

## Welcome

We are pleased to present CLP Group's 14<sup>th</sup> annual sustainability report. Over the past decade and a half, CLP's approach to sustainability and how we communicate it to our stakeholders has evolved and matured considerably. In a changing world, our long standing commitment to transparency and accountability in reporting remains unchanged, and is reflected in our 2015 Sustainability Report.

#### **ABOUT CLP GROUP**

<u>CLP Holdings Limited</u> is a publicly held company that has been in the electricity business since 1901. We are one of the largest investor-operators of power assets in the Asia-Pacific region, with businesses across Hong Kong, Mainland China, India, Southeast Asia and Taiwan and Australia. Our business includes power generation, transmission and distribution, and electricity and gas retail activities, employing over 7,300 people, and serving over five million customer accounts.

#### REPORTING PERIOD AND SCOPE

This report covers CLP Group's sustainability performance for the calendar year ending 31 December 2015. It is published at the same time as our Integrated Annual Report. Different categories of data have specific <u>reporting scopes</u>. Our previous report was published in March 2015.

The content of this Report is prepared in accordance with the Core option of the Global Reporting Initiative's (GRI) G4 guidelines and the Electric Utilities Sector Disclosures, and the requirements of the Hong Kong Stock Exchange Environmental, Social and Governance (ESG) Reporting Guide (ESG Guide).

#### **ASSURANCE & VERIFICATION**

Limited assurance is provided by PricewaterhouseCoopers (PwC) on a selected set of environmental, social and governance-related Key Performance Indicators for this Report in accordance with International Standard on Assurance Engagements 3000 Revised, Assurance Engagements other than Audits or Reviews of Historical Financial Information and International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements.

The scope of work is available in the assurance statement.

#### WHAT'S NFW

- In Essence Report brought back as a separately written summary;
- <u>Stakeholders' Key Concerns or Interests</u> presented in detail by key stakeholder groups with some addressed by our Senior Management in <u>Questions & Answers</u>;
- <u>Materiality Assessment</u> has been further refined so the report now features the performance on our material and most material aspects; and
- <u>Sustainable Development Goals (SDGs)</u> are mapped by the GRI indicators within the report to help identify where our strategy and activities align with the new SDGs.

#### Other updates:

- <u>Video Clips</u> interviews with our Senior Management and sharing on some of our past and upcoming initiatives;
- Asset Performance Statistics performance factsheets of our 20 assets in the environmental scope;
- Interactive Charts data presented in interactive format; and
- XBRL XBRL-tagged report based on GRI taxonomy to enhance accessibility of information.

#### **GIVE US YOUR FEEDBACK**

For every feedback we receive on our Annual Report, our Sustainability Report and / or our Annual Report snapshot online, we will donate HK\$60 to two designated charities, up to a maximum total donation of HK\$350.000.

Submit your feedback here.
Find out more about donation in Contact Us

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#### A BUSINESS WITH A PURPOSE

We run our business with an important purpose – to power the sustainable development of communities and society. The energy we provide helps to improve the quality of life, boost productivity and save lives every day. CLP is a company that aspires to be the leading responsible energy provider in the Asia-Pacific region, not just for this generation, but from one generation to the next. To achieve this, we strive to produce and supply energy with minimal environmental impact to create value for shareholders, employees and the wider community, in a constantly changing world.



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#### **CHANGING FOR SUSTAINABILITY**

In 2014, we began a new milestone in addressing our changing needs by strengthening the sustainability-related governance and organisational structures and increasing resources invested in this area. While continuing our efforts on efficiency and effectiveness, we have increased our attention on innovation. We are building capability in this area and beginning to reorientate ourselves to better position us to take advantage of the changes in our industry.

#### **CHANGING FOR THE CLIMATE**

The Paris Agreement delivered by 195 nations at the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change in Paris in December, was a historic achievement. It provides much-needed clarity on the future direction of the low carbon development plans of many countries. However, much remains to be done to implement the agreement. It requires cooperation between business and government on behalf of the communities they serve, to develop ambitious and pragmatic plans which balance safety, affordability, reliability and environmental factors appropriate to each energy market.

Managing the energy transition is a complex process requiring, at times, difficult choices to be made. In most places, fossil fuel generation, which is most carbon intensive, remains the cheapest and most reliable form of power generation. Wind and solar are the cleanest forms of energy for power generation but these resources are not always available and the fluctuations in power generated from these sources introduces considerable technical challenges for power grids. Shutting down fossil fuel assets to reduce emissions also has many ramifications. CLP strongly believes that policies need to address all of these issues.

In short, policies should facilitate transition in an orderly and sensible fashion by encouraging energy efficiency, the development of renewable energy and low carbon projects, whilst tackling existing emissions reduction through closure and decommissioning of existing plants over a reasonable period of time. In line with our Climate Vision 2050 aspirations, CLP looks forward to working closely with governments and communities to facilitate an orderly transition to a low carbon economy.

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#### **SUSTAINABILITY PRINCIPLES**

The announcement of the United Nations Sustainable Development Goals (SDGs) for 2030 inspired the development of our new Sustainability Principles. Our existing Sustainability Framework helped us to understand and internally align what sustainability means to us and has served us well. As we move forward, we need to focus on our top sustainability priorities so that we can continue meeting the changing aspirations of the communities we serve. Our new Sustainability Principles set the foundation for more strategic goal-setting at the Group level, where appropriate.

The Sustainability Principles are categorised under four focus areas: Economic Sustainability, Our People, Our Environment and Our Communities. This year, we also refined our materiality process to prioritise further our efforts in this area in alignment with the new Sustainability Principles. The "In Essence" version of the Sustainability Report will cover only the most material aspects, whilst the full online version will cover all aspects defined as material in addition to those that are most material.

#### **Our Economic Sustainability**

This year, our financial performance was better than last year, total earnings were HK\$15,670 million, which was 39.6% higher than 2014. We met all our loan obligations, delivered total dividends at HK\$2.70 / share and maintained our credit ratings, with outlooks improving from negative to stable. In addition to good financial performance, high performing efficient operations, good

governance and compliance to all laws and regulations, customercentric initiatives, as well as product responsibility, are all material aspects that contribute to our bottom line.

#### **Our People**

The safety of all our employees is our top priority. There were no fatalities and we recorded 16 cases of Lost Time Injuries (LTI) in our majority-owned assets or assets under our operational control in 2015, improving from 23 cases recorded in 2014. This year, we employed 7,360 people, with 510 employed in wind, solar and hydro projects. We continued to work on promoting diversity and equal opportunity, as well as managing our long-term human capital challenges. Initiatives implemented during the year included establishing a senior management forum, cross-regional secondments and progressively increasing the number of graduate engineering trainees.

#### **Our Environment**

We always strive to reduce emissions and energy consumption from our operations. In 2015, the carbon intensity of our Group's generation portfolio went back down to  $0.81 \text{kg CO}_2$ / kWh compared to  $0.84 \text{kg CO}_2$ / kWh in the previous year and our renewable energy capacity was over 3,050MW making up 16.8% of our generating capacity. The Group's total air emissions of particulates, nitrogen oxides and sulphur dioxide from our generating facilities, declined between 15% to 32% compared to that of the previous year.

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#### **Our Communities**

It is important to invest both money and time into our community. In 2015, our cash donations to charities reached HK\$14.5 million in 2015, which is an increase from 2014, while our staff contributed 11,675 hours of voluntary service.

# TOWARDS A SUSTAINABLE LOW CARBON FUTURE

In our current business plan, we are targeting for half of our investments outside of Hong Kong to be in renewable and non-carbon emitting energy. In developing markets, where new fossil fuel facilities still have a role to play, we intend to use high efficiency coal-fired technology to minimise any environmental impact. We believe we can assist emerging economies transition to a low carbon future whilst also standing by our commitment to increase the share of renewable energy in our portfolio to 20% by 2020 and to reach our science-based carbon intensity reduction target of over 75% by 2050.

Companies, including CLP, need to work hand in hand with policy makers and communities to ensure an orderly and productive evolution. As a responsible investor in the Asia-Pacific power sector for so many years, we are ready and willing to take up this challenge.

The Honourable Sir Michael Kadoorie

Chairman

CLP Holdings Limited

Richard Lancaster

Chief Executive Officer

CLP Holdings Limited

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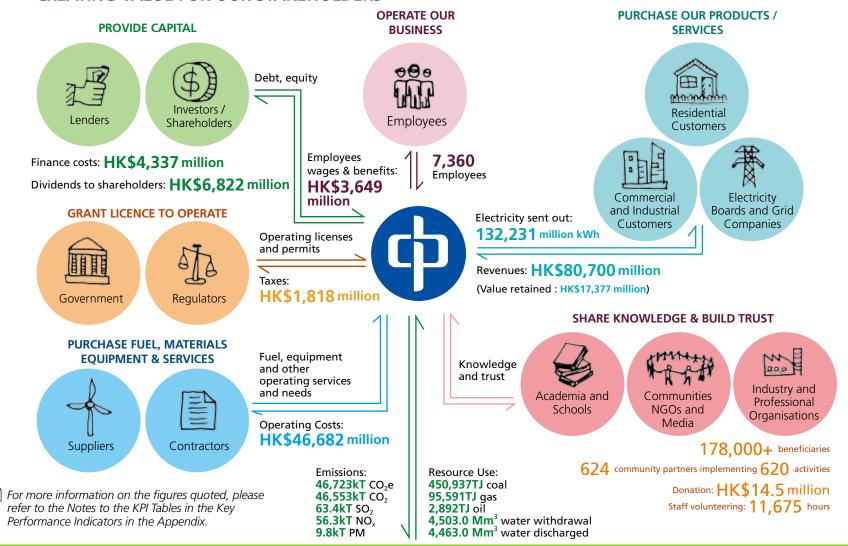
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At the heart of our success is our value creation process, which draws on various inputs and through our business activities, converts them to outputs that create positive value for our stakeholders.

#### **CREATING VALUE FOR OUR STAKEHOLDERS**



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# We report on our performance so that together with our stakeholders, we can take stock of what we have achieved during the year.

In 2015, we improved the Boundary Scoping and Materiality Identification (BSMI) by classifying a new 'most material' aspects list to further prioritise those aspects identified as 'material'. The 2015 BSMI process identified that among GRI G4's 54 aspects, for a power company that aspires to be the leading responsible energy provider in the Asia-Pacific region from one generation to the next, all 54 aspects were material and 18 aspects of which were 'most material'. The most material aspects by the four focus areas of our Sustainability Principles are:

## **2015 Most Material Aspects**



#### **ECONOMIC SUSTAINABILITY**

- Availability and Reliability
- Demand-side Management
- Customer Privacy
- Product Responsibility Compliance
- Anti-corruption
- Anti-competitive Behaviour
- Economic Performance



#### **OUR ENVIRONMENT**

- Environmental Compliance
- Emissions
- Energy



#### **OUR PEOPLE**

- Occupational Health and Safety
- Employment
- Training and Education
- Labour / Management Relations
- Diversity and Equal Opportunity
- Equal Remuneration for Women and Men
- Non-discrimination



**OUR COMMUNITY** 

Local Communities

The 2015 key performance figures related to the most material aspects are presented by focus areas in this Performance Highlights section. The sustainability Key Performance Indicators (KPIs) that have been assured by PricewaterhouseCoopers (PwC) for 2015 are shown as non-shaded cells in the 2015 column of the five-year summary of KPIs in the Appendix.

- Find out more about the sustainability Key Performance Indicators.
- Find out more about our Materiality Assessment in 2015.

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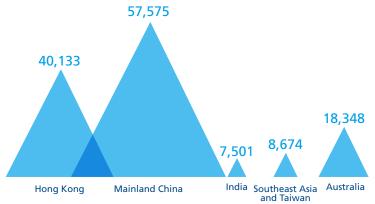
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## **ECONOMIC SUSTAINABILITY**

### **BUSINESS ACTIVITIES**

Total Sent Out from Power Stations in which CLP has Invested (million kWh)



# 132,231 million kWh

78,975 million kWh on equity basis, including capacity purchases and long-term power contracts from facilities in which we hold an equity interest

#### **Availability and Reliability**

Above 99.999%

of our supply reliability in Hong Kong

1.32 minutes

unplanned customer minutes lost in Hong Kong

## **CUSTOMERS**

5.12 million

customer accounts serviced by CLP (2.48 million in Hong Kong and 2.64 million in Australia)

#### **Demand-side Management**

17 energy-saving projects

were completed in 2015 contributing

a total saving of 15.26 GWh in Hong Kong

## **Customer Privacy**

Zero customer privacy and data loss cases in Hong Kong retail business

## **Six** complaints

in Australian retail business (received from the Australian Privacy Commissioner)

#### **Product Responsibility Compliance**

Zero cases of non-compliance

in Hong Kong retail business

35 cases of non-compliance

in Australian retail business

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### **GOVERNANCE**

#### **Anti-corruption**

**Code of Conduct Compliance** 

Zero convicted cases of corruption

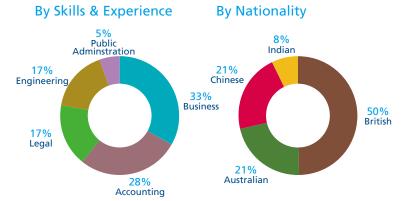
**Six** breaches of **Code of Conduct** 

#### **Anti-competitive Behaviour**

## **CLP Group Competition Policy Statement**

and the Competition Compliance Manual were issued, along with a comprehensive staff engagement programme for our Hong Kong business in 2015

#### **Board Diversity**



Note: The statistics are based on their passport nationality, which does not necessarily reflect their ethnic origin.

#### **Shareholder Visits**

shareholders visited our facilities in 2014-15

### **ECONOMIC PERFORMANCE**

#### **Economic Value Generated and Distributed**



### **Earnings**

Operating Earnings increased to HK\$11,533 million

14.6% rise from 2014

**Total Earnings** HK\$15,670 million 39.6% rise from 2014

Total Dividends per share 3.1% increase from 2014

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## **OUR ENVIRONMENT**

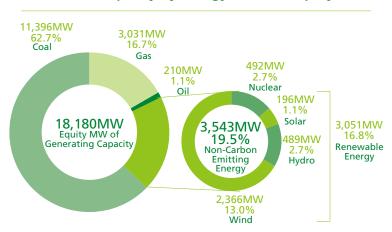
## **Environmental Compliance**

regulatory non-compliance resulting in fines or prosecutions

licence limit exceedances & other non-compliances

## **Energy**

#### **Generation Capacity by Energy Sources (Equity Basis)**



#### **Fuel Consumed for Power Generation**



Gas 450.937 TJ 95.591 TJ



#### **Emissions**

**Carbon Emissions Intensity for CLP Power Hong Kong Electricity Sold** 

0.54kg CO<sub>2</sub>/ kWh 0.54kg CO<sub>2</sub>e/ kWh

### **Group Climate Vision 2050 – Progress Towards 2020**

	2015 Performance	2020 Target
CO <sub>2</sub> Emissions Intensity (equity basis)	<b>0.81</b> kg CO <sub>2</sub> / kWh (2014:0.84kg CO <sub>2</sub> / kWh)	<b>0.6</b> kg CO <sub>2</sub> / kWh
Renewables	16.8% (2014:14.1%)	20%
Non-carbon Emitting	19.5%	30%

#### **Group Air Emissions**



**Group Carbon Emissions** 



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## **OUR PEOPLE**

#### **Occupational Health and Safety**

Lost Time Injury Rate (LTIR) and Total Recordable Injury Rate (TRIR) are industry standards for measuring safety performance.

#### **Employment**

7,360 people

were employed by CLP across the Asia-Pacific region.

**Voluntary Turnover Rate (%)** 2.6 India<sup>1</sup> Mainland . Australia<sup>1</sup>

#### Average length of service years

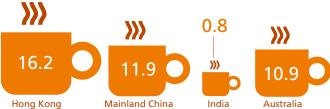








#### Employees eligible to retire within the next five years (%)<sup>2</sup>



1. Include permanent staff only

2. Refer to full-time permanent staff within each location

### **Training and Education**

**57** 2 average hours of training per employee

## **Labour / Management Relations**

# **Full Compliance**

with union membership and collective bargaining

## **Diversity and Equal Opportunity**

**Our Employees** Female: 24.3% Male: 75.7%

**Our Senior Executives** 



#### **Non-Discrimination**

Zero complaints on discrimination

#### **Equal Remuneration for** Women and Men

level and structure of remuneration for women and men

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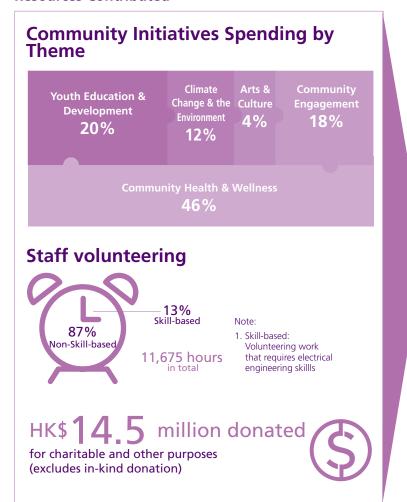
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## **OUR COMMUNITY**

### **Local Communities**

#### Resources Contributed



### **Our Impacts**

178,000+ people and **418** organisations directly benefited from CLP's community initiatives activities were implemented with 624 partners

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## Will CLP do anything different as a result of the climate talks in Paris in December 2015?

We have already set ourselves a science-based long-term goal of reducing carbon intensity by 75% by the year 2050. We have been making progress on that, but it gives us an opportunity to take stock of where we are, and to see how we can fit our plans into the energy policies and the climate change policies of individual countries in which we operate.

## What is the future of coal-fired electricity for both new and existing plants?

It depends on which country you are looking at. In Australia, it's hard to see a case for building new coal-fired capacity when there's already an excess of capacity there. So in Australia, I think the future there is more renewable energy, and gradual phasing out of coal-fired power. In Hong Kong, we are looking at a shift from coal to natural gas, but given that Hong Kong is entirely dependent on imported energy, it is hard to see that coal will be completely phased out in the foreseeable future. Mainland China and India are growing economies - the focus there will be on low carbon infrastructure and low carbon capacity. There are other countries in Southeast Asia that will need to rely on coal, but it needs to be clean coal with high efficiency, so that it has lower carbon emissions than the technology that perhaps is being considered today.

On renewables, you are presently one of the largest foreign renewable energy investors especially in wind, in both Mainland China and India. What's the future for renewables in those countries for CLP in particular?

Renewables will play a very important part in the energy mix for both Mainland China and India. Aside from wind, I think solar power will play a very important role, particularly in a country such as India, which has tremendous solar resources, and huge areas where solar plants could be built. We are very positive about the opportunities in Mainland China and India in renewable energy.



**Richard Lancaster Chief Executive Officer** 



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Coal has been getting more and more attention and last year in 2015, the announcement by Norway's Pension Fund, that it would divest shares in companies that earn more than 30% of their profit from coal, or generate more than 30% of their power from coal, came as big news to a lot of people. Where does CLP fit on these numbers?

Given that Norges is an important institution and it is one of our shareholders, it is of course very important that we have looked at this. Being a company with over a century of history, we do have coal in our fuel mix, but the fact is that of our earnings today, only around 20% comes from coal-fired generation activity, while the rest (i.e. about 80%) comes from our delivery businesses (such as transmission, distribution and retail) and power generation from nuclear, renewable and gas-fired assets. If you look at the metric of proportion of installed capacity, we still do have some coal plants which make up over 60% of our generation portfolio. As we start closing some of them, like we have in Australia, and as our new investment strategy is biased towards low or noncarbon generation and we invest about one dollar in non-carbon generation for every dollar that we might invest in carbon generation, that ratio will evolve over time.

You were the first to issue a green bond in India – we have not talked about the positive side – in some sense we could be looking at a cheaper cost for capital. So how do you think it balances out?

We should not be thinking only in terms of equity of course as a cost of capital, but also in terms of debt. Debt in general terms is expensive in India and our team in India this year have really broken ice by issuing the first corporate green bonds against the portfolio of wind generation assets in India (raising Rs.6 billion, i.e. HK\$706 million), and hence, refinancing at a more cost-effective way than doing this at each separate level of the project. By making green energy more cost-competitive, we can contribute to the low carbon transition.



**Geert Peeters Executive Director & Chief Financial Officer** 



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## What are the major Human Resources-related sustainability issues in 2015?

The first is optimising the utilisation of our engineering talent pool across the Group. Engineering is our core capability, and ensuring that we are developing and deploying engineering talent effectively is critical to our long-term sustainability. As the majority of our Engineers are Hong Kong-based, this means increasing their mobility around the region. This year we have seconded a number of engineers from Hong Kong to the Fangchenggang construction project, and a number of junior engineers from Hong Kong to renewable energy projects in Mainland China and India. To take advantage of the development opportunities provided by our facilities in Hong Kong, we also seconded young high potential engineers from India to our Hong Kong operation.

The second issue is the use of short-term contracts and external contractors. This year we reviewed the use of short-term contracts in Hong Kong, and have set limits on these to ensure that short-term contracts are not used where permanent employment is more appropriate. All of our businesses also make use of staff employed by third party contractors rather than directly by CLP, for reasons including peak demand for labour during project construction. Strengthening our information on the use of contractors will ensure that we have a complete picture of the total human resources needed to meet our business needs. This will also help us to ensure that the rights of staff employed by contractors are respected, and support our sustainable long-term resourcing strategy by reducing the risk of outsourcing our core capabilities.



