.

3 Since 2019, numbers at the asset level have been aggregated and then rounded.

4 Waste categorised in accordance with local regulations.

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

6 Restated as per updated data for Newport Power Station in Australia.

7 Starting from 2019, Yallourn Power Station's "water discharged to third-parties", which was previously reported under "wastewater to sewerage", has been reported under "wastewater to other destinations".

GHG emissions	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
CLP Group¹						
Total CO₂e emissions – on an equity basis (kt)^{2,3}	65,017	62,138	71,720	N/A	N/A	GRI 305-1, 305-2, 305-3 / HKEx A1.2 / SASB IF- EU-110a.1, IF-EU-110a.2 / ISSB 13-a
Scope 1 (kt) ⁴	47,690	45,105	50,047	N/A	N/A	
Scope 2 (kt)	236	244	250	N/A	N/A	
Scope 3 (kt)	17,091	16,790	21,424	N/A	N/A	
Category 1: Purchased goods and services	901	1,210	1,093	N/A	N/A	
Category 2: Capital goods	1,488	685	1,347	N/A	N/A	
Category 3: Fuel- and energy-related activities	12,733	12,690	16,671	N/A	N/A	SASB IF- EU-110a.2
Category 5: Waste generated in operations	80	63	101	N/A	N/A	
Category 6: Business travel	1	1	8	N/A	N/A	
Category 7: Employee commuting	4	2	4	N/A	N/A	
Category 11: Use of sold products	1,884	2,138	2,200	N/A	N/A	

GHG emissions	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
CLP Group's generation and energy storage portfolio^{3,4,5}						
CO ₂ – on an equity basis (kt) ⁶	47,574	44,987	N/A	N/A	N/A	GRI 305-1, 305-2 / HKEx A1.2
CO ₂ e – on an equity basis (kt) ⁶	47,813	N/A	N/A	N/A	N/A	
CO ₂ – on an equity plus long-term capacity and energy purchase basis (kt) ^{7,8}	51,674	48,621	N/A	N/A	N/A	
CO ₂ e – on an equity plus long-term capacity and energy purchase basis (kt) ^{7,8}	51,941	N/A	N/A	N/A	N/A	
CO ₂ – on an operational control basis (kt) ⁶	46,842	43,808	50,412	52,052	47,921 ⁹	
CO ₂ e – on an operational control basis (kt) ⁶	47,090	44,023	50,676	52,306	48,082	
Climate Vision 2050						
CLP Group – GHG emissions intensity of generation and energy storage portfolio^{3,4,5,10}						GRI 305-4 / HKEx A1.2 / ISSB 15
On an equity plus long-term capacity and energy purchase basis (kg CO ₂ e/kWh) ^{7,8}	0.57	0.57	0.63	0.66	0.69 ⁹	
On an equity basis (kg CO ₂ e/kWh) ⁶	0.65	0.66	0.71	0.74	0.80 ⁹	
CLP Power Hong Kong – GHG emissions intensity of electricity sold^{4,11}						
CO ₂ e emissions intensity of electricity sold by CLP Power Hong Kong (kg CO ₂ e/kWh)	0.39	0.37	0.50	0.51	0.51	
CO ₂ emissions intensity of electricity sold by CLP Power Hong Kong (kg CO ₂ /kWh)	0.39	0.37	0.49	0.51	0.50	

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 2019-2021 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 assets with majority and minority shareholdings, and those under "long-term capacity and energy purchase" arrangements with CLP. Starting from 2018, "long-term capacity and energy purchase" has been defined as a purchase agreement with a duration of at least five years, and capacity or energy purchased being no less than 10MW.

8 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).

9 CO₂e emissions of Yallourn and Hallet Power Stations were used to calculate CO₂e emissions metrics in 2017 due to limited data availability.

10 The 2019-2021 numbers refer to the GHG emissions intensity (kg CO₂e/kWh), in line with the updated Climate Vision 2050 targets. Numbers prior to 2019 refer to carbon emissions intensity (kg CO₂/kWh), as reported in the past.