**Roy Massey Chief Human Resources Officer** 



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What is the value of community investment to CLP? Would you please share some examples of CLP's community initiatives with us?

Caring for the community is one of CLP's core values. Our service is the cornerstone for powering the social and economic development of communities, where we operate from one generation to the next. We strive to create positive impacts for the society with and for our stakeholders, by supporting initiatives that serve the needs and improve the quality of life of the underprivileged, alleviate poverty, promote diversity, and foster social harmony.

In 2015, our Hong Kong business launched a first-of-its-kind community programme - Power Your Love - which combines energy saving with a mission to help the less fortunate in the society.

Engineers are trained to make things happen, turning the impossible into the possible. Through our community engagement work, we would like to inspire our younger generation to pursue the engineering profession. Towards this end, we launched the One School One Engineer programme in 2015, and we plan to extend this to the wider community in 2016.



**Quince Chong Chief Corporate Development Officer** 



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We benchmark ourselves against our peers so that we can judge our performance by sector and geographical context and see where we may need to go.

CLP is listed in the Dow Jones Sustainability Asia Pacific Index (DJSI Asia Pacific), the Dow Jones Sustainability Asia Pacific 40 Index (DJSI Asia Pacific 40) and the Hang Seng Corporate Sustainability Index Series.

In addition to the above, we also monitor two sustainability indices to provide us with a reference point for CLP's sustainability performance relative to other companies in our industry, region and the world. These two indices are CDP's climate change program and Bloomberg.

To maximise our scores and ensure CLP is accurately represented on these indices, we provide detailed responses to annual data requests issued by the organisations which produce these indices. With the exception of the Bloomberg data, the 2015 performance scores presented below were received in September and October 2015 and were based on our 2014 calendar year performance data. The historical performance scores presented below are also based on the previous year's performance.

#### **DOW JONES SUSTAINABILITY INDEX**

We track our performance on the DJSI because the index is well-known around the world and includes a broad universe of companies, which helps us to make comparisons. CLP has been a constituent of the DJSI Asia Pacific Index and the DJSI Asia Pacific 40 Index since the index was launched in 2009.

Relatively speaking, other companies around the world outside of the electric utility industry have improved their sustainability performance. As a result both the electric utility industry average and CLP's scores have been declining on a comparative basis in recent years. Although CLP is still above the industry average, we are conducting a deep-dive analysis to look for areas for improvement.

DJSI CLP and Industry Average Scores		
	COMPANY SCORE	INDUSTRY AVERAGE SCORE
2015	57	52
2014	63	56
2013	64	54

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM (

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#### **CDP**

CLP tracks its performance on CDP's climate change program because the index is one of the most influential carbon. performance trackers in the world. Although the scope of CDP's climate change program is limited to carbon and carbon-related disclosure, we monitor this index because carbon emissions are one of the most material areas of sustainability for CLP due to the present nature of the electric power industry.

We have maintained our strong Disclosure Score performance, increasing by one point to 96 between 2014 and 2015. Our Performance Score was in the "C" Performance Score band in 2015, downgraded from "B" in previous years. This downgrade is likely a result of CLP's absolute increase in carbon emissions from 2013 to 2014 and tightening of assessment criteria.

The Performance Score ranges from A to E and indicates the level of action taken on climate change as evidenced by the company's CDP response as well as actual annual reductions in carbon emissions.

CDP Disclosure and Performance Scores		
	DISCLOSURE SCORE	PERFORMANCE SCORE
2015	96	С
2014	95	В
2013	94	В



## HANG SENG CORPORATE SUSTAINABILITY INDEX

The Hong Kong Sustainability Index is a local index which we track in order to help us better understand our sustainability performance in the context of other Hong Kong and Mainland Chinese companies listed on the Hong Kong Stock Exchange.

CLP has been listed on the Hang Seng Corporate Sustainability Index and Hang Seng (Mainland China and Hong Kong) Corporate Sustainability Index since it was launched in 2010. Selection is based on a sustainability assessment undertaken by Hong Kong Quality Assurance Agency (HKQAA), an independent and professional assessment body based in Hong Kong.

In 2015, CLP was recognised as having the best overall score in the utilities industry for the second year in a row, with the strongest performance in the Organisational Governance Score section. CLP received an "AA" rating from HKQAA for its performance.





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#### **BLOOMBERG**

# Bloomberg

CLP monitors the Environmental, Social and Governance (ESG) data and performance scores available on the Bloomberg terminal because Bloomberg is a widely-used data source for the business community. Our Environmental, Social, Governance and Overall Disclosure scores downloaded on 31 December 2015 are presented here.

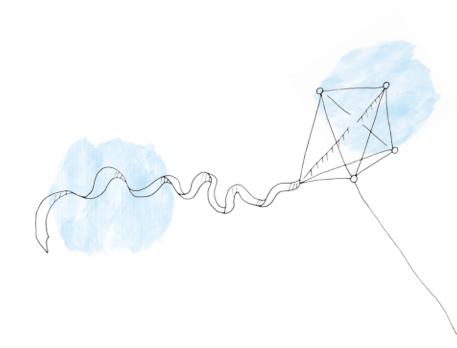
At the time, the most recent scores available on the Bloomberg terminal were as at 31 December 2014, covering our 2014 data. Bloomberg periodically updates both their scoring methodology and the data fields. As a result, all of these scores tend to fluctuate periodically.

Our 2014 overall score is largely in line with that of previous years. Fluctuations in the environmental and social components of our overall score relative to 2013 are most likely due to some combination of an evolving scoring methodology and a reflection of CLP's operating performance and initiatives from year to year.

The 2013 overall score reflects our 2012 performance, which was relatively high due to certain operational issues which resulted in lower emissions, thus resulting in a higher environmental score compared to other years. Source: Bloombera

Bloomberg Overall and ESG Scores				
	OVERALL	ENVIRONMENTAL	SOCIAL	GOVERNANCE
2015	64.88	63.57	54.39	78.57
2014	64.05	60.47	57.89	78.57
2013	68.18	68.22	57.89	78.57

Source: Bloomberg



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We reflect upon the awards and recognition we have achieved during the year so that we can understand more the changing public expectations on business.

### Hong Kong Institute of Certified Public **Accountants**

Best Corporate Governance Disclosure Awards – **Sustainability and Social Responsibility Reporting Award** 

For the fifth year in a row, CLP won the Hong Kong Institute of Certified Public Accountants' Sustainability and Social Responsibility Reporting Award (the Hang Seng Index Category).



Hong Kong Institute of **Certified Public Accountants** 香港會計師公會



## The Hong Kong Management Association

**Sustainability Reporting Award** 

For the fourth year in a row, CLP won The Hong Kong Management Association's Sustainability Reporting Award – General Category.





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We procure, operate, sell and engage responsibly throughout our value chain so that we can be a sustainable business.

CLP Holdings Limited has been in the electricity business since 1901. Our headquarters and largest business unit are located in Hong Kong, where we are listed on the Hong Kong Stock Exchange. Our core business is to provide electricity to customers reliably at a competitive price, with the least impact on the environment and surrounding communities.

CLP acts in different roles across the electricity value chain, depending on local constraints and characteristics that vary in the markets in which we operate. However as a Group, our products span the entire value chain, from power generation to high voltage transmission, and local distribution to gas and electricity retail services.

Much of our business outside Hong Kong lies upstream in the production of electricity, and all of our business units own sizable generation assets. Our generation fleet consists of coal, gas, nuclear, wind, hydro and solar power facilities.

Through our retailing businesses in Hong Kong and Australia, we manage over 5.1 million customer accounts. Our customers include both businesses and residential households. Our wholesale customers include grid companies in Mainland China and State Electricity Boards in India, which purchase power directly from our generating assets.

As of 31 December 2015, we had 7,360 employees and our market capitalisation was HK\$166,000 million. Our revenue for 2015 was around HK\$80,700 million.



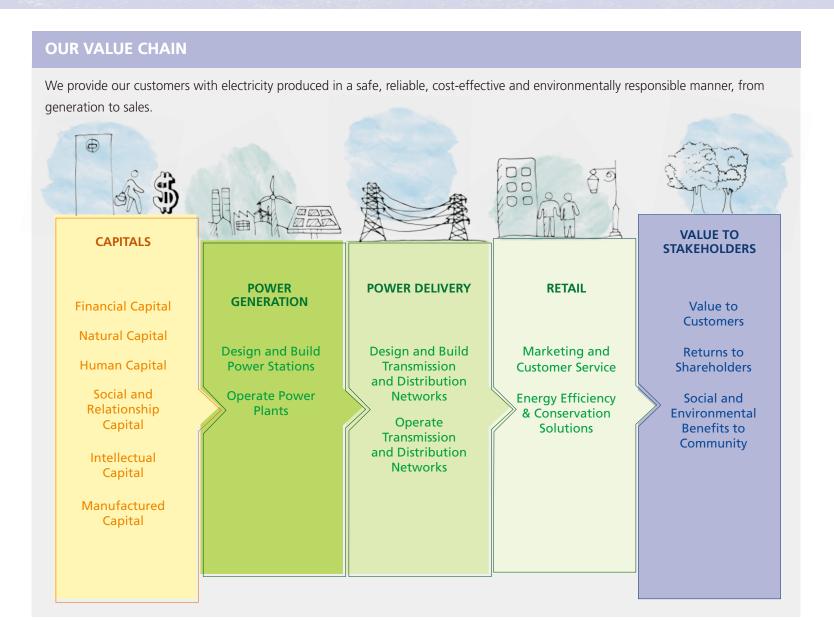
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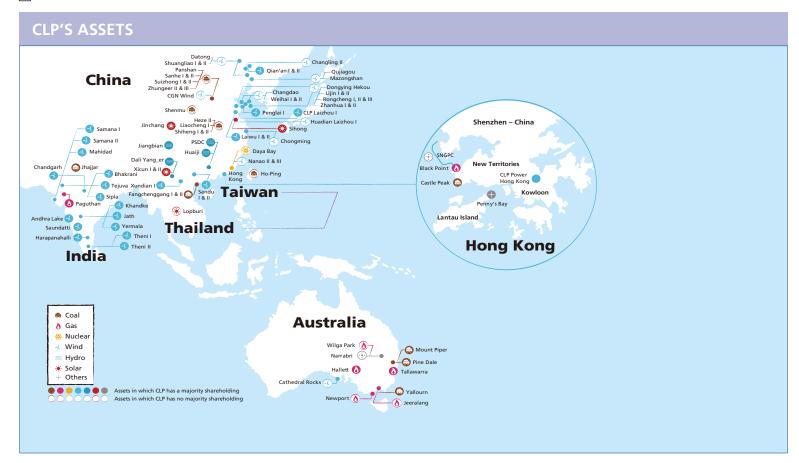
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We build, operate and own assets for the long term and therefore must protect their value over the same period so that we can be operationally sustainable.

Our portfolio includes more than 80 assets located throughout Asia Pacific. We are organised by geography and in addition to our Hong Kong business, we also have business units in Mainland China, India (where we operate as "CLP India"), Southeast Asia & Taiwan, and Australia (where we operate as "EnergyAustralia").

A detailed list of our assets can be found on our website.



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We consider social and environmental considerations as well as technological and financial ones when we invest so that we can be economically sustainable.

2015 saw a few incremental changes to our portfolio of assets. This is in line with how we manage our portfolio; although we are continuously making adjustments to it, we make our investment decisions carefully as we own and operate our assets for the long term.

Taken in total, our investment in renewable energy projects across the portfolio impacts our performance at the Group level. In 2015, we invested HK\$3,042 million and commissioned 284MW of new renewable projects. Our operating earnings from renewable energy increased from HK\$384 million in 2014 to HK\$494 million in 2015, mainly due to the commissioning of new solar projects (e.g. Xicun and Sihong) and higher wind resources in Mainland China.

To provide an indication of whether our significant investment agreements and contracts include human rights clauses, CLP reports the percentage of funding for all non-recourse financing and refinancing that was provided by banks in 2015 which have adopted the Equator Principles. In 2015, just over half of this funding came from Equator Principle banks.



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The material changes we made to our asset portfolio this year include:

## **Beijing Yire Power Station in Mainland** China

In March 2015, Beijing Yire Power Station ceased operation in support of Beijing Government's effort to combat air pollution even though the coal-fired power station was in full compliance with regulatory emissions requirements. CLP was allowed to transfer Yire's allocated generation quota to other power plants within our portfolio.

## **Solar Projects in Mainland China**

Underlining our commitment to develop renewable energy in Mainland China as a key growth market, we added the Sihong and Xicun II solar projects to our portfolio in 2015, which constitute a total of 90MW of solar capacity.

## **Wind Projects in India**

In India, we commissioned more than 190MW of wind projects in 2015, bringing our operating Indian wind portfolio to 924MW.

### Iona Gas Plant in Australia

In December 2015, EnergyAustralia completed the sale of the Iona Gas Plant in Victoria for A\$1,780 million (HK\$9,991 million). This sale is consistent with EnergyAustralia's approach to increasing its focus on customers, improving operational efficiency and optimising its portfolio of assets. We are continually looking at ways to enhance shareholders' value and optimise the long-term sustainable value of the business, and will continue to review our assets on this basis.

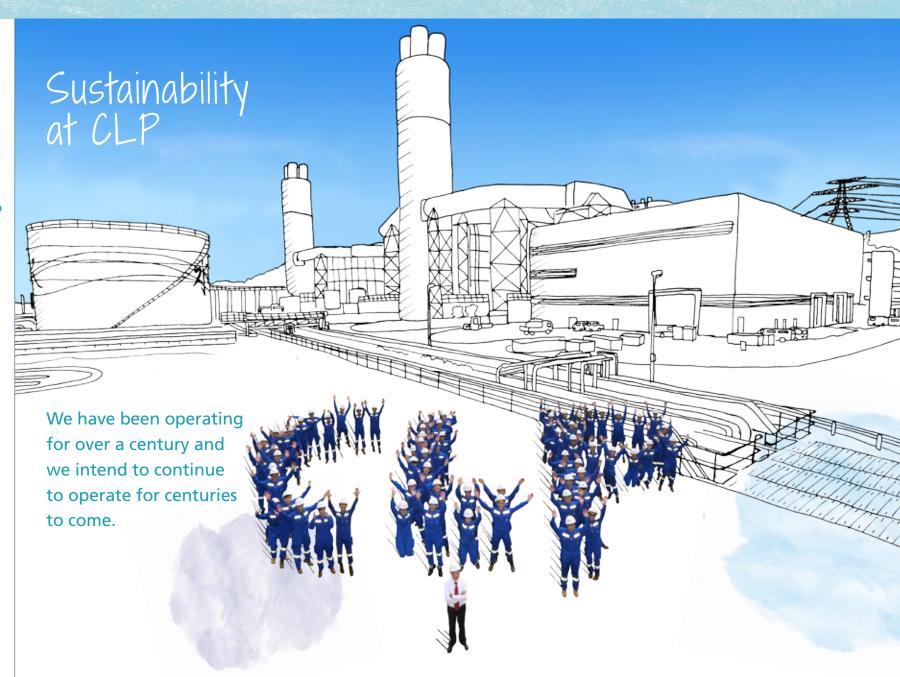
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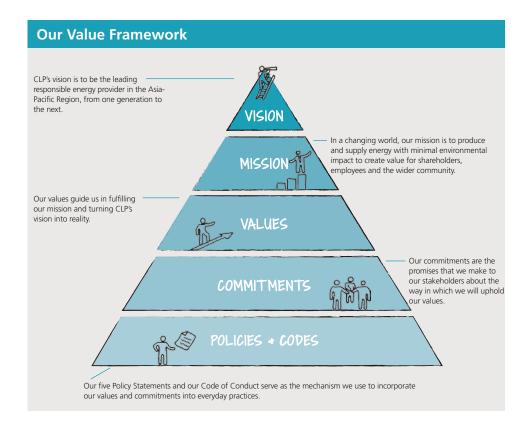
We know it is not just about what we deliver, but how we deliver and so we abide by the timehonoured principles and commitments that have been integral to CLP's success for over 110 years.

#### A TIME-HONOURED GUIDE

CLP's Value Framework articulates the foundations of our corporate identity and guides us in fulfilling our mission and turning CLP's vision into reality. Decisions and actions at CLP are guided by the framework, which includes our Values and Commitments to our key stakeholder groups; Group Policy Statements on Human Resources, Environment, Occupational Safety & Health, Customer Service Quality and Responsible Procurement: as well as Code of Conduct. We regularly review and update our Value Framework to ensure that it reflects global best practice and meets our stakeholders' expectations.

Find out more about CLP's Value Framework.

Find out more about CLP's Code of Conduct.



# **Sustainability Framework to Sustainability Principles**

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We have developed Sustainability Principles so that we have more guidance for strategic longterm planning and are not totally side-tracked by short-term needs and changes.

#### SUSTAINABILITY FRAMEWORK

We developed our Sustainability Framework in 2011 as a tool to build our capability and understanding of the concept on sustainable business, and the requirement of systematic and continual improvement in all aspects of our business planning and operations.

Under the Framework, each of our business units set measureable targets against each of our 15 Sustainability Framework goals, which are grouped under four pillars: People, Business Performance, Energy Supply, and Environment. Business units have the flexibility to select targets most relevant to their particular operations. Progress against these goals is reported to the Board and Senior Management annually.

For our performance against the 2015 goals, see the Sustainability Committee Report.

Our Sustainability Framework has served us well. Many of the 15 goals are now embedded into our operations, and so we will retire the Framework to make way for a more strategic approach to determining our sustainability priorities.

Sustainability Framework		
SUSTAINABILITY PILLAR	GOAL	
	Zero injuries in all our workplaces	
PEOPLE	Support a healthy workforce	
Meet the evolving	Develop committed and motivated employees	
expectations of	Meet or exceed customer expectations	
our stakeholders	Earn and maintain community acceptance	
	Operate our business ethically	
BUSINESS PERFORMANCE Continually increase business value	Create long-term shareholder value	
	Adapt proactively to a changing business environment	
	Enhance individual and organizational capability	
ENERGY SUPPLY	Supply energy reliably	
Deliver world-class	Be operationally efficient	
products and services	Adopt emerging technology in a timely manner	
ENVIRONMENT	Move towards zero emissions	
Minimise environmental	Move towards a more sustainable rate of resource use	
impacts	Move towards no net loss of biodiversity	

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#### SUSTAINABILITY PRINCIPLES

In 2015, we began the process of updating our Sustainability Framework. The Sustainability Framework supported the alignment of what sustainability means to CLP at the operational level. Moving forward, we wanted to focus on more strategic sustainability priorities to support our business strategy of "Focus · Delivery · Growth".

The announcement in September 2015 of the United Nations Sustainable Development Goals (SDGs) for 2030 inspired and informed the development of our new Sustainability Principles, which set the foundation for articulating these priorities in support of our longer term business strategy. Our Sustainability Principles are organised under four focus areas: Economic Sustainability, Our People, Our Environment and Our Community. These Sustainability Principles are consistent with our Value Framework as well as other sustainability disclosure requirements, and encompasses all the sustainability-related areas that we are working on every day.

In 2016, we will focus more on prioritising the relevant goals under these four focus areas given the diverse markets we operate in. The objective is not to set up long-term goals for all the principles to be valid at all times, but to prioritise in which areas and when medium or longer term goals can and should support the delivery of our longer term business strategy, in a way that is aligned with our values and commitments at all times.

Our Sustainability Principles touch on all 17 SDGs, although the SDGs most relevant to our business include:



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#### SUSTAINABILITY PRINCIPLES UNDER FOUR FOCUS AREAS

#### **Economic Sustainability Our People** We create long-term value for our shareholders through focused Me ensure a safe and healthy working environment and are committed to investments in assets across the energy value chain. preventing accidents, injuries and physical or mental illness related to work. 🧖 We ensure compliance with all employment related legal requirements and We pursue excellence in the operations of those assets and endeavour to deliver world-class energy products and services which meet or exceed the contractual agreements in the countries that we operate in, respect for expectations of our customers in balance with all other stakeholders. internationally recognised human rights, and best practice governance and disclosure of executive remuneration. We provide products and services that are valuable and often essential We recruit staff from diverse sources and backgrounds. We encourage to the communities we serve, and we commit to delivering them safely, retention by ensuring equal opportunity, and by maintaining a harassment reliably, efficiently, cost effectively and in an environmentally responsible manner. and discrimination free work-place that promotes gender balance and supports the social and economic empowerment of women. We communicate openly and transparently with our stakeholders on our investments and operations, as well as our financial, environmental, social We maintain our core competencies through the planned intake of trainees and continuous investment in training and development. We build new and governance performance. capabilities in order to stay aligned with changes in our business environment. We proactively adapt to the changing business environment and the changing needs of our customers and other stakeholders by innovating We provide competitive, fair and equitable remuneration and benefits. We help our employees to maintain their work-life balance with familyand adopting efficient and value enhancing technologies, processes. friendly policies, reasonable working hours, and a generous range of leave practices and new business model approaches in a timely and considered We adhere to the laws of all jurisdictions we operate in and seek to Maintaining our organisational productivity enables us to sustain a competitive bring international best practice principles of ethics, governance, public remuneration and benefits policy. Gains in productivity allow us to increase, communication, transparency and sustainability to all our operations. progressively and equitably, the returns to our stakeholders. **Our Environment Our Community** We will reduce our carbon emissions in line with an agreed global level at We care for the health, safety and development of the communities in which which catastrophic climate change can be avoided. we operate. We strive to create positive impacts for the society with and for our We will move towards zero emissions by adopting international best practice for our environmental impact assessments and environmental stakeholders by supporting initiatives that serve the needs and improve the performance standards for construction of all new plants, as is quality of life of the socioeconomically disadvantaged, alleviate poverty, promote diversity and foster social harmony in the communities we serve. commercially viable. We will use resources, including fuel, water and other natural resources, We believe in investing in education and development to equip communities and future leaders with the knowledge and skills necessary to tackle complex efficiently and conservatively and will increase the use of renewable energy resources challenges in the sustainable production and consumption of energy. We support training and skills development initiatives that enhance knowledge We will responsibly manage land use-related issues arising from our transition to a low carbon energy future, including biodiversity, in line with in energy and environment to help our communities make informed choices the local, national and regional circumstances. based on a holistic understanding of the energy sector. We will monitor and manage emerging environmental-related challenges We support initiatives that contribute to the development and appreciation that will arise as technologies, stakeholder expectations and business of history, arts and culture to improve our quality of life and encourage model approaches change. innovation and creative thinking.