11 "Electricity sold" is the total electricity energy sold to CLP Power Hong Kong's customers before the adjustment of Renewable Energy Certificates.

Asset management	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Generation and energy storage capacity by asset type (MW(%))^{1,2}						GRI 2-4 / ISSB 13
Total generation and energy storage capacity - on an equity basis	20,018 (100%)	19,691 (100%)	19,238 (100%)	19,108 (100%)	19,395 (100%)	
Coal	10,795 (53.9%)	10,765 (54.7%)	10,765 (56.0%)	10,765 (56.3%)	11,401 (58.8%)	
Gas	4,666 (23.3%)	4,600 (23.4%)	4,194 (21.8%)	4,147 (21.7%)	3,434 (17.7%)	

Asset management	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Nuclear	1,600 (8.0%)	1,600 (8.1%)	1,600 (8.3%)	1,600 (8.4%)	1,600 (8.2%)	
Wind ³	1,747 (8.7%)	1,521 (7.7%)	1,521 (7.9%)	1,521 (8.0%)	1,941 (10.0%)	
Hydro ³	489 (2.4%)	489 (2.5%)	489 (2.5%)	489 (2.6%)	489 (2.5%)	
Solar ³	499 (2.5%)	499 (2.5%)	451 (2.3%)	369 (1.9%)	321 (1.7%)	
Waste-to-energy ³	7 (0.0%)	7 (0.0%)	7 (0.0%)	7 (0.0%)	N/A	
Energy Storage	5 (0.0%)	0 (0.0%)	N/A	N/A	N/A	
Others	210 (1.0%)	210 (1.1%)	210 (1.1%)	210 (1.1%)	210 (1.1%)	
Total generation and energy storage capacity - on an equity plus long-term capacity and energy purchase basis⁴	25,108 (100%)	24,752 (100%) ⁵	24,015 (100%)	23,705 (100%)	24,554 (100%)	
Coal	12,027 (47.9%)	11,997 (48.5%)	11,997 (50.0%)	11,997 (50.6%)	12,633 (51.4%)	
Gas	5,813 (23.2%)	5,717 (23.1%)	5,139 (21.4%)	5,084 (21.4%)	5,322 (21.7%)	
Nuclear	2,685 (10.7%)	2,685 (10.8%)	2,685 (11.2%)	2,685 (11.3%)	2,488 (10.1%)	
Wind ⁶	2,331 (9.3%)	2,105 (8.5%) ⁵	2,049 (8.5%)	1,982 (8.4%)	2,401 (9.8%)	
Hydro ⁶	489 (1.9%)	489 (2.0%)	489 (2.0%)	489 (2.1%)	489 (2.0%)	
Solar ⁶	793 (3.2%)	793 (3.2%)	745 (3.1%)	558 (2.4%)	321 (1.3%)	
Waste-to-energy ⁶	10 (0.0%)	10 (0.0%)	10 (0.0%)	10 (0.0%)	N/A	
Energy Storage	660 (2.6%)	655 (2.6%)	N/A	N/A	N/A	
Others	300 (1.2%)	300 (1.2%)	900 (3.7%)	900 (3.8%)	900 (3.7%)	
Energy sent out by asset type (GWh(%))^{1,7,8}						GRI 2-4 / SASB IF- EU-000.D / ISSB 13
Total energy sent out - on an equity basis	73,113 (100%)	68,699 (100%)	70,949 (100%)	N/A	N/A	
Coal	42,002 (57.4%)	39,438 (57.4%)	44,596 (62.9%)	N/A	N/A	
Gas	13,233 (18.1%)	12,390 (18.0%)	9,979 (14.1%)	N/A	N/A	
Nuclear	12,302 (16.8%)	11,192 (16.3%)	10,888 (15.3%)	N/A	N/A	
Wind ⁹	2,959 (4.0%)	2,886 (4.2%)	2,924 (4.1%)	N/A	N/A	
Hydro ⁹	1,668 (2.3%)	1,879 (2.7%)	1,758 (2.5%)	N/A	N/A	
Solar ⁹	922 (1.3%)	898 (1.3%)	805 (1.1%)	N/A	N/A	
Waste-to-energy ⁹	27 (0.0%)	15 (0.0%)	0 (0.0%)	N/A	N/A	
Energy Storage	0 (0.0%)	0 (0.0%)	N/A	N/A	N/A	
Others	0 (0.0%)	1 (0.0%)	0 (0.0%)	N/A	N/A	
Total energy sent out - on an equity plus long-term capacity and energy purchase basis^{4,10}	91,183 (100%)	85,949 (100%) ⁵	88,573 (100%)	100%	100%	GRI 2-4 / SASB IF- EU-000.B / ISSB 13
Coal	43,995 (48.2%)	41,118 (47.8%)	48,512 (54.8%)	60%	61%	
Gas	18,461 (20.2%)	17,157 (20.0%)	13,073 (14.8%)	12%	15%	
Nuclear	20,962 (23.0%)	19,923 (23.2%)	19,400 (21.9%)	20%	15%	
Wind ¹¹	4,611 (5.1%)	4,445 (5.2%) ⁵	4,474 (5.0%)			
Hydro ¹¹	1,668 (1.8%)	1,879 (2.2%)	1,758 (2.0%)	8%	9%	
Solar ¹¹	1,524 (1.7%)	1,522 (1.8%)	1,467 (1.7%)			
Waste-to-energy ¹¹	38 (0.0%)	22 (0.0%)	0 (0.0%)	N/A	N/A	
Energy Storage	-75 (-0.1%)	-118 (-0.1%)	N/A	N/A	N/A	
Others	1 (0.0%)	1 (0.0%)	-109 (-0.1%)	0%	0%	
Total energy sent out (GWh) - on an operational control basis	62,967	58,918	N/A	N/A	N/A	SASB IF- EU-000.D / ISSB 13

Asset management	2021	2020	2019	2018	2017	GRI/HKEx/ SASB/ISSB
Fuel use^{8,12}						
Coal consumed (for power generation) (TJ)	426,190	403,379	485,453	521,568	471,976	GRI 302-1 / HKEx A2.1
Gas consumed (for power generation) (TJ)	142,304	134,776	107,183	83,364	91,426	
Oil consumed (for power generation) (TJ)	2,717	2,243	2,620	3,807	5,069	

- 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 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.
- Renewables include wind, hydro, solar and waste-to-energy. The total capacity of renewables on an equity basis is 2,743 MW (13.7%) in 2021.
- Numbers include assets with majority and minority shareholdings, and those under "long-term capacity and energy purchase" arrangements with CLP. Starting from 2018, "long-term capacity and energy purchase" is defined as a purchase agreement with a duration of at least five years, and capacity or energy purchased being no less than 10MW.
- Restated as per updated data for Power Purchase Agreement (PPA) of Waterloo Wind Farm in Australia.
- 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 3,624 MW (14.4%) in 2021.
- 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.
- Paguthan Power Station, the power purchase agreements of which expired in December 2018, was not included in the 2019-2021 numbers.
- Renewables include wind, hydro, solar and waste-to-energy. The total sent out of renewables on an equity basis is 5,576 GWh (7.6%) in 2021.
- Only percentages are available for the years 2017-18.
- 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 (8.6%) in 2021.
- Numbers include operating assets where CLP has operational control during the calendar year.