## Climate Vision 2050

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We set ourselves a science-based carbon intensity reduction target so that we are constantly reminded on where we need to be by 2050, which may seem impossible today, but we hope will be possible over time.

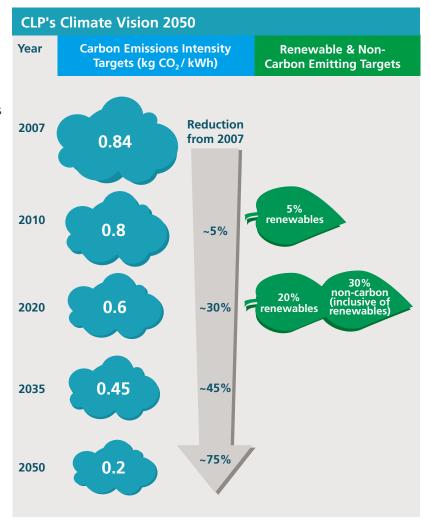
#### **OUR TARGETS**

In 2007, to meet the 2°C scenario before the end of this century, CLP set a science-based carbon intensity reduction target of around 75% by 2050 compared to 2007 levels. This target became the cornerstone of our Climate Vision 2050, and is supported by a series of interim carbon emissions intensity targets in 2010, 2020, and 2035. Climate Vision 2050 also includes targets to increase both the renewable and the non-carbon emitting portions of our generation fleet as a percentage of total capacity.

In 2010, the Climate Vision 2050 was updated and the 2020 carbon intensity target was tightened from 0.7kg CO<sub>2</sub> / kWh (about 15% reduction from 2007 level) to 0.6kg CO<sub>2</sub>/kWh (about 30%). Renewable (20%) and non-carbon emitting (30%) targets for 2020 were also developed to succeed the 2010 renewable target of 5%.

As a consequence of the Paris Agreement at COP21, CLP will review the potential business opportunities as well as risks arising from the Intended Nationally Determined Contribution (INDCs) commitments submitted by the countries we operate in, in line with our Climate Vision 2050. We aim to complete our post-COP21 review soon after the Paris Agreement is open for ratification.

Our Climate Vision 2050 performance in 2015 is detailed in the Greenhouse Gas Emissions section.



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# Our Stakeholders and Materiality

For a sustainable business, issues that are material to the business are not determined just by the business itself, but also by its stakeholders.





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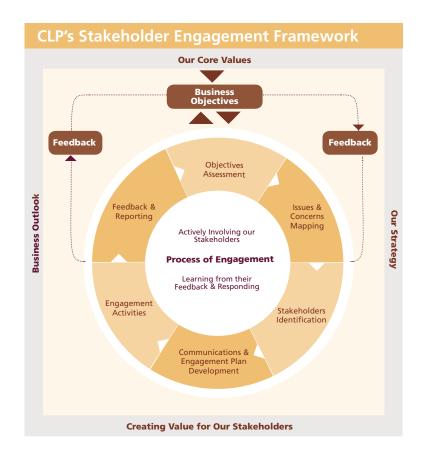
We have stakeholder engagement channels embedded into our daily operations as they are key to our sustainability – whether it is for access to capital, delivering equipment, fuel and services, operating our business, regulating our industry, buying our product, or granting a social licence to operate – our shareholders, lenders, partners, suppliers, contractors, employees, regulators, customers and the community all play a role in making our business a sustainable one.

### **OUR APPROACH G4-26**

CLP's stakeholder engagement is guided by our Value Framework which includes our longstanding Code of Conduct which translates our responsibilities to each other and to our stakeholders into a set of formal written requirements. We are committed to regular communications with our stakeholders, providing open and transparent channels for input from our stakeholders and responding in a timely manner to stakeholders' concerns about our business. All CLP employees are obliged to apply these principles whenever they deal with our stakeholders.

Find out more about "Our commitments" to our stakeholders.

Our Stakeholder Engagement Framework guides us in delivering on our commitments to our stakeholders to ensure the sustainability of our business. The engagement process involves issues mapping, stakeholder identification, engagement activities and reporting feedback. Stakeholders' feedback obtained from this process supports the review of business activities and objectives, as well as alignment with the business strategy.



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#### **2015 INTERNATIONAL ENGAGEMENTS**

CLP continued its international engagement activities in 2015, although there were two major international initiatives that reached milestone achievements worth noting.

### SUSTAINABLE DEVELOPMENT GOALS (SDGS)

First, was the announcement in September of the United Nations Sustainable Development Goals (SDGs) for 2030. CLP participated in the United Nations Private Sector Forum in New York in September 2015, to understand more about the role of business in contributing to the Sustainable Development Goals (SDGs).

The SDGs essentially build upon the Millennium Development Goals (MDGs) targeted for 2015, and outline the next set of development targets to be achieved in aggregate by countries around the world by 2030 in our quest to achieve sustainable development for all.

The 17 SDGs and 169 targets were developed by a process that was formally more inclusive than the one for the MDGs, incorporating both academic and business sector input for example.

### **UNFCCC COP21**

The second major event was COP21 in Paris in December 2015, where history was made as an international agreement on climate change was delivered by 195 nations.

To engage different sectors in the area of climate action, our CEO attended and spoke at some of the side events to share our views on a low carbon future and the reform of the electricity market in China. He also articulated the importance of clarity and predictability in the area of energy policy across nations at the World Business Council for Sustainable Development (WBCSD) Paris Council Meeting.

The success of COP21 was due not only to the shift to a bottom-up approach for the agreement process, but the increased engagement with business during the year in the leadup to COP21, led by the French Government, also contributed to the success.

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#### ENGAGING WITH OUR KEY STAKEHOLDERS 64-24 G4-25 G4-26

Our business activities involve a diverse range of stakeholders. The identification of all stakeholders at any time is a continuous challenge, but we have identified the key stakeholder groups who are instrumental to the success of our business. Here we present who our key stakeholders are, why they are important and how we communicate with them.

KEY STAKEHOLDERS				ENGAGEMENT CHANNELS
Provide Capital	Lenders*	Investors / Shareholders		<ul> <li>Annual General Meetings</li> <li>Annual and Interim Reports</li> <li>Announcements and Circulars</li> <li>Shareholders' visit programme</li> <li>Investor meetings and roadshows</li> </ul>
Grant Licence to Operate	Governments	Regulators		<ul> <li>Regular working meetings</li> <li>Regular performance reporting</li> <li>Written responses to public consultations</li> </ul>
Purchase Fuel, Materials, Equipment & Services	Suppliers	Contractors		<ul> <li>Supplier management meetings and engagements</li> <li>Supplier Assessment System</li> </ul>
Operate Our Business	Employees			<ul> <li>Employee Engagement Survey</li> <li>Employee feedback channels (forms, suggestion box, etc.)</li> <li>Regular management communications, roadshows and performance reviews</li> <li>Employee newsletters and broadcasts</li> <li>CLP intranet portal</li> </ul>
Purchase Our Products / Services	Residential Customers	Commercial and Industrial Customers	Electricity Boards and Grid Companies	<ul> <li>Customer Consultative Groups, Local Customer Advisory Committees</li> <li>SME Consultative Group</li> <li>Customer satisfaction surveys and feedback forms</li> <li>Customer service centres and call centres</li> <li>Online service portals</li> <li>Account managers</li> </ul>
Share Knowledge & Build Trust	Academia and Schools	Communities, NGOs and Media	Industry and Professional Organisations	<ul> <li>Working Committees, Advisory Committees, panels and meetings</li> <li>Seminars, lectures and workshops</li> <li>Public / community events and partnerships on various initiatives</li> <li>Community investment programmes</li> </ul>

<sup>\*</sup> Lenders include perpetual capital securities holders

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We believe that our Sustainability Report should address stakeholder interests and concerns that have been collected through our daily operations throughout the year, especially since they often vary from one community to another.

Provide Capital G4-2	27				
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015			
Lenders*	<ul> <li>Business sustainability and recovery of overseas businesses particularly in Australia and India</li> <li>CLP Group's investment strategy and financial performance</li> </ul>	<ul> <li>Exercised a high level of discipline in managing its investments and financials, and a strong competence in managing operating performances and turning around commercial hardship in Australia and India</li> <li>Articulated the Group's clear strategic vision of "Focus. Delivery. Growth"; maintained healthy financial profile with stronger than budgeted business performances in Hong Kong and overseas business units</li> </ul>			
	<ul> <li>Review on post-2018 regulatory arrangement</li> </ul>	<ul> <li>While the review is still ongoing, CLP Power Hong Kong and Castle Peak Power Company Limited (CAPCO) further optimised the debt profile ensuring adequate financial flexibility to meeting future challenges</li> </ul>			
	<ul> <li>Financial stability and loan portfolio management amidst market uncertainties</li> <li>Maintenance of loan portfolio under overall credit tightening particularly in the first half of 2015</li> </ul>	<ul> <li>Diversified the funding source by tapping into offshore RMB bank loan market in Hong Kong to fund construction and early period of operation of our whollyowned renewable energy projects in Mainland China</li> <li>Cultivated and maintained long-term relationship with key lenders in Mainland China</li> </ul>			
Investors / Shareholders	<ul> <li>Coal exposure and impending divestment of fossil fuel-intensive companies by certain institutional investors</li> <li>Corporate governance, in particular, board composition and diversity, succession planning</li> </ul>	<ul> <li>Provided our financial and operational metrics associated with our investment in coal-fired generation, and maintained a dialogue with institutional investors in formulating policy and response</li> <li>Conducted meetings with analysts and institutional investors to explain our position and strategy</li> </ul>			

<sup>\*</sup>Lenders include perpetual capital securities holders

Group Level or General

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Mainland China

Australia

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Grant Licence to Operate G4-27				
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015		
Governments & Regulators	Regulatory compliance	Held regular meetings and maintained communications with government, regulators and advisors		
	<ul> <li>Tariff review for 2016</li> <li>Public consultation on the future development of the electricity market</li> <li>CLP's Environmental Impact Assessment (EIA) for additional gas-fired generation capacity</li> <li>Technical Memorandum (TM) that sets emissions caps for 2020 and thereafter</li> <li>Resilience of our electricity supply systems to extreme climate conditions, e.g. super typhoons, severe floods</li> </ul>	<ul> <li>Ongoing dialogue with the relevant government departments on regulatory matters</li> <li>Submitted our response to the public consultation on future development of the electricity market to the Environment Bureau in June 2015</li> <li>Commissioned an EIA and feasibility study and submitted a proposal on additional gas-fired generation capacity to the Environment Bureau in December 2015</li> <li>Worked with the Environmental Protection Department on a new TM that sets emission caps for 2020, which came into effect in December 2015</li> <li>Continued to implement resilience measures, including enhancing structure of our pylons and maintaining an Emergency Restoration System for the rapid construction of temporary pylons, a flood prediction system and flood detection systems for substations, and conducting regular drills</li> </ul>		
	<ul> <li>Safety and reliability</li> <li>Emergency readiness (especially nuclear)</li> </ul>	<ul> <li>Exchanged regularly with government to build support and increase understanding of CLP's safety culture</li> <li>Demonstrated to goverment authorities through established reporting channels, monitored activities and regular communications the robustness of nuclear operation in meeting regulatory compliance in safety, reliability and emergency readiness</li> </ul>		
	Transparency of environmental performance reporting	Participated in a pilot to provide live environmental reporting of Paguthan Power Station and implemented similar full fledge reporting at Jhajjar Power Station to the environmental regulator		
	The national climate change policy and Renewable Energy Target (RET)	Contributed to expert reviews at Australian Parliamentary committees and forums, and actively participated in industry groups		

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Provide Fuel, Materials, Equipment & Services G4-27			
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015 ACTIONS TAKEN BY CLP IN 2015		
Suppliers & Contractors	<ul> <li>Responsible procurement practices and supply chain management</li> <li>Management of tight construction workforce in Hong Kong</li> </ul>	<ul> <li>Included Responsible Procurement Policy Statement (RePPS) in supplier selection and performance evaluation</li> <li>Collaborated with suppliers and strengthened contract management. Organised forum for experience sharing</li> </ul>	
	Compliance with Health, Safety, Security and Environment (HSSE) standards of construction projects	Conducted behaviour-based safety training and HSSE audits for contractors in the construction of Fangchenggang phase II in Mainland China	

Operate Our Busine	SS G4-27	
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015
Ñ	<ul> <li>Remuneration and benefits</li> <li>Career development opportunities</li> <li>Gender diversity and equal opportunity</li> <li>Compliance with Health, Safety, Security and Environment (HSSE) standards</li> </ul>	<ul> <li>Conducted regular independent review of market remuneration surveys and benefits, and review of family-friendly policies</li> <li>Conducted regular review of succession planning; maximised internal promotion; continued investment in training and development; and arranged staff rotation</li> <li>Conducted focus groups of female employees; organised female mentoring programme with universities</li> <li>Implemented Health, Safety, Security and Environment (HSSE) management system standard and critical risk standard across the group</li> </ul>
	Job security concerns of employees directly affected by closure of an asset and offshoring call centre roles in 2016	<ul> <li>Provided significant notice on call centre closure and consulted on nature and terms of change and complied with all legal and trade union-related consultation requirements</li> <li>Provided support to all employees impacted via outplacement support, Employee Assistance Programme (EAP) and redundancy programme</li> </ul>

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Purchase Our Products / Services G4-27					
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015			
Residential Customers	<ul><li> Tariff adjustment</li><li> Energy efficiency and conservation</li></ul>	<ul> <li>Provided bill inserts and bill messages as well as FAQs on CLP website to explain tariff change</li> <li>Provided energy savings solutions, e.g. Home Energy Report, Power Your Love programme</li> </ul>			
	<ul> <li>"Bill shock" and energy prices</li> <li>Billing and debt collection</li> <li>Customer service quality</li> <li>Rooftop solar and feed-in tariffs</li> <li>General lack of trust in energy retailers</li> </ul>	<ul> <li>Launched new brand campaign "Wise Call"; ensured consideration of media, communications and customer service response for all price changes</li> <li>Improved assistance to customers experiencing hardship</li> <li>Customer service improvements included dedicated call centres to assist customers with queries &amp; complaints as well as improved digital "self-service" functionality; conducted market and focus-group research on consumer needs; trialled an expansion of the Net Promoter Score programme</li> <li>Kept a watching brief on changes to solar and solar feed-in tariffs</li> <li>Monitored social media to gauge customers' views</li> </ul>			
Commercial and Industrial Customers	<ul> <li>Tariff adjustment</li> <li>Energy efficiency and conservation</li> </ul>	<ul> <li>Communicated with key customers and stakeholders through dedicated account managers via phone</li> <li>Provided tariff impact analysis information to large consumption customers; provided bill inserts and bill messages to SMEs; and developed FAQs on CLP Power Hong Kong's website</li> <li>Conducted energy audits and provided power quality improvement services for commercial and industrial customers</li> <li>Provided energy saving solutions e.g. Meter Online, Energy Billboard</li> </ul>			
	<ul> <li>Billing accuracy</li> <li>Industry-wide difficulties in contracting gas post-2017 and contracting electricity in South Australia</li> </ul>	<ul> <li>Launched various processes, data and system initiatives to improve billing accuracy and timelines</li> <li>Offered structured or shorter-term deals to key customers</li> </ul>			

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Purchase Our Products / Services (Con't) 64-27				
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015		
Electricity Boards and Grid Companies	<ul> <li>Ability to fulfil dispatch obligations and to meet off-take agreements</li> <li>Tariff competitiveness</li> </ul>	<ul> <li>Communicated regularly with grid companies on generation plans and dispatch requirements</li> <li>Maintained tariff competitiveness through efficient operations</li> </ul>		
	<ul> <li>Generation and Dispatch Planning</li> <li>Power Purchase Agreement (PPA) management and grid constraint</li> </ul>	<ul> <li>Interacted regularly with the external grid management team</li> <li>CLP India's top management interacted with customer representatives to discuss matters related to PPA and feedback</li> </ul>		
	<ul> <li>Network tariff reform for the electricity and mass market</li> <li>Opening up of metering competition</li> <li>CLP's dependence on regulated revenue streams</li> </ul>	<ul> <li>Participated in regulatory and industry discussions with distributors and retailers; and began to increase engagement at the executive management level between EA and the distributors</li> </ul>		

Share Knowledge &	Build Trust G4-27	
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015
Academia and Schools	<ul> <li>Public consulation on the future development of the electricity market</li> <li>Energy efficiency and conservation</li> </ul>	<ul> <li>Engaged and informed key stakeholders through lectures, seminars and site visits to CLP's facilities</li> <li>Collaborated in public education programmes and conducted school talks; and shared the findings of the myEnergy Pilot programme with engaged academia</li> </ul>

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KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015
Communities, NGOs and Media	<ul> <li>Construction works affecting the community</li> <li>Additional generation capacity</li> <li>Livelihood issues</li> </ul>	<ul> <li>Issued media releases and conducted media briefings</li> <li>Engaged and informed community stakeholders through briefings, collateral and site visits to CLP's facilities</li> <li>Conducted discussion workshops to consider and review ways in which CLP can continuously improve its efforts in enhancing supply reliability, cost control and environmental performance</li> <li>Conducted meetings with local community leaders such as district councillors as well as CLP's Local Customer Advisory Committees and Customer Consultative Group</li> </ul>
	Effectiveness of CSR programmes in meeting community needs	Launched CSR programmes based on inputs received from community members
	<ul> <li>Customers' capacity to pay energy bills</li> <li>EA in the Top 10 polluters / "Dirty Three"</li> <li>Community engagement and communication</li> </ul>	<ul> <li>Supported Social Service groups' hardship programme and conducted research pieces on hardship</li> <li>Commenced dialogue with green groups to communicate EA's approach of environmental management</li> <li>Delivered a community grant programme in South Australia and conducted a review of community consultation practices</li> </ul>
Industry and Professional Organisations	<ul> <li>Climate change</li> <li>Reliability of power supply</li> <li>Extreme weather</li> <li>Emissions trading</li> <li>Transparency and reporting</li> </ul>	Engaged with the World Business Council for Sustainable Development (WBCSD), World Energy Council (WEC), MIT Joint Program on the Science and Policy of Global Change (MITJIP), International Emissions Trading Association (IETA), International Integrated Reporting Council (IIRC) and Global Reporting Initiative (GRI)
	<ul> <li>Supply reliability</li> <li>Demand side management and energy saving</li> <li>Public consulation on the future development of the electricity market</li> </ul>	<ul> <li>Held regular meetings and briefings with CLP's professionals and experts</li> <li>Participated, presented, spoke and / or officiated at seminars, classes and events</li> <li>Arranged visits to CLP's facilities to share CLP's efforts in enhancing supply reliability, cost control and environmental performance</li> <li>Held discussion workshops after visits to explore opportunities for collaboration</li> <li>Engaged with professional organisations such as The Hong Kong Institution of Engineers (HKIE)</li> </ul>

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Share Knowledge & Build Trust (Con't) G4-27				
KEY STAKEHOLDERS	KEY CONCERNS OR INTERESTS IN 2015	ACTIONS TAKEN BY CLP IN 2015		
Industry and Professional Organisations	<ul><li>Nuclear energy development</li><li>Reliability of power</li></ul>	Engaged with the China Nuclear Energy Association (CNEA) and China Electricity Council (CEC)		
2000	<ul><li>Wind industry development</li><li>Industry best practices for sustainability</li></ul>	<ul> <li>Engaged with the Indian Wind Power Association (IWPA), and in Confederation of Indian Industry (CII)'s activities</li> <li>Participated in TERI-CBS meetings and initiatives on business sustainability</li> </ul>		
	<ul> <li>National Renewable Energy Target</li> <li>Solar installation and energy storage</li> <li>Safeguard mechanism for the electricity industry</li> </ul>	Engaged in The Clean Energy Council and Energy Supply Association of Australia (esaa)'s activities		

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CLP engaged in discussion about the Hong Kong government's consultation paper on the future development of the electricity market with different stakeholders in the community

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We have developed a Boundary Scoping and Materiality Identification methodology to not only identify material aspects to be included in our Sustainability Report according to both internal and external stakeholder opinion, but to also ensure that all material entities across our business have been included, which can be more than those defined by financial reporting rules.

### **OUR APPROACH** G4-18

We developed the Boundary Scoping and Materiality Identification (BSMI) methodology to identify the aspects that matter to our business and to our stakeholders, as well as the reporting boundaries of the information to be included in the Sustainability Report. The customised methodology defines the key content of the report.