People	2021	2020	2019 ¹	2018	2017	GRI/HKEx/ SASB/ISSB
Total employees by region (number)	8,116	8,060	7,960	7,634	7,542	GRI 2-7 / HKEx B1.1
Hong Kong	4,771	4,689	4,604	4,538	4,504	
Mainland China	627	609	607	596	577	
Australia	2,281	2,320	2,280	2,042	1,998	
India	437	442	469	458	463	
Total employees eligible to retire within the next five years (%)²	14.6	14.5	13.9	16.4	15.1	GRI EU15
Hong Kong	20.1	20.4	19.5	20.0	18.6	
Mainland China	15.1	13.4	14.5	13.2	10.6	
Australia ³	6.6	5.7	5.4	12.8	12.2	
India	5.0	5.1	4.8	4.0	2.4	
Voluntary staff turnover rate (%)^{4,5}						GRI 401-1 / HKEx B1.2
Hong Kong	4.6	3.1	2.4	2.3	1.9	
Mainland China	2.3	1.3	2.0	4.7	3.0	
Australia	16.1	7.7	12.9	13.6	13.8	
India	6.9	4.7	6.6	5.6	3.5	
Average training hours per employee (hours)	51.6	42.5	40.1	46.1	46.9	GRI 404-1 / HKEx B3.2

- Starting from 2019, the numbers have included full-time and part-time employees. Numbers in the previous years included full-time employees only.
- The percentages given refer to permanent employees within each region, who are eligible to retire within the next five years.
- There is no mandatory retirement age in Australia. Since 2019, the retirement age assumption has been adjusted from 60 to 65 to reflect local norms, which led to a significantly lower percentage compared to previous years. Numbers in previous years adopting the adjusted retirement age for Australia are as follows: 2017 - Australia: 4.8% / Group total: 12.9%; 2018 - Australia: 4.6% / Group total: 14.0%.
- Voluntary staff turnover refers to employees leaving the organisation voluntarily and does not include dismissal, retirement, company-initiated termination or end of contract.
- Includes permanent employees except for Mainland China, which includes both permanent and fixed-term contract employees due to local employment legislation.

The 2021 data shaded in orange has been independently verified by PricewaterhouseCoopers. The assurance scope of past years' data can be found in previous Sustainability Reports.

Appendix II : Reporting scope and data verification

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

This report covers the CLP Group's sustainability performance for the calendar year ending 31 December 2021. It is published at the same time as the Annual Report. The previous CLP Sustainability and Annual reports were published in March 2021.

CLP reviews its reporting scope regularly to ensure the material impact of the Group's overall portfolio is covered. In 2021, there were no major changes to the reporting scopes of its ESG metrics. CLP has continued to enhance the disclosure of ESG metrics, and the highlights are as follows:

- **Health and Safety, Environmental (HSE):** CLP has broadened the disclosure of safety and environmental metrics to meet external reporting requirements. New disclosures include: high-consequence injuries (representing life threatening or life-altering work-related injuries), mercury emissions and a number of water metrics. Several existing safety metrics have been revised to align with international reporting practices, and additional safety metrics are now independently assured.
- **Asset management:** CLP has started to report the sent out of each type of renewable energy, namely solar, hydro, wind and waste-to-energy. It complements the existing disclosure on the generation capacity of the individual component of the renewable energy portfolio. Individual data points are independently assured. The total capacity and total sent out of the portfolio are also provided in the report to enable performance assessment.
- **Climate Vision 2050:** CLP has converted the carbon emissions intensity (kg CO₂/ kWh) to greenhouse gas

emissions intensity (kg CO₂e/ kWh) to align with the updated Climate Vision 2050 targets. Disclosure on the GHG emissions of the generation and energy storage portfolio is added to provide transparency to the calculation of the Group's GHG intensity.

[See CLP Group's portfolio on its website](#) 

GRI reference: 2-5

Limited assurance is provided by PricewaterhouseCoopers (PwC) on a selected set of environmental, social and governance-related Key Performance Metrics for 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 greenhouse gas emissions the International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements.

[Download the independent assurance report](#) 

Below is the definition of the Group's boundary for each of the main categories of data included in this report. Please refer to the [CLP 2021 Annual Report](#) for more details on the entities included in the consolidated financial statements.

Governance	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.
Finance	Selected financial figures are extracted from the Annual Report and the consolidated financial statements of CLP Holdings Limited and its subsidiaries (the Group) which is in accordance with Hong Kong Financial Reporting Standards (HKFRS) issued by the Hong Kong Institute of Certified Public Accountants (HKICPA). For a detailed description of the financial reporting scope, please refer to the Significant Accounting Policies – <i>Consolidation and Equity Accounting</i> on pages 232-233 of the <i>2021 Annual Report</i> .
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.

<p>Safety</p>	<p>Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines, fuel storage facilities and offices that are:</p> <ul style="list-style-type: none"> · Majority owned by CLP or under CLP's operational control, defined as having full authority to implement CLP's operating policies; and · Under construction or in operation during the reporting year. <p>100% of the performance data for in-scope assets is reported without adjustment based on CLP's equity share, unless otherwise stated.</p>
<p>Asset management</p> <ul style="list-style-type: none"> · Energy sent out, Fuel use (on an operational control basis) 	<p>Data are consolidated on an operational control basis. It includes the assets in the Group's generation and energy storage portfolio that are:</p> <ul style="list-style-type: none"> · Majority owned by CLP or under CLP's operational control, and where full authority is given to implement CLP's operating policies; and · In operation during the reporting year. <p>100% of the performance data for in-scope assets is reported without adjustment based on CLP's equity share, unless otherwise stated.</p>
<p>Environment</p> <ul style="list-style-type: none"> · Resource use, Air emissions and Environmental compliance 	<p>Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines and fuel storage facilities that are:</p> <ul style="list-style-type: none"> · Majority owned by CLP or under CLP's operational control, defined as full authority to implement CLP's operating policies; · In operation during the reporting year; and · Posing material impact to the environment. <p>100% of the performance data for in-scope assets is reported without adjustment based on CLP's equity share, unless otherwise stated.</p>
<p>GHG emissions</p> <ul style="list-style-type: none"> · CLP Group's total CO₂e emissions (on an equity basis) 	<p>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.</p> <p>Scope 1 CO₂e</p> <p>Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines and fuel storage facilities that are:</p> <ul style="list-style-type: none"> · Owned by CLP, where assets are included on an equity basis (i.e. accounts for the data according to CLP's equity share in the asset); and · In operation during the reporting year. <p>Scope 2 CO₂e</p> <p>Includes the Group's generation and energy storage portfolio, transmission and distribution infrastructure, coal mines, fuel storage facilities and offices that are:</p> <ul style="list-style-type: none"> · Owned or rented by CLP, where assets and offices are included on an equity basis (i.e. accounts for the data according to CLP's equity share in the asset); and · In operation during the reporting year. <p>Scope 3 CO₂e</p> <p>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.</p>

GHG emissions

· CLP Group's generation and energy storage portfolio (CO₂/CO₂e on an equity/ an equity plus long-term capacity and energy purchase basis)

Data are consolidated on an equity basis with two variations:

1. **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. accounts for the data 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** adds onto (1) above and includes the assets in the Group's generation and energy storage portfolio whose capacity and energy are purchased by CLP to meet customer demand, and where:
 - Purchase agreement duration is at least 5 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 full authority to implement CLP's operating policies;
- In operation during the reporting year; and
- Posing material impact to the environment.

100% of the performance data for in-scope assets is reported without adjustment based on CLP's equity share, unless otherwise stated.

Climate Vision 2050

Asset management – Generation and energy storage capacity, energy sent out

Data are consolidated on an equity basis with two variations:

1. **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. accounts for the data 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 onto (1) above and includes the assets in the Group's generation and energy storage portfolio whose capacity and energy are purchased by CLP to meet customer demand, and where:
 - Purchase agreement duration is at least 5 years; and
 - Capacity or energy purchase is no less than 10MW.

CLP Power Hong Kong GHG emissions intensity of electricity sold

Includes power generation assets involved with the delivery of electricity to CLP Power Hong Kong customers, where:

- The CO₂ and CO₂e emissions are from generation assets owned or controlled by CLP Power Hong Kong/ CAPCO in Hong Kong only (as nuclear power generation does not result in significant carbon emissions); and
- The kWh is from the total electricity sales for CLP Power Hong Kong.