Features of the BSMI methodology include:

- Multi-functional meets multiple needs, including external requirements (GRI G4 and HKEx ESG guidelines) and internal requirements (Internal Control, CLP Value Framework);
- Diversity and inclusion includes input from a wide range of internal and external stakeholders; and
- Internal Competence internal subject matter experts perform the assessment using their professional expertise and experience from continuous engagements with their key stakeholders, to help deliver more relevant and appropriate results.

The BSMI methodology adopts a two-pronged approach:

- Boundary Scoping takes on the business-entity approach to ensure completeness of addressing all material business entities across the Group in the Sustainability Report. Which business entities are material or not can differ depending on the subject area. As a result, different reporting boundaries are defined in terms of which business entities are included in the different categories of financial and non-financial information: and
- Materiality Identification identifies the sustainability aspects in line with GRI G4 guidelines, including the Electric Utilities Sector Disclosures. The aspects are prioritised and grouped into our four sustainability focus areas. The most material aspects are mapped to show which parts of our value chain they impact the most.

The objective of the BSMI is to not only meet external reporting requirements, but to also help drive CLP's sustainability performance in response to changing internal and external stakeholder expectations.

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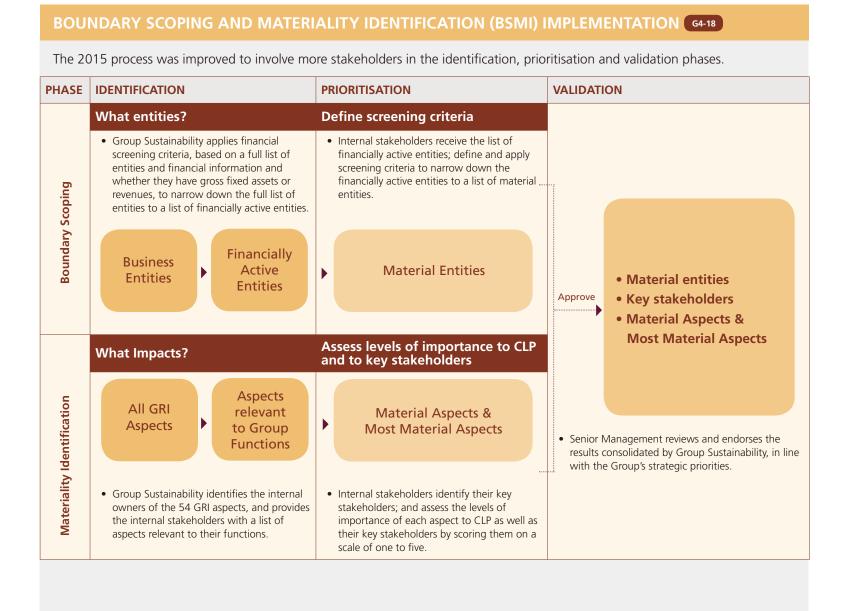
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### 2015 DEVELOPMENT G4-18

The BSMI methodology was devised in 2013 to prepare for the transition of our reporting from using the GRI G3.1 to G4 Guidelines. We reported in accordance with the G4 Guidelines when the BSMI process was fully launched in 2014.

In 2015, we conducted a review of the BSMI process. As a result, the following areas were improved:

- Prioritisation the material aspects were further prioritised, allowing clearer differentiation of the most material aspects;
- Completeness more internal stakeholders engaged in the assessment process, including our senior management; and
- Value chain mapping the most material aspects were mapped according to where they impact the most on our value chain, whether within or outside the CLP Group.

### 2015 RESULTS **G4-19**

The 2015 BSMI process concluded with the following key results:

- All 54 aspects were material, of which 18 aspects were most material;
- The reporting scopes of the financial and non-financial information were defined in terms of business entities; and
- The 18 most material aspects were mapped to where they impact the most on our value chain.

As a company that aspires to be the leading responsible energy provider in the Asia-Pacific region from one generation to the next, we do believe that the wide range of economic,

environmental and social aspects, are all important to our business and our stakeholders to varying degrees at various points in time, hence, all aspects are considered as material. Some aspects become most material, depending on stakeholder expectations and our business needs and priorities at the time.

The most material aspects can be identified by the Most Material Aspect labels in the top-right corner where they appear in this report.



We will continue to explore how to leverage the results to support further embedment of sustainability into our operations and strategic decision-making, as well as driving continuous performance improvement.

### **Additional Value of BSMI**

Further to achieving its designed objectives, the BSMI process delivered additional value:

- Reflection it made us rethink what is truly important and hence reflect on the evolving priorities of CLP and our key stakeholders.
- Collective intelligence it inspired more integrated discussions amongst colleagues from across functions, departments and business units.
- Alignment of communications it ensured internal consensus and consistent communications with external stakeholders.

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### 2015 LIST OF MATERIAL ASPECTS G4-19

The list below shows 54 GRI aspects mapped according to their importance to CLP and our stakeholders. Amongst the 54 material aspects, 18 aspects are prioritised as most material and are the primary focus of this 2015 full report and are the only aspects included in the In Essence report.

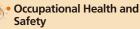
### **Most Material Aspects**



- Demand-side ManagementEmissions
  - Customer Privacy
  - Product Responsibility Compliance
  - Anti-corruption
  - Anti-competitive Behaviour
  - Economic Performance

- Availability and Reliability Environmental Compliance

  - Energy





- Training and Education
- Labour / Management Relations
- Diversity and Equal Opportunity
- Equal Remuneration for Women and Men
- Non-discrimination



Local Communities

### **Material Aspects**

- Disaster / Emergency Planning and Response
- System Efficiency
- Customer Health and Safety
- Access to Electricity
- Marketing Communications
- Product and Service Labelling
- Provision of Information
- Procurement Practices
- Supplier Human Rights Assessment
- Indirect Economic Performance
- Research and Development
- Plant Decommissioning
- Investment Screening for Human Rights

- Water
- Effluents and Waste
- Biodiversity
- Supplier Environmental Assessment
- Environmental Grievance Mechanisms
- Environmental Overall
- Materials
- Products and Services
- Transport

- Child Labour
- Forced or Compulsory Labour
- Freedom of Association and Collective Bargaining
- Human Rights Assessment
- Human Rights Grievance Mechanisms
- Labour Practices Grievance Mechanism
- Market Presence
- Security Practices
- Supplier Assessment for Labour Practices

- Society Compliance
- Public Policy
- Indigenous Rights
- Grievance Mechanisms for Impacts on Society
- Supplier Assessment for Impacts on Society

### **Non-Material Aspects**

Sustainability Principles under Four Focus Areas

- Economic Sustainability
- Our Environment

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### IMPACTS ALONG OUR VALUE CHAIN G4-20 G4-21

The 18 most material aspects are mapped (indicated by "
") according to where they impact our value chain the most, whether within or outside the CLP Group.

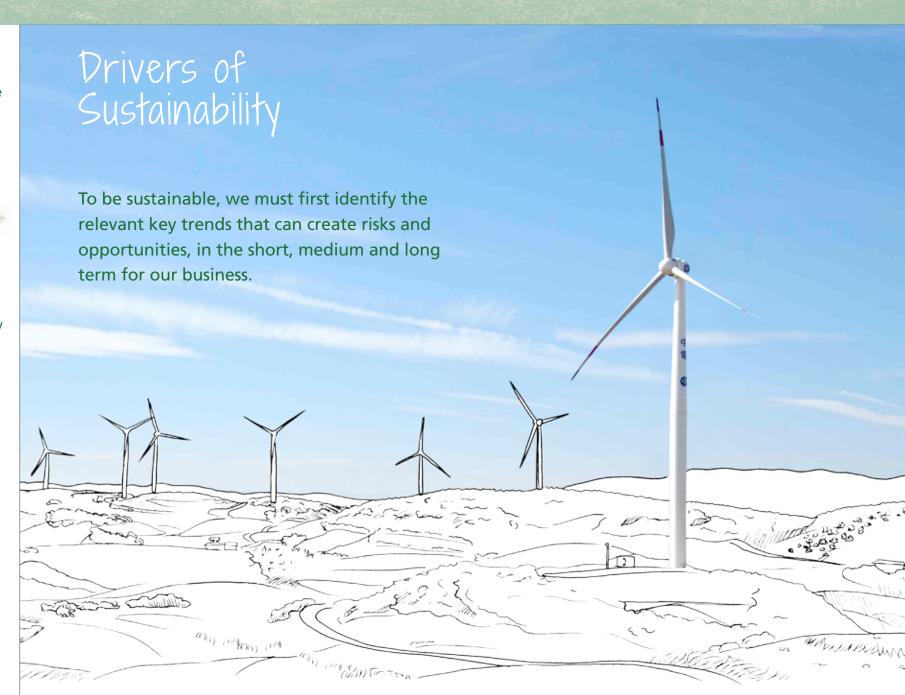
	CLP's Value Chain					
Most Material Aspects	Outside CLP Inside CLP			Outside CLP	Reference	
·	Capitals	Power Generation	Power Delivery	Retail	Value to Our Stakeholders	
<b>Economic Sustainability</b>						
Availability and Reliability					<b>~</b>	Power Generation and Delivery
Demand-side Management				✓	<b>~</b>	Intellectual Capital
Customer Privacy				✓	*	Retail
Product Responsibility Compliance				✓	<b>*</b>	Retail
Anti-corruption		✓	✓	✓	*	Code of Conduct
Anti-competitive Behaviour	✓	✓*	✓	✓*	✓	Code of Conduct
Economic Performance	✓	✓*	✓	✓	✓	Economic Value Generated and Distributed
Our Environment					<u>'</u>	
Environmental Compliance	✓	✓	✓	✓	*	Regulations and Compliance
Emissions	✓			✓	*	Greenhouse Gas Emissions Air Emissions
Energy	✓			✓*	✓	Power Generation and Delivery
Our People						
Occupational Health and Safety	✓	✓	✓	✓		Health, Safety, Security and Environment
Employment	<b>✓</b>	✓	✓	✓		Health, Safety, Security and Environment Employees
Training and Education	✓	✓*	✓	✓		Employees
Labour / Management Relations	✓	✓	✓	✓		Employees
Diversity and Equal Opportunity	✓	✓	✓	✓		Employees
Equal Remuneration for Women and Men	✓	✓	✓	✓		Employees
Non-discrimination	✓	✓*	✓	✓*		Employees
Our Community						
Local Communities	<b>~</b>	✓	✓	✓	<b>~</b>	Community

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### **Drivers of Sustainability**

Megatrends and Impacts Managing Risks **Capturing Opportunities** 

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### Megatrends and Impacts 64-EC2



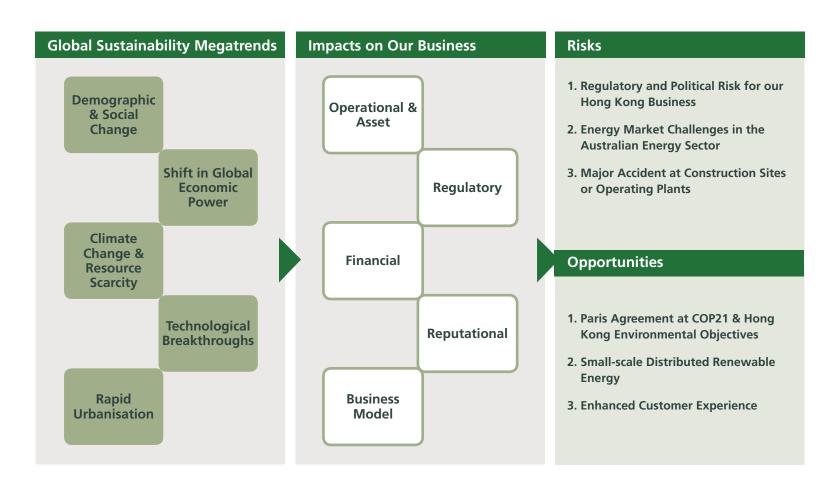
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**Megatrends and Impacts** Managing Risks **Capturing Opportunities** 

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We monitor trends in technology, markets, policy and regulatory development, global economics and social expectations on environmental, social and governance-related areas, so we can anticipate and prepare our company for emerging potential implications for our business.



## **Megatrends and Impacts**

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#### THE GLOBAL MEGATRENDS

To navigate through the continuously changing business landscape, it is important to monitor and anticipate global megatrends in order to stay ahead of the changes. With this information, we can better manage our risks and look for more opportunities to grow our business.

### **Demographic & Social Change**

**Climate Change & Resource** 

As the global climate continues to

change, we will see changes in the

in resource availability and scarcity,

increasing expectations on carbon

reductions and reporting, as well as adapting and developing resilience.

physical environment, along with shifts

As the global population continues to grow, we will see changes such as ageing population, growing mobility and increasing workforce diversity.

There will also be increasing polarity as the wealth and age gaps continue to widen, and international versus national tensions continue to rise.

### **Technological Breakthroughs**

As technology continues to advance, we will see changes in customers' and other stakeholders' behaviour and expectations.

#### Shift in Global Economic Power

As the economic power of emerging economies continues to grow, infrastructure growth and investment will shift towards these economies.

### **Rapid Urbanisation**

As urbanisation continues with rising population density and readier access to resources, we will face tough choices trying to keep our cities liveable.

#### Reference:

**Scarcity** 

Five global megatrends, PwC, retrieved on 28 February 2016.

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#### THE BUSINESS IMPLICATIONS

Megatrends can have extensive technological, regulatory, economic, environmental, and social implications on our business.

- Advancement in technology can improve processes and efficiency, but can also lead to major disruptions of traditional business models, which we are starting to see in utilities around the world.
- Demographic and social changes such as polarity in views can hinder decision-making processes and infrastructure project development, but they can provide more market opportunities for a wider range and variety of new products and / or services in the retail sector.
- Environmental challanges such as climate change and resource use can physically impact businesses and their value chain, and so remaining resilient will be critical for sustainable success. Furthermore, increasing social expectations of trying to manage such issues often leads to the development of more regulations, which in turn can lead to an increase in operational costs. Alternatively, such regulatory change can also be viewed as an opportunity for businesses delivering products and services which support compliance to these new regulations.

- The shift in global economic power brings about a shift in business opportunities from developed to emerging economies, and so the capability to navigate in these new fast moving economies will define success or failure.
- Rapid urbanisation will change behaviour patterns as more people migrate and live in increasingly dense and growing cities, which although may increase resource efficiency, can also increase environmental impacts as well as social issues.





### **Managing Risks**

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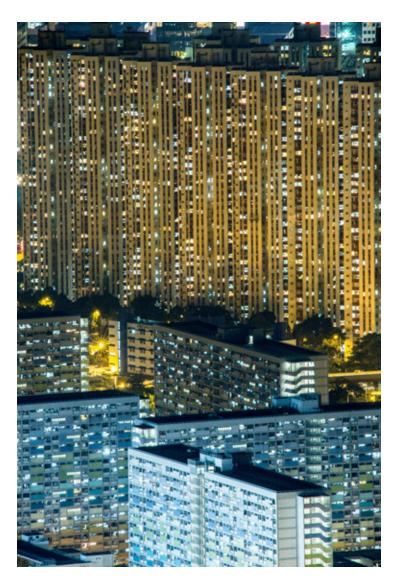
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We manage short, medium and long term risks to protect not just our business, but to also protect the continuity of the value we deliver to all our stakeholders.

Risk is inherent in CLP's business and the markets in which it operates. CLP proactively manages its risks through a groupwide Risk Management Framework. It has been established to facilitate the implementation of a structured approach in identifying and assessing risks, making effective risk management decisions, establishing risk mitigation strategies as well as promoting a risk-aware culture across the Group. CLP's overall risk management process is overseen by the Board through the Audit Committee as an element of solid corporate governance. CLP recognises that risk management is the responsibility of everyone within CLP.

Rather than being a separate and standalone process, risk management is integrated into business and decision-making processes including strategy formulation, business development, business planning, investment decisions, capital allocation and day-to-day operations management. We do not implement a separate risk management process for sustainability in general or climate change in particular. These types of risks are assessed and managed alongside all other types of risk as part of CLP's Risk Management Framework.



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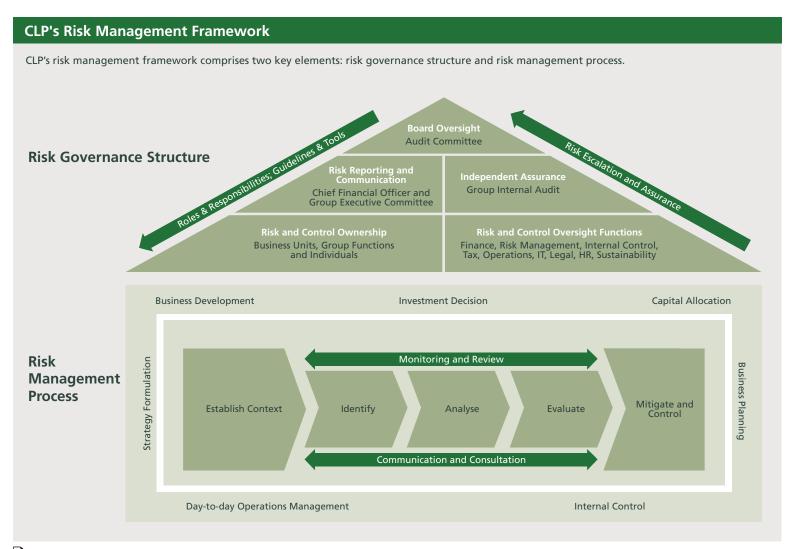
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Find out more about CLP's Risk Management Framework in our 2015 Annual Report.

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### REGULATORY AND POLITICAL RISK FOR **OUR HONG KONG BUSINESS**

The current regulatory framework for the electricity sector in Hong Kong, known as the Scheme of Control (SoC) is due to expire in 2018. The Hong Kong Government conducted a public consultation on the future development of the electricity market in Hong Kong in March 2015

#### **About the Risk**

In November 2015, the Government announced the key findings on the public consultation.

The results of the consultation recognised the value of SoC and supported a continuation of the established regulatory framework, although there was a range of views expressed on the terms on the future SoC such as the rate of return, further support for more renewable energy and energy efficiency & conservation.

TYPE OF RISK	Regulatory
TYPE OF CONSEQUENCE	Financial / Reputational / Regulatory & Governance
IMPACT OF RISK	Capital availability, investment opportunities,

Risk

operational costs and other dimensions

### Impact to CLP

Electricity is a highly capital intensive business. Our investments are for the long term, often counted in decades. A stable regulatory arrangement that offers investors a reasonable return is crucial in attracting sufficient investment to provide the kind of performance our customers expect and deserve.

#### **Actions Taken**

We welcome the results of this consultation and we are willing to work jointly with the Government, our key stakeholders and the community in the most constructive manner. We recognise our community's aspiration for cleaner energy and we support the Government's policies and efforts to promote energy efficiency and conservation in Hong Kong.

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### **ENERGY MARKET CHALLENGES IN THE AUSTRALIAN ENERGY SECTOR**

In 2015, the medium-term trend of declining demand for centralised energy generation in Australia stabilised. However, the outlook for the wholesale market remains uncertain

### **About the Risk**

The trend since 2010 of declining demand in the National Electricity Market, abated in 2015. Overall, demand increased by 1.0% compared to 2014, mainly due to the electricity needs of three large liquefied natural gas projects in Queensland. In contrast, demand in Victoria and South Australia was lower in 2015 compared to the year before while in New South Wales it was broadly the same.

While demand was lower in aggregate across the southern states of Australia, there was greater volatility. State capitals Sydney and Melbourne experienced their hottest weather in the Julyto-December period of the last 20 years, while for Adelaide it was the second-warmest second half in the past two decades. Concerns about the El Nino weather pattern and lower hydroelectric generation led to higher average electricity spot prices across the southern states compared with 2014.

Despite signs of short-term improvement, the wholesale electricity market remains significantly oversupplied with prices well below the level required to provide adequate long-term returns on generation investments

TYPE OF RISK	Market		
TYPE OF CONSEQUENCE	Financial		
IMPACT OF RISK	Decreased demand for CLP's products and services		

Risk

### Impact to CLP

The challenging market conditions have been reflected in announcements of plans to shut down power stations, particularly in southern states, following EnergyAustralia's closure of the Wallerawang Power Station in New South Wales.

#### **Actions Taken**

EnergyAustralia is focusing on restoring value to the business by adopting a new corporate strategy which includes putting a priority on customers and transforming the business into a world-class energy retailer with a sustainable low-cost business model.

Consistent with this approach, EnergyAustralia will pursue further efficiency savings and control costs, building on success in these areas in 2015. In particular, EnergyAustralia expects to enhance its cost to serve in billing and credit performance, reduce its bad debt expenses, realise benefits from a new call centre operating model and lower customer complaints. Additionally, in 2016 the business will focus on previously announced plans to relocate some customer service activities offshore and enhancing digital services such as e-billing and self-service.

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### MAJOR ACCIDENT AT CONSTRUCTION SITES OR OPERATING PLANTS

As we continue to expand and develop our asset base, there is a significant amount of construction activity that takes place at any one time, particularly in developing countries and high risk locations where safety awareness is not high.

### **About the Risk**

At our major ongoing construction projects, safety processes are run by the main contractors in charge of the projects. Both India and Mainland China have seen significant expansion of heavy construction over the years. As a result, some contractors, who are relatively new to the industry are not as experienced in safety practices as they might be if the local heavy construction industry were more mature.

In addition, hydropower plants are by nature susceptible to risks of landslides and dam safety, largely due to unusual floods, particularly during rainy seasons.

### Impact to CLP

CLP has several construction projects where safety processes are being run by the main contractors in charge of the projects. This is the case at our Fangchenggang II coal-fired power plant and solar and wind projects in Mainland China and India.

TYPE OF RISK	Industry / Operational		
TYPE OF CONSEQUENCE	Safety & Health / Reputational		
IMPACT OF RISK	Safety & health of our staff, contractors and the general public		

Risk

In addition, CLP has had experience with flooding at our hydropower plants in Mainland China in the past few years.

#### **Actions Taken**

Safety is part of CLP's Value Framework, and it is one of our highest priorities and greatest ongoing concerns. We remain committed to continued and sustainable improvement in our safety performance and our goal of zero injuries.

CLP has many established systems in place to ensure that safe working practices are observed in all parts of the company at all times.

Find out more about our safety practices in the Health, Safety, Security
and Environment section

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We create opportunities by managing our risks well and ahead of others, creating new capabilities for new business and enhancing our reputation and brand.

Although the changing landscape may pose risks, it also provides opportunities. To be able to capture these opportunities, we must be capable of identifying markets and business opportunities from the megatrends we track. To facilitate our expansion in the local markets, we must adapt to the changes quickly enough to enhance our competitiveness. This involves attracting the right partners and suppliers, increasing access to more favourable lending conditions and further strengthening the trust and confidence of local communities in our brand.

Since the markets in which we operate are so diverse, it is most effective to manage these opportunities at the business unit level. Here we highlight some of the major opportunities we see arising in our different business units.



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### PARIS AGREEMENT AT COP21 & HONG KONG ENVIRONMENTAL OBJECTIVES G4-EC2

CLP welcomes the adoption of the landmark accord at COP21 in Paris as a vital step in combating climate change.

### **About the Opportunity**

In early December 2015, 195 nations agreed to take measures to limit the increase in global average temperature to well below 2°C and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

To arrive at this agreement, the United Nations Framework Convention on Climate Change (UNFCCC) invited countries to provide their own climate commitments or Intended Nationally Determined Contributions (INDCs). In the next two to three years, countries are expected to start implementing specific policies to meet their submitted obligations.

The objectives in this Agreement are well aligned with Hong Kong's existing carbon-related objectives, in particular the one to reduce carbon intensity by 50-60% by 2020 when compared to 2005. The Hong Kong Government has announced the following fuel mix target for Hong Kong in 2020:

- Increase the percentage of local gas generation to approximately 50% of the total fuel mix;
- Maintain the current level of nuclear power (currently about
- Encourage the development of renewable energy, energy saving measures and demand-side management programmes; and
- Meet the balance of requirements (approximately 25%) with coalfired generation and renewables.

TYPE OF OPPORTUNITY	Market / Regulatory		
TYPE OF CONSEQUENCE	Financial / Reputational / Regulatory & Governance		
IMPACT OF OPPORTUNITY	Capital availability, investment opportunities, other dimensions		

### Impact to CLP

The adoption of the Paris Agreement at COP21 brings about a clear direction for low carbon energy development at the international level and for investors such as CLP. It also reinforces Hong Kong's existing climate change objectives and fuel mix policy.

This Agreement as well as Hong Kong's climate change goals can support CLP's Climate Vision 2050, which aims to cut the carbon intensity of our generation portfolio by 75% by 2050, and our investment strategy in pursuing low carbon projects in Mainland China and India. We look forward to working with policy makers to address the climate challenge.

### **Actions Taken**

In Hong Kong, to support the Government's target of increasing local gas generation in Hong Kong's fuel mix to around 50% by 2020, CLP has been actively engaging with key stakeholders on a proposal to build a new high-efficiency, low-emissions Combined Cycle Gas Turbine (CCGT) at Black Point Power Station by 2020.

In addition, we consider that the recent short-term increase in nuclear imports can continue to play a role in our fuel mix, subject to acceptable terms being agreed with our counterparties.

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### **SMALL-SCALE DISTRIBUTED RENEWABLE** ENERGY G4-EC2

Market research and public consultations have indicated that consumers favour opportunities for small-scale distributed renewable eneray.

### **About the Opportunity**

In Hong Kong, one of the key findings of the public consultation on the future development of the electricity market was that respondents wanted more emphasis on promoting renewable energy and energy conservation, which could include distributed renewable energy.

Customers in Australia are becoming increasingly interested in adopting distributed renewable energy such as solar power which helps them manage their electricity usage more effectively. This shift in customer preferences and the actions customers have taken as a result are one of the contributing factors to the decline in energy demand amongst retail customers in Australia.

### Impact on CLP

Customer demand for distributed renewable energy presents a new opportunity in the market. Given their existing business and expertise, power companies like EnergyAustralia and CLP Power Hong Kong are well placed to take advantage of this opportunity to develop a line of products to meet this demand.

TYPE OF OPPORTUNITY	Market	
TYPE OF CONSEQUENCE	Financial / Reputational	
IMPACT OF OPPORTUNITY	Demand for products and services (distributed generation)	

### **Actions Taken**

Our Hong Kong business continues to support local renewable energy development such as distributed renewable energy facilities, wherever practicable. Currently, more than 200 distributed renewable energy systems are connected to CLP's grid. Throughout 2015, we improved customer support and streamlined the application process to encourage connection of these facilities to our grid. We will continue to enhance our efforts to develop and promote local renewable energy, where this is feasible and in the interests of our consumers, consistent with the community's willingness to pay.

In 2015, EnergyAustralia Home Services commenced selling a new advanced residential solar system pairing two of the most technically advanced solar products in the world.

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### ENHANCED CUSTOMER EXPERIENCE G4-EC2

Like other industries, we need to keep pace with evolving customer needs. These are likely to direct a shift in focus more towards the demand side. We see two key areas for engagement: helping our customers with energy management and offering them greater choice

### **About the Opportunity**

As part of its energy management efforts, the Hong Kong Government recently published an important policy paper, an Energy Saving Plan for Hong Kong's Built Environment, which includes a series of energy savings targets. The paper lists out three energy management themes going forward: promoting energy wise buildings; mobilising stakeholders, including ourselves; and the community taking responsibility.

Electricity customers around the world have indicated they want more choice. For example, through smart meters customers can receive much better consumption information and can also choose tariff plans and services to suit their lifestyles. In addition, electric vehicle charging points allow more choice for customers in terms of the vehicles they purchase.

### Impact to CLP

To support the Hong Kong Government's Energy Saving Plan, we need to help our customers conserve energy wherever they can. In the future we see a place for continued energy saving and will play our part in educating customers on how to achieve this. We will also invest in a smarter and more energy efficient network.

TYPE OF OPPORTUNITY	Market
TYPE OF CONSEQUENCE	Financial / Reputational
IMPACT OF	Improve customer relationships

### **Actions Taken**

**OPPORTUNITY** 

CLP in Hong Kong is conducting trials on a range of more active demand side management measures for both homes and businesses. CLP also looks forward to working with customers and the Hong Kong Government to support energy efficiency in buildings and help the Government achieve its energy savings targets.

EnergyAustralia is currently evaluating alternative energy management systems that will enable customers to identify opportunities for improvements in how they manage their energy requirements, particularly to do with energy efficiency and usage.

In addition, Energy Australia is pursuing a number of opportunities to offer customers greater choice. These include working with potential partners on energy-efficient lighting retrofits to improve energy efficiency, evaluating a range of potential battery systems to increase customer energy independence, and evaluating Power Factor Correction devices for smaller users who will soon be subjected to new network tariffs.

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In a world where even social norms are changing, we always adhere to our company values, such as honesty and integrity.



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For 2015, the following most material aspects relevant to this chapter were identified:



**Anti-Corruption** 

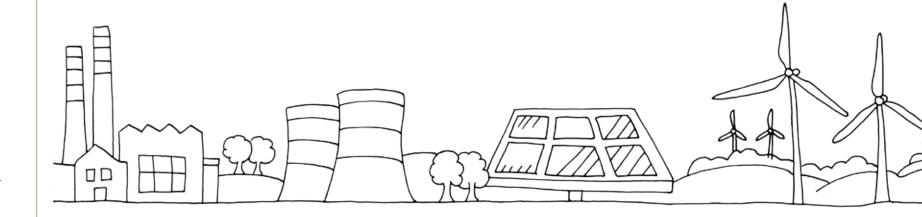


**Anti-Competitive Behaviour** 

### Why are the aspects highly material?

Being a responsible company helps to build and maintain long term relationships with our stakeholders and to build the trust they have in us, so that we can be a sustainable business.

In addition to complying with locally applicable laws in all countries in which we operate in, CLP is committed to preventing, detecting and reporting all types of fraud, including corruption. We maintain a control environment that promotes our values and our Whistleblowing Policy is a critical component to maintaining this environment.



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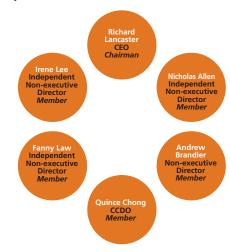
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We have integrated sustainability-related governance into our existing corporate governance structure so that we can ensure more integrated oversight of financial and non-financial aspects at the Board level.

#### SUSTAINABILITY COMMITTEE

CLP's Sustainability Committee is a Board level function which oversees CLP's position and practices on sustainability issues affecting, or relevant to, the CLP Group business or operations, shareholders and other key stakeholders. Appointed by the CLP Holdings Board of Directors, the Committee is chaired by the CEO and includes Executive and Independent Nonexecutive Directors of the Board. In 2015, the members of the Sustainability Committee were:



A form of the Sustainability Committee has existed since 2005. In light of the increasing significance of ESG-related emerging risks and opportunities for the business, the Terms of Reference for two of the Board level Committees were amended in 2015:

- Our non-financial data management and reporting has matured and become operationalised and so the Audit Committee now has oversight of it; and
- the Sustainability Committee can now focus on a broader base of topical areas, identifying and managing longer term emerging and strategic sustainability issues, which could be passed on to other relevant Board level Committees for more detailed strategic and management planning.
- A full report on the Sustainability Committee's activities for 2015 can be found in the Appendix.

To help drive sustainability-related issues throughout the organisation from the Board level down, a new dedicated Group Sustainability Department, reporting to the Chief Corporate Development Officer (CCDO), who in turn reports to the CEO, was also set up in 2014 to ensure successful implementation of sustainability-related strategies, policies and initiatives.



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We maintain a framework of corporate governance that ensures we conduct our affairs in an ethical, transparent and accountable manner, so as to promote and safeguard the interests of our shareholders and other stakeholders.

#### **GOVERNING FRAMEWORK**

We use a Corporate Governance Framework to identify all the key participants in good governance, the ways in which they relate to each other and the contribution each makes to the application of effective governance policies and processes.

- We disclose our corporate governance principles and practices openly and fully; and
- We continually strive to improve our principles and practices in light of our experience, regulatory requirements, international developments and expectations.

The Hong Kong Stock Exchange's Corporate Governance Code and Corporate Governance Report (the Stock Exchange Code) found in Appendix 14 of the Rules Governing the Listing of Securities (the Listing Rules) on the Stock Exchange, sets out principles of good corporate governance and two levels of recommendation:

- Code Provisions, with which issuers are expected to comply or to give considered reasons for any deviation; and
- Recommended Best Practices, for guidance only, save that issuers are encouraged to comply or give reasons for deviation.

CLP adopted our own unique CLP Code in February 2005. The CLP Code incorporates all of the Code Provisions and Recommended Best Practices in the Stock Exchange Code, save for one single exception with regard to quarterly reporting. The CLP Code in a number of respects exceeds the requirements of the Stock Exchange Code.

The CLP Code is updated from time to time, most recently in February 2015, reflecting the New Companies Ordinance (Cap. 622) (NCO) which took effect from 3 March 2014 and the evolution of CLP's corporate governance practices. Shareholders may download a printable copy of the CLP Code from our website, obtain a hard copy from the Company Secretary on request at any time, or by completing and returning the form enclosed with this Annual Report.

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#### **HIGHEST GOVERNING BODY**

CLP's Board of Directors is the highest governing body in the organisation. The Board has a unitary board structure in which the Chairman of the Board and the Chief Executive Officer are separate roles filled by different people. The Board is composed of 15 members as of today, three of whom are women. The

Board includes seven influential and active Independent Non-executive Directors to whom shareholder concerns can be conveyed. The Board segments itself into six separate committees in order to focus more effectively on the range of responsibilities it has. The committees perform the following functions:

Our Board Committees			
BOARD COMMITTEE NAME	BOARD COMMITTEE FUNCTION	MEETINGS HELD IN 2015	
Full Board	The Board is charged with promoting the success of the Company by directing and supervising its affairs in a responsible and effective manner.	6	
Audit Committee	The Audit Committee comprises only Independent Non-executive Directors. Two of the four members have appropriate professional qualifications, accounting and related financial management expertise. The other two members have respective experience in public administration and financial services. The Committee's primary responsibilities are to: assure that adequate risk management and internal control systems are in place and followed; assure that appropriate accounting principles and reporting practices are followed; assure that appropriate assurance process for the sustainability and/or environmental, social and governance data is followed; satisfy itself as to the adequacy of the scope and direction of external and internal auditing; satisfy itself that good accounting, audit principles, risk management, internal controls and ethical practices are applied on a consistent basis throughout the CLP Group (without limiting the responsibilities of the boards of CLP subsidiaries in this respect); and perform corporate governance duties.	6	
Finance & General Committee	This committee meets when required to review the financial operations of the company including Group-wide financial, accounting, treasury and risk management policies, major financing transactions, corporate plans and budgets and business performance, and major acquisitions or investments and their funding requirements.	7	
Human Resources & Remuneration Committee	This committee scrutinises the remuneration policies applied within the CLP Group, including the remuneration of Non-executive and Executive Directors and of Senior Management. The committee's objective is to ensure that CLP applies properly structured and fair remuneration policies which align the interests of Directors and Senior Management with those of the Company and its shareholders.	3	

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Our Board Committees	(con't)	
BOARD COMMITTEE NAME	BOARD COMMITTEE FUNCTION	MEETINGS HELD IN 2015
Nomination Committee	The Nomination Committee is responsible for reviewing the Board structure and composition, identifying and recommending possible appointees as Directors, recommending appointment or reappointment of Directors, succession planning, assessing the independence of Independent Non-executive Directors, reviewing whether Directors are spending sufficient time performing their responsibilities, reviewing training and professional development of Directors, and reviewing the Board Diversity Policy.	
Provident & Retirement Fund Committee	This committee advises the Trustee on investment policy and objectives for the Group's retirement funds, namely the CLP Group Provident Fund Scheme and the CLP Group Top-Up Scheme.	3
Sustainability Committee	<ul> <li>The Sustainability Committee's role is to oversee management and advise the Board on matters required to enable:</li> <li>The CLP Group to operate on a sustainable basis for the benefit of current and future generations;</li> <li>Sustainable growth by maintaining and enhancing CLP Group's economic, environmental, human, technological and social capital in the long term; and</li> <li>The effective management of CLP Group's sustainability risk.</li> </ul>	3

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#### **OUR BOARD MEMBERS**

The committees are made up of different teams of Board members to best take advantage of Board members' varying range of expertise and perspectives. A description of each Board member and the Committees on which they sit is presented below as of 29 February 2016.

	AGE	APPOINTED TO THE BOARD	COMMITTEE MEMBERSHIPS
No. of Block on	AGE	ALL CHALLS TO THE BOARD	COMMITTEE MEMBERSTILLS
Non-executive Directors			
The Honourable Sir Michael Kadoorie	74	January 1967	Nomination Committee
		January 1993	Finance & General Committee
Mr William Elkin Mocatta	62		Human Resources & Remuneration Committee
			Provident & Retirement Fund Committee
Mr Ronald James McAulay	80	January 1968	None
Mr John Andrew Harry Leigh	62	February 1997	None
	59	May 2000	Finance & General Committee
Mr Andrew Clifford Winawer Brandler			Sustainability Committee
Dr Lee Yui Bor	69	August 2003	None
Independent Non-executive Directors			
	69	March 1997	Audit Committee
Mr Vernon Francis Moore			Finance & General Committee
			Human Resources & Remuneration Committee
Sir Roderick lan Eddington	66	January 2006	Finance & General Committee
	60	May 2009	Audit Committee
			Finance & General Committee
Mr Nicholas Charles Allen			Human Resources & Remuneration Committee
			Nomination Committee
			Sustainability Committee

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Our Board Members (con't)			
	AGE	APPOINTED TO THE BOARD	COMMITTEE MEMBERSHIPS
	67	August 2011	Finance & General Committee
Mr Cheng Hoi Chuen Vincent			Human Resources & Remuneration Committee
			Nomination Committee
Name Lavy Fam Chin Fran Famou	63	First appointed in August 2011	Audit Committee
Mrs Law Fan Chiu Fun Fanny		Reappointed in August 2012	Sustainability Committee
	62	October 2012	Audit Committee
Ms Lee Yun Lien Irene			Finance & General Committee
			Sustainability Committee
Mrs Zia Mody	59	July 2015	Human Resources & Remuneration Committee
Executive Directors			
Mr Richard Kendall Lancaster	54	June 2013	Finance & General Committee
IVII NICHATU KEHUAN LAHCASTEI			Sustainability Committee
Mr Geert Herman August Peeters	52	January 2016	Finance & General Committee
wir Geert Heiffialt August Feeters			Provident & Retirement Fund Committee

CLP ensures that there is no conflict of interest on the part of any of its Board members. The relationships (including financial, business, family or other material or relevant relationships) among members of the Board are disclosed. There is no such relationship as between the Chairman with respect to the CEO and the CFO. Directors are requested to declare their and their connected entities' direct or indirect interests, if any, in any proposals or transactions to be considered by the Board at Board meetings and withdraw from the meetings as appropriate. There was no such occasion in 2015.

The Company follows guidelines at each financial reporting period to seek confirmation from Directors in respect of any transactions of the Company or its subsidiaries which are related to Directors or their connected entities. In addition. identified significant related party transactions are disclosed in the Financial Statements of the Annual Report.

Pursuant to the requirement in the Listing Rules, the Company has received a written confirmation from each Independent Non-executive Director of his/her independence to the Company. The Company considers all of the Independent Nonexecutive Directors to be independent.

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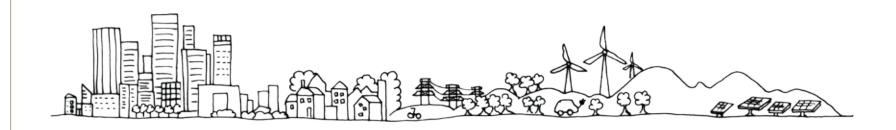
#### **DIVERSITY**

The Board formally adopted a Board Diversity Policy in August 2013 which seeks to record, more formally, CLP's policy on board diversity and to recognise the terms of relevant Code Provisions of the Stock Exchange Code which came into effect on 1 September 2013. The Policy is available on the CLP website. Minor modifications to the Policy were made in February 2015.

Recognising directors are appointed by shareholders, not the Board nor the Company, merit and competence to serve the Board and hence shareholders, remains the first priority. In assessing potential candidates for the Board, the Nomination Committee considers the diversity perspectives. Notwithstanding the diversity perspectives, all appointments to the Board are based on merit, having regard to the ability of candidates to complement and expand the skills, knowledge and experience of the Board as a whole. The recommendations of the Committee are then put to the full Board for decision. Thereafter, all Directors are subject to election by shareholders at the first General Meeting following their appointment.

In 2015, we have measured the diversity of the Board as of 2014 and 2015 based on the aspects of independence, gender, nationality and ethnicity and skills and experience (which are the measureable objectives as set out in the Board Diversity Policy).

The analysis has indicated that, in 2015, while maintaining the independence of Directors at the same high level of 50% and the diversity level in nationality, there was both an increase in the gender diversity and in diversity in terms of professional background and experience, which significantly enhanced the overall diversity of the Board. We have also sought shareholders' views on the satisfactory levels of the diversity aspects of the Board during the Shareholders' Visit Programme 2014-2015. The overall results showed that shareholders were satisfied with the diversity aspects of the Board and its effectiveness in promoting shareholders' interests. The satisfaction level has increased from 91% for all diversity aspects in 2013/2014 to 92.5% - 95.6% for different aspects in 2014/2015. The 2015 review of the Board Diversity Policy was endorsed by the Nomination Committee.



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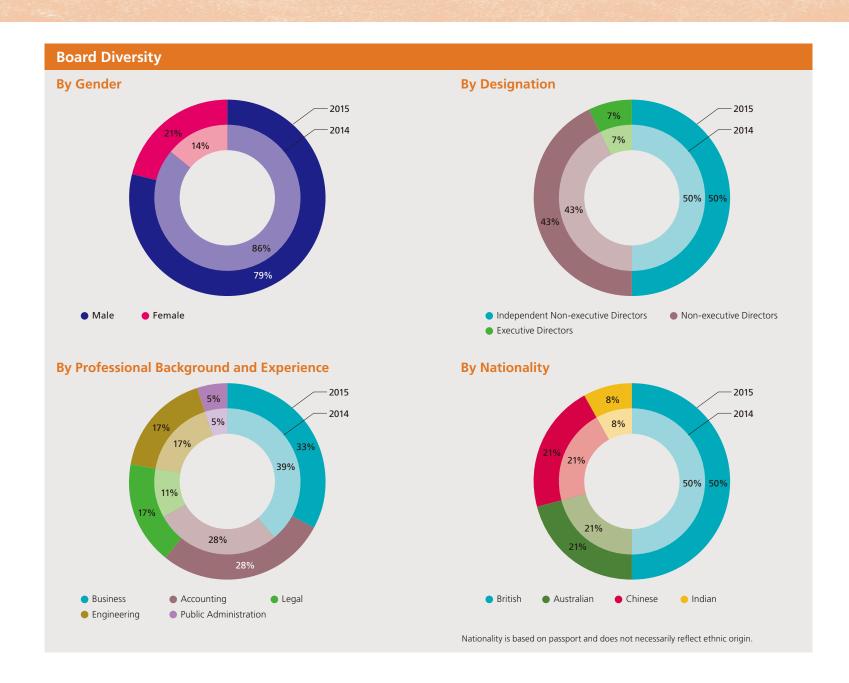
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#### TRAINING AND PERFORMANCE G4-43

In order to help enhance the Board's collective knowledge, including that related to economic, environmental and social topics, members participate in a continuous professional development programme. As part of the continuous professional development programme, Directors participated in the Shareholders' Visit Programme, various briefings and visits to local management, CLP's facilities and special projects with CLP's involvement, as arranged and funded by the Company with appropriate emphasis on the roles, functions and duties of the Directors. This is in addition to Directors' attendance at meetings and review of papers and circulars sent by Management.

A performance evaluation of the CLP Holdings Board and its Board Committees for 2014 was conducted by the Company Secretary in the form of a questionnaire to all Directors individually, with a focus on the implementation of the recommendations of the previous year's board performance evaluation. It covered similar areas as those in the 2013 Board Performance Evaluation: dynamics and overall impression of the Board; organisation of the Board; Committee organisation; Board composition; Board involvement and engagement; communication with shareholders and stakeholders; and overall Board effectiveness.

The findings of the 2014 Board Performance Evaluation were that the recommendations of the 2013 Board Performance Evaluation were, in general, effectively implemented as appropriate. CLP's corporate governance policies and processes continue to be strong. They satisfy and/or exceed the Stock Exchange Code and Listing Rules requirements. Any exceptions to the Stock Exchange Code are relatively minor, are recognised by the Company and are capable of being suitably explained. A copy of the conclusion of the 2014 Board and Board Committees Performance Evaluation has been published on the CLP website. The Board considered the findings and recommendations of the Company Secretary on the 2014 Board and Board Committees Performance Evaluation at its meeting on 8 May 2015 and approved the recommendations for implementation with a view to making further improvements in Board effectiveness.

Board performance is evaluated on an ongoing basis with an independent evaluation every three years. In line with this interval, the performance evaluation of the Board as a whole and its Board Committees for 2015 will be undertaken by an independent external consultant during 2016 and management had undertaken a competitive tendering process for engagement of the consultant. The evaluation of the Board for 2015 will be completed in 2016 and a summary of the findings will be disclosed in our 2016 annual report.

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Participation in Directors' C	ontinuous Profe	esional Dovolon	mont Programmo in	2015 64 42
Participation in Directors C	READING REGULATORY UPDATES	PAYING VISITS TO LOCAL MANAGEMENT, CLP'S FACILITIES AND SPECIAL PROJECTS WITH CLP'S INVOLVEMENT	HOSTING SHAREHOLDERS' VISITS (2014-2015 SHAREHOLDERS' VISIT PROGRAMME)	ATTENDING EXPERT BRIEFINGS / SEMINARS / CONFERENCES RELEVANT TO THE BUSINESS OR DIRECTORS' DUTIES
Non-executive Directors				
The Hon Sir Michael Kadoorie	✓	✓	✓	✓
Mr William Mocatta	✓	✓	✓	1
Mr Ronald J. McAulay	✓	✓		<b>✓</b>
Mr J. A. H. Leigh	✓			<b>✓</b>
Mr Andrew Brandler	✓		✓	✓
Dr Y. B. Lee	✓	✓	✓	✓
Independent Non-executive Direct	ctors			
Mr V. F. Moore	✓	✓	✓	✓
Sir Rod Eddington	✓			<b>✓</b>
Mr Nicholas C. Allen	✓	✓	✓	<b>✓</b>
Mr Vincent Cheng	✓	✓		✓
Mrs Fanny Law	✓	✓	✓	1
Ms Irene Lee	✓		✓	1
Mrs Zia Mody <sup>1</sup>	✓			<b>√</b>
Executive Director				
Mr Richard Lancaster	✓	✓	✓	<b>✓</b>
Company Secretary				
Mrs April Chan <sup>2</sup>	✓	✓	✓	/

<sup>1</sup> An induction was conducted for Mrs Zia Mody who was newly appointed to the Board in July 2015.

<sup>2</sup> During 2015, Mrs April Chan served as the Past President on the Council of Corporate Secretaries International Association and the Chairman of the Technical Consultation Panel of the Hong Kong Institute of Chartered Secretaries. She was a frequent speaker at seminars and has exceeded the 15 hours of professional training requirement of the Listing Rules.

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#### **REMUNERATION**

The main elements of CLP's remuneration policy have been in place for a number of years and are incorporated in the CLP Code:

- No individual or any of his close associates should determine his or her own remuneration;
- Remuneration should be broadly aligned with companies with whom CLP competes for human resources; and
- Remuneration should reflect performance, complexity and responsibility with a view to attracting, motivating and retaining high performing individuals and promoting the enhancement of the value of the Company to its shareholders.

The above policies apply to the remuneration of the Non-executive Directors, with appropriate adjustments to reflect good corporate governance practices, the particular nature of their duties and that they are not Company employees. In considering the level of remuneration payable to Non-executive Directors, we have referred to the:

- Report of the Committee on the Financial Aspects of Corporate Governance of December 1992;
- "Review of the Role and Effectiveness of Non-executive Directors" of January 2003 as subsequently codified in the Financial Reporting Council's "The UK Corporate Governance Code" published in September 2014 (2014 UK Code); and
- Hong Kong Stock Exchange's Corporate Governance Code and associated Listing Rules.

In light of these considerations, CLP's Non-executive Directors are paid fees in line with market practice, based on a formal independent review undertaken no less frequently than every three years. A review was undertaken at the beginning of 2016 with full details included in the Human Resources & Remuneration Committee Report in our 2015 Annual Report. The remuneration policy and fees paid to each Non-executive Director in 2015 are also set out in the Human Resources & Remuneration Committee Report.

In determining incentive payments and Total Remuneration for Senior Management, the Human Resources & Remuneration Committee takes into account a broad range of performance indicators including financial (e.g. long-term growth in the share price and dividends), operational, safety, environmental, social, governance and compliance related factors. The determination of performance outcomes is not formulaic, as the Committee believes their overriding responsibility is to exercise judgment and responsibility.

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We recognise the importance of true, fair and complete disclosure of our financial position and operating performance to our shareholders, as well as addressing their social and environmental concerns.

#### **OUR APPROACH**

We have collected and answered the most frequently asked questions by shareholders regarding their rights as CLP shareholders and the ways in which they can best exercise and enjoy those rights in a Shareholders' Guide. In addition, we also receive and respond to concerns when they are communicated to the Board. One of the most effective ways for shareholders to communicate a concern is through a General Meeting.

Find out more about the Shareholders' Guide. Find out more about how we engage with our shareholders in the Sustainable Relationships chapter.

The Company regards the Annual General Meeting (AGM) as an important event in the corporate year and all Directors and Senior Management make an effort to attend. The Chairmen of Board Committees attend the AGM and will take shareholders' questions. A representative (usually the engagement partner) of the external auditor also attends the AGM and will take questions from shareholders relating to their audit of the Company's financial statements.

The most recent shareholders' meeting was the AGM held on 7 May 2015 at the Hong Kong Polytechnic University, Kowloon, Hong Kong. Major items discussed included the adoption of a new set of Articles of Association to:

- update various provisions contained in the predecessor Articles of Association in order to bring them into line with the NCO;
- make a number of procedural changes, mainly relating to the conduct of General Meetings, to reflect the evolution of the current practices of the Company; and
- make some consequential and housekeeping changes.

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The percentage of votes cast in favour of the resolutions relating to the major items are set out below:

- Re-election of Mr William Mocatta, Mr Vernon Moore, Mr Vincent Cheng, The Hon Sir Michael Kadoorie and Mr Andrew Brandler as Directors of the Company (78.5119% to 98.3614% in respect of each individual resolution);
- Adoption of the new Articles of Association of the Company (99.5764%);
- General mandate to Directors to issue and dispose of additional shares in the Company, not exceeding 5% of the total number of shares in issue and such shares shall not be issued at a discount of more than 10% to the Benchmarked Price of such shares (99.4720%); and

• General mandate to Directors to exercise all the powers of the Company to buy back or otherwise acquire shares of the Company in issue, not exceeding 10% of the total number of shares in issue (99.9974%).

All resolutions put to shareholders at the 2015 AGM were passed. The results of the voting by poll of the 2015 AGM have been published on CLP's website and the website of the Hong Kong Stock Exchange.

- Full proceedings of the 2015 AGM are in the Investors Information section of the corporate website.
- Minutes of the 2015 AGM are on the corporate website.



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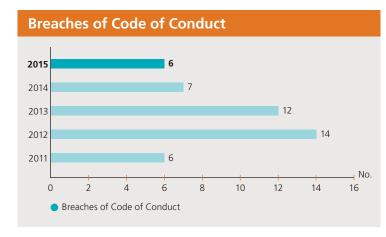
We are committed to acting with integrity in all our business activities as integrity is a vital company asset that helps build the trust that has ensured our continued expansion for more than a century.

#### **CODE OF CONDUCT**

64-503 All management and staff are subject to a formal Code of Conduct which places them under specific obligations as to the ethics and principles by which our business is conducted. This Code of Conduct, which has been aligned across the CLP Group, is set out in full on our website. Management and staff receive training on the Code and its implications periodically. Management and staff above a designated level or in certain functions are required to sign annual statements confirming compliance with the Code.

Non-compliance with the Code of Conduct results in disciplinary action. Disciplinary measures are decided by the relevant line management. These measures are then subject to review and endorsement by a Group Code of Conduct Committee, which comprises the Executive Director & Chief Financial Officer, Group General Counsel & Chief Administrative Officer and Chief Human Resources Officer, in order to ensure the consistency and fairness of treatment. In 2015, a separate Code of Conduct Committee was established for EnergyAustralia to provide quicker turnaround on Australian Code of Conduct violations. The EnergyAustralia Code of Conduct Committee acts only for non-senior EnergyAustralia's employees and cases involving senior EnergyAustralia's employees will continue to be brought to the Group Code of Conduct Committee. During 2015, there were six breaches (2014: seven) of the Code. Sanctions applied ranged from reprimands to dismissal. No breaches of the Code were material to the Group's Financial

Statements or overall operations and none involved Senior Management. Non-compliance with the Code of Conduct cannot be waived.



64-505 Our Code of Conduct is the tool we use to guard against corruption within CLP. We take cases of corruption seriously, and cases of corruption are not only tracked and reported, but also externally verified by a third party before results are reported in our Sustainability Report. In 2015, we had no cases of corruption at CLP.

We have a Whistleblowing Policy to encourage employees and related third parties (such as customers and suppliers) who deal with the Company to raise concerns in confidence about misconducts, malpractices or irregularities in any matters related to the Company. A whistleblowing policy specific for EnergyAustralia and a whistleblowing policy specific for CLP India to reflect the local legislative requirements were also adopted. During 2015, there were 15 cases of whistleblowing (2014: eight).

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#### **ANTI-COMPETITIVE BEHAVIOUR**

Our Code of Conduct sets out our commitment to comply with laws and regulations, and this includes compliance by all CLP staff with competition laws. In line with our Code of Conduct and the CLP Group Competition Policy Statement, CLP is committed to compliance with competition and antitrust laws in force in all countries in which we operate. All CLP directors, officers and employees are expected, in his or her conduct of the company's business, to observe and comply with competition laws.

Compliance with competition laws is monitored under our regulatory compliance programme. Different compliance programmes are used in different jurisdictions. For example, in the Hong Kong business, a Competition Compliance Manual has been prepared and is available to staff to help understand and comply with the new Competition Ordinance which came into full effect on 14 December 2015. Protocols have also been developed to provide further practical guidance to staff in their day-to-day work activities. All employees on the Hong Kong payroll of CLP Holdings and its Hong Kong subsidiaries are also expected to complete a face-to-face training session and mandatory e-learning course. There is a governance structure allocating responsibilities for compliance with competition laws across all levels of the business.

The CLP-wide reporting system for Code of Conduct violations applies to any alleged or potential breaches of competition law. All CLP staff are expected to co-operate fully in the investigation of any alleged violation, and disciplinary action applies to any staff that has been found in breach of the Code of Conduct.

G4-507 In 2015, there were no new legal cases regarding anticompetitive behaviour. However, there is one existing and previously reported case at our Ho-Ping Power Station in Taiwan, in which the CLP Group has an effective 20% equity interest. The Ho-Ping litigation is for alleged concerted action with other independent power producers (IPPs), in violation of the Fair Trade Act by the Taiwan Fair Trade Commission (FTC). In October 2014, Ho-Ping received a favourable ruling from the Taipei High Administrative Court. However, this decision was successfully appealed by FTC to the Supreme Administrative Court, and will return to the Taipei High Administration Court for re-examination. Ho-Ping will continue to pursue and defend its positions in the Taipei High Administration Court's reexamination of the case.

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We comply with all applicable laws and regulations and are prepared to forego opportunity or advantage in order to maintain our high standards of corporate governance and integrity.

The CLP Group operates in a number of different jurisdictions with different legal and regulatory requirements and we often find ourselves faced with an evolving legal and regulatory regime that affects our operations.

Compliance with legal and regulatory requirements in the jurisdictions that we operate in has always been, and will continue to be a matter of top priority for us. Our commitment to compliance is demonstrated by our low number of noncompliance cases resulting in a significant fine (> HK\$1 million).

An example of a material non-compliance is our previously reported case at Ho-Ping Power Station. In 2013, the Taipei High Administrative Court (THAC) ruled in favour of Ho-Ping regarding a penalty of NT\$442 million (CLP share HK\$18.3 million after tax) imposed by the Hualien County Government (HCG) for Ho-Ping's exceedance of its coal consumption limit in 2009 and 2010. The HCG subsequently appealed and the THAC was instructed to re-examine the case. In December 2015, the THAC ruled in favour of the HCG but marginally reduced the penalty to NT\$436 million (CLP share HK\$18 million after tax). Ho-Ping is considering appealing the verdict.



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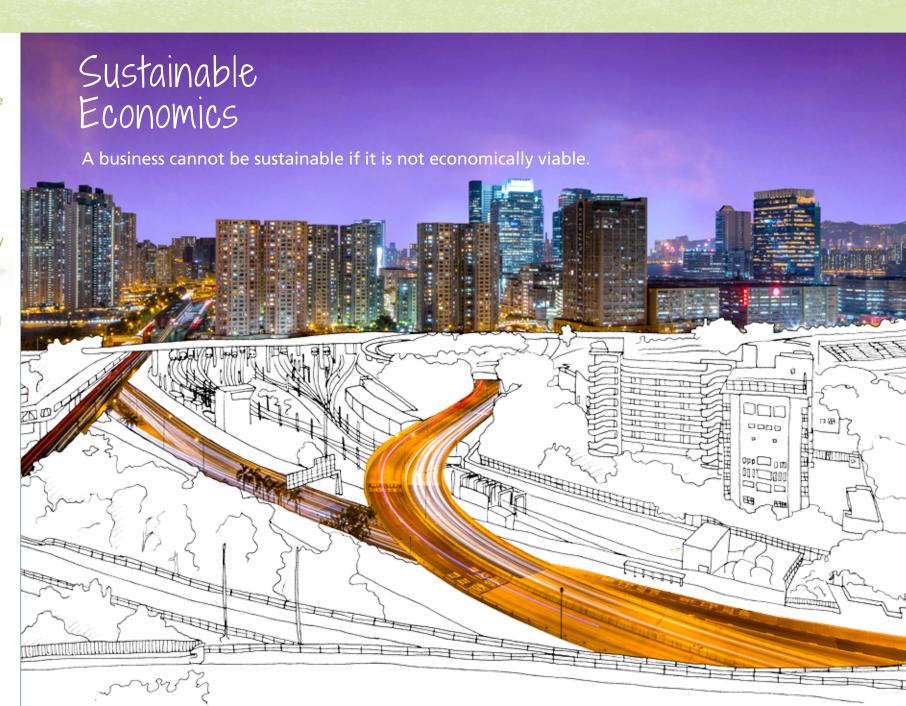
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For 2015, the following most material aspect relevant to this chapter was identified:



**Economic Performance** 

#### Why is the aspect highly material?

As a business that has been in operation since 1901, we are cognisant that maintaining strong and robust economic performance is critical to the sustainability of the company.

How to ensure that we are financially sustainable requires us to be abreast of the changing times. As the global financial system becomes increasingly complex, the challenges to be met are also growing. New effective and legitimate measures and business models are needed to help manage these evolving financial challenges.



### **Economic Value Generated and Distributed**



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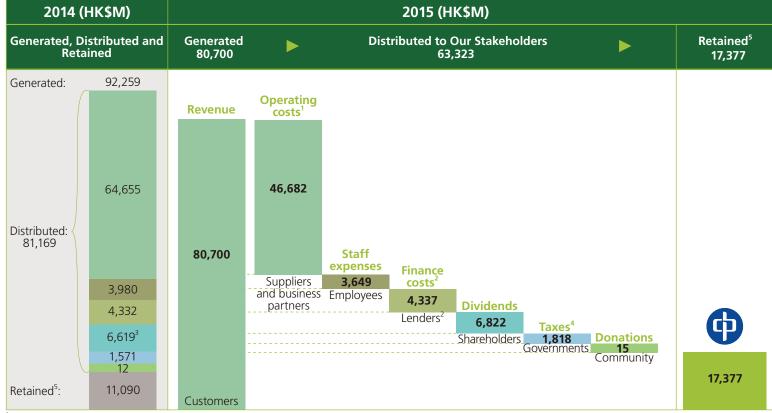
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We create value not only for our shareholders, but also for our other stakeholders – over 78% of our revenue was redistributed back to our stakeholders in 2015.

#### Economic Value Generated and Distributed G4-EC1

Revenue can be viewed as the economic value CLP created for the provision of electricity and gas supply to our customers. The payment of expenses can be considered as the distribution of economic value to our various stakeholders – suppliers, employees, capital providers, governments and the community. Economic value retained in CLP represents the reinvestment made to preserve operating capacity and to fund new investments.



For simplicity sake, operating costs included earnings attributable to other non-controlling interests and netted with other gain, finance income and share of results (net of income tax) from joint ventures and associate.

<sup>&</sup>lt;sup>2</sup>Lenders include perpetual capital securities holders and finance costs include payments made to them. <sup>3</sup>The 2014 figure was adjusted to align with current year's presentation basis.

<sup>&</sup>lt;sup>4</sup>Represents current income tax but excluding deferred tax for the year

<sup>&</sup>lt;sup>5</sup>Represents earnings attributable to shareholders (before depreciation, amortisation and deferred tax) for the year retained.

# **Market Regulation and Planning**



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We operate in different countries, each with different market structures and different implications of what sustainability means for our business in each location.

#### 2015 REGIONAL DEVELOPMENT

The respective local and national governments are one of CLP's most important stakeholders. We work closely with these stakeholders, and the results help guide and inform our business model and development plans for each country.

In the regions in which CLP operates, there is enormous variation in the electricity market structure. These market structures and the associated rules have a fundamental impact on the financial performance and sustainability of each of our businesses.

Below are summaries of regulatory developments and government engagements for 2015 in each of the regions where we operate.



### Independence

Although CLP operates in a heavily regulated industry, we are not associated with any government body. CLP is a publically held company listed on the Hong Kong Stock Exchange.

None of the companies in the CLP Group receives any significant financial assistance from the government outside of those financial incentives or subsidies, which are in place to encourage market participants to behave in certain ways. Examples of such incentives include tax holidays and preferential tariffs for renewable investment or financial assistance from export credit agencies.

### **Political Neutrality and Public Policy Positions**

It is our policy to remain politically neutral and to avoid making political contributions. For public policy developments which apply to the electricity industry, we take public policy positions and participate in the discussions. We feel that in bringing our industry expertise to the table, we can add value to the discussion on how best to structure rules for our industry going forward, as both technology and public demand for our product evolves.

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# -[Hong Kong]-

Electricity in Hong Kong is supplied by two vertically integrated utilities, each serving different geographical areas. They are regulated by the Government under a Scheme of Control (SoC) framework, which allows them to earn a return based on the capital investment in fixed assets required to supply electricity. As one of the two electricity utilities in Hong Kong, our business decisions are closely intertwined with the electricity supply in the city. Under the SoC, we have been working closely with the Hong Kong Government to forecast electricity demand and plan for investment to provide safe and reliable electricity supply to our customers at reasonable cost and while improving environmental performance.

### **Tariff Adjustment**

Under the SoC, CLP is required to submit to the Government a tariff proposal for the next year before the end of October every year. CLP and the Hong Kong Government will jointly review and agree on the tariff before it becomes effective.

CLP's electricity tariff mainly consists of a Basic Tariff and a Fuel Cost Adjustment. The Basic Tariff covers all the required operating costs (including a standard cost of fuel) and the net return as determined by the SoC. The Fuel Cost Adjustment covers the charge or rebate for the difference between the actual cost of fuel and the standard cost of fuel recovered through the Basic Tariff.

For 2016, the Average Total Tariff is HK\$1.132 per unit of electricity, a decrease of 0.9% from 2015. The Average Basic Tariff is adjusted upward by 1.7 cents per unit of electricity, still at a level lower than that in 1998. The Fuel Cost Adjustment decreased by 2.7 cents per unit of electricity, primarily due to a significant drop in fuel prices.

#### **Fuel Mix Consultation**

The Hong Kong Government launched a three-month public consultation on the future development of the electricity market on 31 March 2015. The consultation paper presented the results of the 2014 public consultation on Hong Kong's future fuel mix for electricity generation, which showed that the majority of respondents supported local generation by natural gas. The paper also proposed to increase the percentage of local gas generation to around 50% of the total fuel mix in 2020 and envisaged that a small number of additional gas units would need to be built to increase the use of natural gas.

To meet the Government's policy of increasing the share of gas in the total fuel mix for power generation to around 50% in 2020, CLP has been actively engaging with key stakeholders on the proposal to build a new Combined Cycle Gas Turbine (CCGT) at Black Point Power Station to be ready by then. The new CCGT unit would adopt a technology that has comparatively higher efficiency and better emissions performance than our existing generation units. We submitted a Development Plan to the Government at the end of 2015, followed by an environmental impact assessment study report in February 2016.

# **Market Regulation** and Planning







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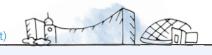
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# -[Hong Kong] (con't)



### **Future Regulatory Framework**

The SoC has delivered reliable and safe power to Hong Kong for over 50 years, with improving environmental performance and reasonable tariffs. The current Scheme of Control (SoC) Agreement signed between the Hong Kong Government and CLP will expire in 2018.

In order to understand the Hong Kong community's views on the matter, the Hong Kong Government launched a three-month public consultation on the future development of the electricity market on 31 March 2015. CLP actively engaged with stakeholders, listened to their views and provided relevant information to facilitate a thorough understanding of the issues through public forums and local events. CLP submitted its response in June 2015, in which we stressed that any new regulatory arrangements must not compromise the current levels of high supply safety, world class reliability, environmental performance, reasonable tariffs and maintain sufficient incentives to facilitate continued investment. We believe that any new regulatory arrangements should build on the existing framework and evolve along our three proposed guiding principles, namely Greener and Smarter Electricity, Enhanced Customer Experience and Effective Regulation, as laid out in our submission.

The consultation generated an enthusiastic response: over 15,000 public responses were submitted to the

Government. In November 2015, the Government tabled the findings of this consultation. The majority of respondents recognised the effectiveness of the SoC Agreement and supported the current contractual arrangements which they felt had met the four energy policy objectives of safety, reliability, reasonable tariffs and environmental protection. Respondents also generally agreed that the SoC Agreement has enabled electricity providers to provide customers with a reliable and safe electricity supply, which is considered to be of great importance. For the future, respondents wanted more emphasis on promoting renewable energy and energy conservation. We welcome the consultation results and we have commenced discussions with the Government on the new SoC Agreement.



CLP submitted a response with our views to the Hong Kong Government's public consultation on the future development of the electricity market in June



Find out more about CLP's Response.

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### -[Mainland China]-

Although the power industry in Mainland China is dominated by state-owned companies, there are some limited opportunities for private companies like CLP to invest in the industry. Although our business is small compared to local players, we are one of the largest external energy investors in Mainland China.

Because the government plays such a large role in the electricity industry in Mainland China, maintaining strong relationships with government officials is just as important as monitoring regulatory developments.

#### **Electricity System Reform**

In March 2015, the Central People's Government released Document No. 9, "Certain Opinions on Further Deepening Reform of Electricity System", a guiding policy document co-signed by the State Council and the Central Committee of the Communist Party. This document set out the general principles of power sector reform in the coming years with the main objective of introducing competition and improving efficiency across the power industry value chain. Some key policies include tariff setting reform, promotion of electricity trading mechanisms, support of private investment in transmission and distribution, and the promotion of cleaner technologies.

A key driver of the proposed reforms is to increase efficiency of the power industry. This is in line with the national policy, which is shifting from ensuring enough generation to meet significant levels of demand growth, to better managing the now vast and sprawling power sector. The reform plan is expected to be gradually implemented in the 13<sup>th</sup> five-year period (2016-2020).

#### **Government Engagements**

CLP held various meetings and visits to our assets to engage key government stakeholders and discuss relevant issues. For example in November 2015, our CEO, Mr Richard Lancaster, accompanied by Managing Director – China, Mr SH Chan, met senior government officials in Shandong who highlighted the need for Shandong Province to adopt renewables to enhance the provincial energy infrastructure and encouraged CLP to invest in wind and solar power projects.

Around the same time, a CLP delegation visited Laiwu City and met with senior government officials in Laiwu who remarked that CLP's new energy investment has helped revitalise the local economy and reiterated continuous support from the Laiwu Government.



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Government-owned companies have significant presence in the entire value chain of the electricity industry in India. However, foreign private companies are allowed to invest in the industry in India as well. CLP has seized this opportunity and is currently India's largest independent wind power producer and one of the leading foreign investors in the power sector.

Considering the highly regulated nature of the electricity industry and significant presence of governmentowned companies in the value chain, maintaining strong relationships with the relevant government officials through engagement and frequent communication is again, just as important as monitoring regulatory developments.

### **Regulatory Developments and Government Engagements**

When building relationships with key stakeholders, CLP India works to achieve mutual trust, respect and integrity. This applies to all Government bureaux, governing bodies of neighbouring villages, and community programme partners. From time to time, we engage State and Federal Government agencies responsible for policy decisions on areas affecting our business, and make joint representations on key issues with leading industry associations. For example, in 2015, CLP India worked with the Association of Power Producers, of which we are a member, to provide opinion from industry on Standard Bidding Documents for Ultra Mega Power Projects to the Ministry of Power.

### -[Australia]-

Eastern and Southern Australia, where our business is located, is home to the National Electricity Market (NEM). In the NEM, private generators along with a few governmentowned assets compete to dispatch their generation through a competitive wholesale market. The retail market is largely privatised, allowing all customers to enter a contract with a retailer of their choice. The transmission and distribution elements of the electricity value chain are regulated monopolies. A wide range of regulations relating to consumer protection also apply to energy retailers.

EnergyAustralia is one of the largest privately-owned electricity generators in the NEM, and a major gas and electricity retailer in New South Wales (NSW), Victoria, South Australia, the Australian Capital Territory and Queensland, the latter in which EnergyAustralia is an electricity retailer only. EnergyAustralia's business model is to ensure it matches customer demand with generation and because it is a competitive market, industry participants largely rely on the price signals present in the retail and wholesale markets to make decisions about whether to invest in new generation or retire existing assts. To complement the price signaling, an independent market operator, known as the Australian Energy Market Operator (AEMO), publicly releases annual supply and demand forecasts along with a list of generation and production projects under construction in documents called the Electricity Statement of Opportunities and Gas Statement of Opportunities. AEMO also identifies emerging constraints in the electricity and gas transmission networks.

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# -[Australia] (con't)

### Reforms to the Revised Renewable Energy Target (RET)

On 23 June 2015, the Australian Parliament agreed to new legislation giving effect to reforms to the Renewable Energy Target (RET). The new target for large-scale generation of 33,000GWh in 2020 (reduced from 41,000GWh) is set to double the amount of large-scale renewable energy being delivered by the scheme compared to current levels. If this target is delivered, it means that about 23.5% of Australia's electricity generation in 2020 will be from renewable sources. The Clean Energy Regulator will provide an annual statement to Parliament on how the scheme is tracking towards the 2020 target, and any impact the RET is having on electricity prices.

### State level electricity price regulation

The NSW Government deregulated retail electricity prices from 1 July 2014 and following its perceived success, is now considering deregulation of retail gas prices. It is currently reviewing the extent of effective competition in NSW gas markets in advance of a final decision. For electricity, as the incumbent retailer in the Ausgrid distribution zone, EnergyAustralia agreed to the Government's proposal of a two-year transitional retail tariff. Households who had not switched over to a market rate by 1 July 2014, received a 1.5% reduction in their rate compared to the most recent regulated price and a Consumer Price Index (CPI) increase on 1 July 2015 for the second year of the arrangement. In Queensland, the Government is considering whether to deregulate retail electricity prices and is conducting a review that will be completed in 2016.

The Victorian and Oueensland Governments have both commenced reviews to consider the appropriate level of feedin tariffs for solar power that is produced at the home or business premises of a 'small customer' and exported into the electricity grid. This may lead to changes in the regulation of these tariffs, such as increase in the minimum tariff paid to solar customers.

### Smart meters and energy efficiency

The Australian Energy Market Commission is proposing rule changes to encourage competition in the provision of metering services. The NSW Government supports greater competition in metering and a voluntary market-led roll out of smart meters, consistent with the national regulatory framework.

The Victorian Government has extended the Victorian Energy Efficiency Target (VEET) scheme, which requires energy retailers to provide incentives to Victorian households and businesses to undertake improvement such as installing energy efficiency appliances. EnergyAustralia will continue to meet its obligations under the scheme by purchasing certificates from service providers that offer eligible products and services.

The NSW Government administers the Energy Savings Scheme. Its principal objective is to achieve energy savings by creating a financial incentive to reduce the consumption of electricity through energy savings activities and it has recently been extended to also cover gas. Retailers must calculate their individual energy savings target, obtain and surrender certificates in order to meet its target.

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We must be financially sustainable so that our company can be sustainable. Today it is not just about using traditional tools for financial management, it is also about exploring new tools and business models.

#### **DELIVERING VALUE TO SHAREHOLDERS**

CLP reported strong financial results in 2015, following restructuring in Australia and better results from other overseas operations. The Group's operating earnings increased 14.6% from 2014 to HK\$11,533 million. Total earnings were up 39.6% to HK\$15,670 million.

A majority of our shareholders invest in our company because they value our ability to provide reliable and consistent dividends with gradual growth. At CLP, we understand this expectation and manage the company to ensure we are able to meet it. We have a solid, 55-year track record, as our annual dividend has not decreased since 1960.

In 2015, CLP paid quarterly dividends to our shareholders of HK\$0.55 / share for each of the three interim dividends and HK\$1.05 / share for the fourth interim dividend. Combined, this resulted in total dividends for the year of HK\$2.70 / share. This is an increase from last year's total dividend of HK\$2.62 / share. This represents a dividend payout ratio for the year of 59% of operating earnings.

CLP continued to demonstrate its characteristics as a defensive stock in 2015, which marked a year of high volatility for the Hong Kong market. Relative to its starting position on 1 January, the Hang Seng Index (HSI) fluctuated from a loss of 13% to a gain of 20%, finishing the year down by 7%. In contrast, CLP's share price was comparatively stable and the stock ended the year with a modest decline of 2%.

In 2015, the average closing price of CLP's shares was HK\$66.53, an increase of more than 5% when compared with the average of 2014. The stock recorded its highest closing price of HK\$69.75 on 27 February and the lowest closing price of HK\$62.20 on 2 September. It ended the year at HK\$65.85, outperforming the HSI. Total returns to shareholders come from the combination of share price appreciation and dividend payments over time. During the 10-year period from 2006 to 2015, CLP provided an annualised rate of return of 8.35%, as compared with 7.50% for the HSI.

CLP is included in a number of global utilities / electricity indices. For instance, CLP represents 1.64% of the Bloomberg World Electric Index (BWEI), which comprises 119 worldwide electricity stocks.

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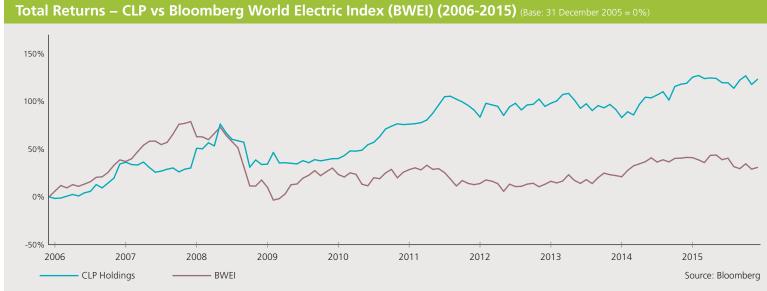
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#### **CREDIT RATINGS**

CLP is committed to maintaining high quality grade credit ratings. Our effort to further enhance the capital structure of the Group by issuing US\$750 million (HK\$5.8 billion) perpetual capital securities in 2014 and deliver a more robust financial profile by further reducing debt gearing and lowering debt funding costs in 2015 paid off. The credit rating agencies revised the outlooks of CLP Holdings (by S&P and Moody's) and CLP Power Hong Kong (by S&P) from negative to stable after the annual credit rating review in May 2015. In parallel, both S&P and Moody's affirmed the credit ratings of CLP Holdings and CLP Power Hong Kong at A- / A2 and A / A1 respectively. In May 2015, S&P revised EnergyAustralia's rating outlook to stable from negative and affirmed its BBB- credit rating.

These rating actions demonstrated that the two credit rating agencies recognised CLP exercised a high level of discipline in managing its investments and financials. The credit ratings of major companies within the group as of 31 December 2015 are presented here.

Credit Ratings	
CID Held's re	<b>S&amp;P:</b> Affirmed the A- credit rating with outlook revised to stable from negative in May 2015. S&P opined that CLP Holdings' focus on organic growth should lead to the steady improvement of credit metrics.
CLP Holdings	Moody's: Affirmed the A2 credit rating with outlook revised to stable from negative in May 2015. Moody's recognised the increasing earnings from operations in Mainland China and India.
CLP Power	<b>S&amp;P:</b> Affirmed the A credit rating with outlook revised to stable from negative in May 2015. S&P assessed the business risk profile of CLP Power Hong Kong as "excellent" which provides sound and stable cash flows.
Hong Kong	Moody's: Affirmed the A1 credit rating with stable outlook in May 2015. Moody's recognised the positive aspect of predictable cash flows from CLP's Hong Kong operations.
EnergyAustralia	<b>S&amp;P:</b> Affirmed the BBB- credit rating of EnergyAustralia with outlook revised to stable from negative in May 2015. S&P opined that EnergyAustralia's new retail billing system and expected lower operating cost should bring stable earnings.

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For 2015, the following most material aspects relevant to this chapter were identified:



**Availability and Reliability** 



Energy



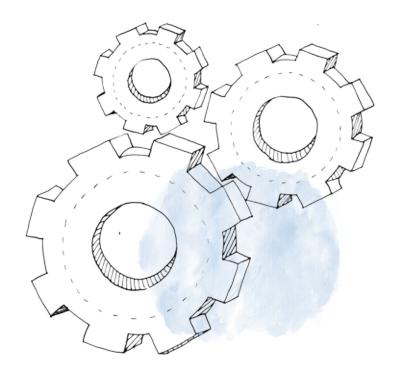
**Customer Privacy** 



**Product Responsibility Compliance** 



**Occupational Health and Safety** 



### Why are the aspects highly material?

At the end of the day, it is our operations that ultimately create the value we aspire to deliver and so the more efficient and effective they are, the more successful we can be in delivering this value to our stakeholders.

We are committed to building assets using the best available technologies and less emitting fuels where possible, and to run them efficiently and effectively to ensure a reliable supply of electricity is available to our customers. Our talented staff is key to delivering on that objective and so we are committed to ensuring they work under a healthy and safe environment.

Our customers are our bread and butter and so we must be committed to protecting customers' personal information as well as their rights under local laws and regulations.

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We are committed to generating and delivering electricity safely and reliably, at a competitive price and with the least environmental impact, to power the development of sustainable communities.

#### **AVAILABILITY AND RELIABILITY**

Availability and reliability are two key performance metrics for CLP assets. Targets for each asset are set annually and included in the business plan. Performance is reported on a weekly basis to senior management. Any significant variations to what has been planned are analysed and corrective actions are put in place where appropriate.

For our Generation assets, we monitor the capacity or service factor which is the amount of electricity the power plant produces over a year as a percentage of its full capacity. Typical values range from 70% to 90%.

Find out more about the generation performance of our assets.

### Reliability of Electricity Supply in **Hong Kong**

We maintain a world-class supply reliability of over 99.999%. In 2015, we achieved a historic low level of 1.32 minutes of unplanned power interruptions per customer. Between 2013 and 2015, on average a CLP customer experienced 1.5 minutes of unplanned power interruptions per year, improving from 2.3 minutes between 2012 and 2014.

The achievement is an aggregation of various factors such as a regulatory framework that encourages careful investment planning, professional maintenance and expertise in power operations. In 2015, we continued to enhance the reliability and security of our supply system and invested HK\$7.6 billion in generation, transmission and distribution networks, as well as in customer services and supporting facilities.

Reliability Levels in Hong Kong, New York, Sydney, London and Singapore Unplanned customer minutes lost per year 0.5 17 28 Singapore **CLP Power** Sydney **New York** London **Hong Kong** (CBD) More Reliable Less Reliable Notes: 1 2013 - 2015 average for CLP Power Hong Kong 2 2012 - 2014 average for all other cities (the latest available data) 3 Singapore's power supply network is mostly underground, and is less exposed to the influence of weather and other external interferences than overhead lines

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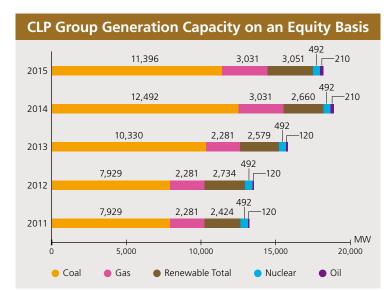
#### GENERATION

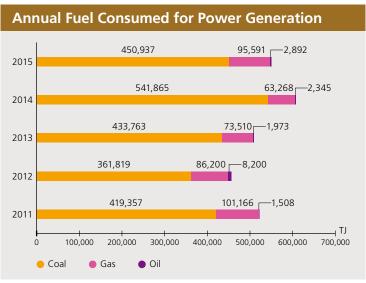
Since we commissioned our first generator over a century ago in Hong Kong, we have increased the generation capacity we are involved in to more than 18,180MW equity of generating capacity and 4,526MW of capacity purchase from six different energy sources. Our diversified portfolio of power generation assets include: coal, gas, nuclear and renewable energy (wind, hydro and solar).

In 2015, the Group's total generation capacity decreased by 4% to 18,180MW (2014: 18,885MW). The coal capacity dropped by 9% whereas the renewable capacity rose by 15% during the same year. The total fossil fuel consumption for power generation decreased by 9.6% to 549,420TJ and we used 17% less coal and 51% more gas in 2015.

Most of our assets use electricity generated from their own operations for ancillary use but a small amount is also purchased from the grid. In 2015, the amount of electricity purchased at our operationally controlled assets for their own use was over 218GWh.

In terms of transport fuel consumption, we have a fleet of vehicles which we use mainly for daily operation and network maintenance purposes. In 2015, the amounts of petrol and diesel purchased for use in our transportation fleet in our Hong Kong business were 1,235 kilolitres and 433 kilolitres respectively.





Find out more about our assets' generation performance, including availability factor, thermal efficiency and energy intensity, where applicable.

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Following the first full year's execution of our "Focus · Delivery · Growth" Group strategy, our generation capacity was adjusted as a result of capacity changes in our asset portfolio, including existing assets and assets in the pipeline. Below is a summary of the capacity changes by market.

In Hong Kong, our core market, we almost doubled the amount of natural gas used to generate power to improve our environmental performance. We are actively engaging with key stakeholders on the proposal of building a new Combined Cycle Gas Turbine (CCGT) at Black Point Power Station to support the Government's policy of increasing the share of gas in the Hong Kong's fuel mix for power generation to around 50% in 2020. The new CCGT unit would adopt a technology that has comparatively higher efficiency and better emissions performance than our existing generation units. We are making good progress and have submitted a Development Plan to the Government at the end of 2015, followed by an environmental impact assessment study report in February 2016.

In Mainland China, which has been identified as a key growth market in our investment strategy, we continued to expand our generation portfolio, concentrating on renewable energy and high efficiency coal-powered developments.

We added 90MW of solar energy (Sihong and Xicun II) to our portfolio. Xicun I, which was commissioned in December 2014, performed above our expectations in 2015 due to better solar resources and higher plant efficiency. The success of Xicun I has helped CLP secure additional capacity quota from the Yunnan Provincial Government to develop Phase II, adding a further 42MW of capacity.

Xundian Wind (49.5MW) commenced commercial operation in January 2016, while the construction of Sandu I, CLP Laizhou and Laiwu II Wind (198MW combined) continues. We have also obtained approval from Guizhou Energy Administration for the development of Sandu II wind (99MW).

Construction of Phase II of Fangchenggang Power Station in the Guangxi Zhuang Autonomous Region continued in 2015 and will go on line in 2016, making use of the cleanest ultra-supercritical technology.

In India, also our primary growth market, our wind portfolio continued to expand and our coal and gas plants showed improved performance. We commissioned more than 190MW of new wind capacity in 2015, after three wind farms (Chandgarh, Bhakrani and Tejavu) became fully operational. In addition, we have another 149MW of wind power in the pipeline. Jhajjar Power Station achieved availability of more than 80% due to improved operations and coal supply. The utilisation of our gasfired Paguthan plant also improved, thanks to both lower gas prices and additional gas imports at subsidised prices from the Government's subsidy scheme.

In Australia, to support the development of renewable energy projects and secure a supply of large-scale generation certificates (LGCs) to meet the requirements of the federal government's Renewable Energy Target scheme, EnergyAustralia has signed four Power Purchase Agreements (PPAs) with new wind farm developments. Under these PPAs, EnergyAustralia buys output from the Mortons Lane, Taralga, Boco Rock and Gullen Range wind farms.

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#### **OPERATION EFFICIENCY IMPROVEMENTS**

We have a variety of generation assets in our portfolio, using different fuel sources and at various stages of the asset life cycle. Whichever type of generation asset, we endeavour to identify opportunities for improvement in operational efficiency. For projects involving a major overhaul of the assets, they undergo stringent technical and financial scrutiny before implementation. Our ultimate aim is to operate all of our plants efficiently, with minimal environmental impacts for the equivalent amount of output.

Listed below are some of the operational efficiency improvement initiatives conducted on plants in 2015:

- In Hong Kong, we conducted a chemical clean at C6 unit's Heat Recovery Steam Generator (HRSG) of the Black Point Power Station. It effectively removed deposits at the High Pressure Evaporator section, and analysis of the performance improvement indicated HRSG efficiency and unit output were recovered by 0.42% and 620kW respectively.
- In Mainland China, we expanded the capacity for our Xiazhu hydropower station, one of the hydropower stations under the Huaiji hydropower station. The capacity was increased from 4MW to 4.8MW which is roughly equivalent to annual electricity generation of 1,870MWh.

- EnergyAustralia improved the generation efficiency of Yallourn Power Station through the installation of a new High Intermediate Pressure (HIP) turbine at our Unit 2. This results in an efficiency improvement for Unit 2 of 2.7%, which now produces around 70-80GWh more electricity per year without any extra coal consumed or CO<sub>2</sub> emissions emitted. As a comparison, 80GWh is equivalent to installing a 30MW wind farm with a 30% capacity factor. This also marked the completion of our five-year programme of new HIP's on all four Yallourn Units.
- In our Paguthan plant in India, we managed to secure additional gas allocation through the Government of India Scheme from June onwards. This improved the Plant Load Factor to roughly 11% from 5%. We also optimised our load dispatch through better generation planning, which enabled us to operate the units at the best technologicallycommercial normative heat rate with better utilisation of fuel. As a result of these initiatives, we saved 29,260GCal (equivalent of 2.9 mcmd of Gas) of thermal energy in the second half of the year.



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#### TRANSMISSION AND DISTRIBUTION

While CLP has generation businesses across the Asia-Pacific region, Hong Kong is the only location where we operate a transmission and distribution network. It serves about 80% of the population of the city and close to 100% of the population in our service area.

The reliability of our system is above 99.999%, higher than other major cities such as London, New York and Sydney. At the end of 2015, we had approximately 1,180 km of overhead and approximately 13,782 km of underground circuits at medium or higher voltage. The length of overhead lines was slightly reduced from the previous year and there was a slight increase in the length of our underground cables. This expansion was needed to keep up with the electricity demand growth in Hong Kong. In addition, we also had 226 primary and 14,019 secondary substations in Hong Kong.

### **Customer Safety**

Electricity needs to be provided safely. We take this responsibility seriously and place the highest priority on both customer and employee safety.

Working near electricity supply lines could impose public health and safety concerns. We conduct regular construction site inspections and provide cable plans and safety talks to road work contractors to enhance safety. Through site inspections and safety talks, measures for working near electricity supply lines are communicated to site management personnel.

Electromagnetic fields (EMF) arising from the power system is another public health concern. Our power supply equipment fully complies with the guidelines issued by the International Commission on Non-Ionising Radiation Protection (ICNIRP). Regular EMF measurements on our power supply equipment are carried out jointly with the Electrical and Mechanical Services Department. The measured EMF levels are well below the guideline limits.

**Case Study** 

### **Technology Application in Hong Kong**

We strive to maintain operational and maintenance excellence in order to satisfy customers' increasing expectations over supply reliability and power quality. We achieve this through the application of proven technologies. An illustration of such continuous improvement efforts is our project to develop an "Enhanced Automatic Power Restoration System for 11kV Overhead Line", which automates power supply restoration with intelligent switches and advanced controllers, when circuit outage is triggered by external interference of the distribution overhead power lines.

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#### **Performance**

We use a set of universally recognised supply reliability performance indicators from the IEEE 1366-2012 standard to monitor our system performance. These indicators are the core attributes for power systems and are reported annually to the Hong Kong Government.

In order to improve our system performance, we have vegetation management and third party damage prevention programmes in place. Furthermore, new technologies have been introduced to further enhance network reliability and minimise customer interruption time. Some examples are:

- Use of a newly developed bypass jumper connection to speed up repairs of the overhead line system;
- Use of in-line isolators as temporary isolation points to reduce planned interruption duration for overhead line circuits; and
- Installing on-line condition monitoring systems for switchgear and transformers to allow real-time monitoring and detection of incipient fault conditions. The information gathered by these systems also helps us optimise our condition-based maintenance strategy.

In 2015, our average network loss for the past five years was 4.1% of the total energy, which remained unchanged from our 2014 figure.

# System Average Interruption Frequency Index (SAIFI) EU28

SAIFI is the average number of supply interruptions for each customer served. Both planned and unplanned interruptions are included. Our three-year average SAIFI (2013 – 2015) was 0.17, meaning our customers experienced a power interruption approximately once in six years during this period. This is an improvement over last year's three-year rolling average of 0.18.

# System Average Interruption Duration Index (SAIDI) EU29

SAIDI is the average duration of interruptions each customer may encounter in a given year. Our three-year average SAIDI (2013 – 2015) was 0.39 hours including both planned and unplanned interruptions. This is an improvement over last year's three-year average SAIDI (2012 – 2014) of 0.43 hours.

# Unplanned Customer Minutes Lost (Unplanned CML) EU29

Unplanned CML is 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. Our 2013 to 2015 three-year average unplanned CML is 1.5 minutes. This is an improvement over last year's average of 2.3 minutes.

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We operate retail businesses in Hong Kong and Australia, where the local market structures, regulatory requirements, demand, customer preferences and cultural norms are very different and so performance is often assessed, interpreted and managed differently due to the different context.

#### **CUSTOMERS FOCUS**

We serve residential, commercial and industrial consumers in both Hong Kong and Australia. In Australia, we have reshaped our strategy and put a priority on customers. We appointed a new executive management team with proven experience in energy, retail and business transformation for EnergyAustralia.

The reshaping work refreshed and sharpened the business' focus in key areas, in particular enhancing customer service and expanding its offer of next-generation products. Towards this endeavour, we successfully integrated all mass market customer accounts onto one billing system, making them simpler, more efficient and more reliable.

# -[Hong Kong]-

We are the sole electricity provider for Kowloon, the New Territories, and most of the outlying islands, serving 2.48 million customer accounts or about 80% of Hong Kong's population.

Our total electricity sales for 2015 were 34,220GWh, where 33,033GWh came from sales to our Hong Kong customers and 1,187GWh from sales to the Mainland. In Hong Kong, there was an increase in sales in the Commercial and Infrastructure & Public Services sectors in 2015, which was partially offset by a moderate decrease in sales for our Residential sector.

Hong Kong Customer Breakdown  No. of Customers  As of 31 December 2015			
COMMERCIAL	MANUFACTURING	RESIDENTIAL	INFRASTRUCTURE AND PUBLIC SERVICES
200,000	20,000	2,164,000	101,000
TOTAL: 2,485,000			

## [Australia]

EnergyAustralia retails electricity and gas to customers across four states: Victoria, New South Wales (NSW), Queensland (electricity only) and South Australia.

As at 31 December 2015, EnergyAustralia had about 2.64 million customers, comprising about 1.8 million electricity accounts and 844,000 gas accounts. We achieved a modest net increase in mass market customer accounts as a result of enhanced brand awareness, a focus on customer retention and new third-party sales channels.

Australian Customer Breakdown  No. of Customers  As of 31 December 2015	
COMMERCIAL AND INDUSTRIAL	MASS MARKET
17,052	2,620,963
TOTAL: 2,638,015	

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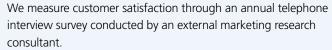
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#### **CUSTOMER SATISFACTION**

In order to gauge the performance of our retail businesses, we ask our customers how we are doing via customer satisfaction surveys that we conduct on a regular basis.

# -[Hong Kong]



The customer satisfaction score is calculated considering overall satisfaction towards the utility and relative rating against an ideal utility in Hong Kong. The score is benchmarked against all public utilities in the energy sector (CLP Power, Hong Kong Electric and Towngas) and all public utilities (public utilities in the energy sector plus Hong Kong Post and the Water Supplies Department).

Hong Kong Customer Satisfaction Score			
	CLP	ALL PUBLIC UTILITIES IN THE ENERGY SECTOR	ALL PUBLIC UTILITIES
2015	68	69	69
2014	69	69	70
2013	68	68	69
2012	68	68	70
2011	68	67	70

## [Australia]

For the third year in a row, EnergyAustralia used a Strategic Net Promoter Score (NPS) approach to assess customer satisfaction.

In addition to the Strategic NPS tracking, which measures overall customer advocacy, in November 2015 EnergyAustralia also launched a Transactional NPS tracking, which will assist with tracking of service performance in relation to specific customer interactions (for example after a phone call with our contact center) which will help with identifying areas for improvement. The results are not yet available but will form a part of this review in 2016.



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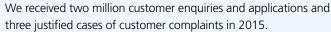
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#### **CUSTOMER ENQUIRIES AND COMPLAINTS**

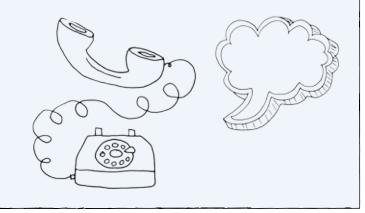
In addition to gauging the performance of our retail business based on satisfaction, we also assess our performance based on the number of customer enquiries as well as complaints.

# -[Hong Kong]



Customer enquiries are handled by our skilled and well-trained frontlines at the Customer Interaction Centre (CIC) in a 24 x 7 operation model. CIC provides one-stop shop customer services in order to maintain good customer relationships to help word-ofmouth promotion of CLP's services. All enquiries will be resolved by the frontlines where possible. For unresolved issues, the cases will be passed to the Customer Care team which is a support function within CIC for escalation. The Customer Care team is a centre of excellence for handling general customer complaints and specific enquiries of high consumption patterns.

CIC has an internal service pledge to follow up verbal complaints within 24 hours and to acknowledge written complaints within two working days. All escalated cases will be studied thoroughly and a resolution developed for the customer.



### - Australia -

The introduction of our internal complaints channel in July 2014 continues to be extremely effective in capturing complaints and resolving issues before they escalate to the Ombudsmen schemes. In 2015, there was a 27% decrease in the total number of Ombudsmen complaints received by EnergyAustralia and the number of Ombudsmen complaints per 10,000 customers is the lowest it has ever been at 56 per month across 2015.

Our call rate (inbound customer enquiries) reduced from 9% per 100 customers at the start of the year to 6.95% at the end of the year. This reduction can be attributed to an increase in digital service offerings, including live-chat and my-account activities.

A highlight for 2015 was our call centre operated under the new "triage/transfer model". All calls are initially handled in our customer support area, more complex calls are then transferred into a specialised area. Our contact rate in 2015 was consequently reduced by 18% from 2014.





3.372.654 2014



2013



5.001.049 2012

Complaints Received by EnergyAustralia





2014



2013



53.538

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#### **CUSTOMER SERVICE IMPROVEMENTS**

In our continuing focus on our customers, we initiated a number of new customer service improvement programmes in 2015.

# -[Hong Kong]-



Two examples of such initiatives in 2015 were:

- An enhanced "WeChat" function with proactive messaging and promotional service to all high-risk buildings to divert outage or voltage dip reporting to non-voice channels; and
- New energy efficiency and conservation services, such as energy modelling and air flow optimisation were provided to commercial and industrial customers.
- See the revamped CLP Power Hong Kong website.

# [Australia]



In 2015, we saw a 600% increase in customers using our Livechat functionality with an 88% favourable response from Live-Chat customer surveys.

Throughout the year we promoted to customers the use of e-billing. At the beginning of the year only a few thousand customers received bills via email. By the end of 2015, we had approximately 300,000 customers on e-billing, which is around 40,000 above forecast.

Our plan is to further invest in our digital mobile platform to improve the customer experience.





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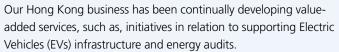
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#### **VALUE-ADDED SERVICES**

In addition to improving customer service, we are also responding to customer demands by developing new value-added services.

# -[Hong Kong]

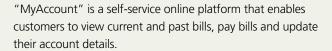


We have now established more than 140 charging points providing standard, semi-quick and quick charging services, including the first multi-standard quick charger in the city. The charger can accommodate different charger standards worldwide and is compatible with EVs from Europe, the US and Japan as well as models recently introduced to Hong Kong from Korea. A one-stop "333 EV Power Supply Support" service was introduced at the same time, which makes it easier for EV drivers to install private chargers in residential and commercial buildings.

Find out more about our EV support services.

The existing Scheme of Control (SoC) Agreement sets an energy efficiency and conservation target of achieving no less than 150 energy audits for commercial and industrial customers and saving at least 12GWh of electricity consumption per year. CLP has successfully achieved these targets each year. In 2015, we conducted 160 energy audits for our commercial and industrial customers from different sectors. Arising from energy audits conducted for our customers over the previous years, 17 energy saving projects were completed in 2015, contributing a total saving of 15.26GWh.

### [Australia]



As at the end of 2015, there were more than 250,000 EA customers registered in comparison to 60,000 in 2014. In 2015, added functionality included setting up direct debit, regular payment options, additional account holders, managing billing preferences and moving home under the digital transformation programme.

Our Home Services programme offers customers a tailored end-to-end heating and cooling, hot water and solar system service. In 2015, EA Home Services commenced selling a new advanced solar system. Our new premium LG Black systems combine LG Neon 2 BlackTM panels with 4th generation M250 Enphase Microinverters. This was a new addition to our range of services to capture premium buyers with strong brand association and to ensure we were delivering world-leading products.

٦	Find out more about our MyAccount platforn

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#### **ENERGY EFFICIENCY AND CONSERVATION INITIATIVES IN HONG KONG**

Our efforts in promoting energy efficiency and conservation continued in 2015 as more programmes were rolled out to help our customers identify energy saving opportunities and better manage their electricity usage.

#### **Demand Side Management**

Our Demand Response programmes enable our commercial and industrial customers to save electricity by meeting their pre-agreed load reduction targets during demand peaks.

# Awareness Building Campaign Eco Building Fund

The Eco Building Fund helped fund energy efficiency improvement projects in common areas of residential buildings. By the end of 2015, 36 applications involving HK\$16 million had been approved.

#### **GREEN**PLUS Award 2015

The Award encouraged business customers to practise energy efficiency and conservation.

#### **Green Building Symposium**

The Green Building Symposium held in November 2015 provided a platform for our business customers and professionals in the building industry to share ideas and experiences.

#### **Eco Home Tour - Smart Living • Smart Use of Energy**

The new Eco Home Tour showcased an ingenious selection of home energy saving technology and devices from around the world to introduce low-carbon living and energy saving tips to visitors. The customer service centre in Tai Po was refurnished as an Eco Home to provide green living tips to customers.



# **Energy Efficiency Education Green Studio**

Green Studio, Hong Kong's first 3D environmental education mobile studio, has been in service since 2009. It received over 13,000 visitors in 2015 and will reach its 100,000<sup>th</sup> visitor milestone in 2016.

#### **CLP Junior Green Engineer Programme 2015**

Through field trips, talks and interactive workshops, primary four to six students who joined the CLP Junior Green Engineer Programme in the summer learned about science, environmental protection and the engineering profession. In 2015, the programme received over 1,000 applications.

#### **Green Elites Campus Accreditation Programme**

We engaged with more than 8,000 students and teachers of primary schools under Po Leung Kuk through the Green Elites Campus Accreditation Programme. Together with Friends of the Earth (HK) and Green Power, we provided them with educational tools and daily tips to encourage them to practise green living. In addition, over 22,000 primary school students enrolled as Green Elites through our Green Elites Portal to learn more about green living.

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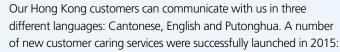
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#### **ACCESS TO ELECTRICITY**

Electricity is an essential service and we work hard to ensure all members of our community can access our products and services. We have services in place that ensure most challenges including language, culture, literacy or disability do not prevent people from accessing and using our products. In both our Hong Kong and Australian retail businesses, we avoid disconnection of our accounts and try to work out special arrangements for non-payments.

# {Hong Kong}



- Multi-Channel Customer Interaction Management Solution (eSix) through centralising management of calls, faxes, emails, SMSs on to a single platform, the Solution enables the elevation of CLP's customer interactions and customer services to a more advanced level:
- e-Welcome package to new customers to provide move-in details, value-added services and Energy Efficiency & Conservation (EE&C) information through email communication;
- WeChat service extended to hearing-impaired customers;
- Special fuel rebate hotline set up for one month to handle the enquiries and registration for moved-out customers; and
- Braille bill and a Green Braille bill (voice-over) to enable visuallyimpaired customers to understand their electricity bill statement in a more convenient manner.

Disconnections in Hong Kong, by Duration of Disconnection No. of Disconnections						
	0-2 DAYS	3-7 DAYS	8-31 DAYS	≥32 DAYS	TOTAL	
2015	8,128	313	1,748	8	10,197	
2014	5,519	196	241	59	6,015	

### -[Australia]-

In 2015 we continued providing the following services in Australia:

- Interpreter services for those who have a first language other than English;
- Telephone Typing Services (TTS) machine for the hearing impaired; and
- For the vision impaired we have a number of services, such as Braille billing and large format bill print.

Information on these services is easily accessible on the EnergyAustralia website and on customers' bills.

In July 2015, EnergyAustralia undertook a research project to better understand stakeholder expectations of its role and responsibilities in supporting customers who are struggling to pay energy bills. The exercise enabled EnergyAustralia to identify key priorities and areas for improvement in its hardship programme. This will be one of our key focus areas for stakeholder engagement during 2016.

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#### **CUSTOMER PRIVACY**

We monitor and annually document any complaints related to breaches of customer privacy and loss of customer data.

In our Hong Kong retail business, no customer privacy and data loss cases have been reported or noted.

Our EnergyAustralia retail business received a total of 49 privacy complaints relating to information being provided to unauthorised parties. EnergyAustralia has dealt adequately with the resolution of each complaint.

Of the 49 privacy complaints, six complaints were received from the Australian Privacy Commissioner regarding potential breaches of customer privacy. Following investigation of the complaints, the Commissioner closed three files on the basis that EnergyAustralia had not interfered with the customer's privacy and three are still pending further investigation.



Case Study

### **CLP Privacy Policy Principle**

As a responsible utility company, CLP is firmly committed to a set of business principles and ethics that help drive our company forward. One of these principles is respect for people and privacy and that begins with how we respect and protect the personal data we receive. To preserve the confidentiality of your personal data provided to us, we maintain the following data privacy principles:

- 1. We only collect personal data that we believe to be relevant and required to conduct our business;
- 2. We will not disclose your personal data outside CLP unless we have your consent or are required by law;
- 3. We aim to keep your personal data accurate and upto-date; and
- 4. We maintain appropriate security systems designed to prevent unauthorised access to your personal data.
- Find out more about our privacy principle.

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#### **COMPLIANCE**

Our objective is to comply with all applicable laws and regulations related to information about the retail of electricity in Hong Kong and the retail of gas and electricity in Australia. We do not sell products that are banned as our products are limited to electricity and gas.

On customer health and safety, there was no reported incidence of non-compliance with regulations or voluntary codes concerning health and safety impacts of products and services during their life cycle in 2015.

On product service labelling and product responsibility compliance, in our Hong Kong retail business we did not incur any monetary fines for non-compliance relating to the provision and use of electricity and we did not have any breaches of regulatory obligations.

In March 2015, the Federal Court approved a settlement between EnergyAustralia and the Australian Competition and Consumer Commission (ACCC) and the Australian Energy Regulator (AER) after EnergyAustralia's third party sales contractor Bright Choice (which traded as TeleChoice) contravened the Australian Consumer Law (ACL) for misleading conduct. An initial internal investigation by EnergyAustralia revealed that TeleChoice had engaged in misleading conduct

when dealing with certain customers to sell electricity and gas products on EnergyAustralia's behalf. The conduct occurred without EnergyAustralia's knowledge and was in contravention of contractual, training and scripting requirements. This was self-reported by Energy Australia to the regulators in September 2013, and the contract with TeleChoice was terminated shortly after. After a review of its internal sales and compliance processes, EnergyAustralia has now implemented stricter training and sales compliance procedures for employees and third party sales partners.

In 2015, EnergyAustralia also had 35 new instances of non-compliance against the National Energy Retail Rules, the Victorian Energy Retail Code and Queensland Electricity Industry Code. These breaches concerned overcharging due to tariff misalignment, failure to credit solar customers for generation, the application of discounts and rebates, and provision of information to customers such as providing contractual information and notice of a product change.

On marketing communications, other than what is reported in this Compliance section and the Customer Privacy section, there was no reported incidence of breaches of regulations and voluntary codes concerning marketing communication, including advertising, promotion and sponsorship.

# Emergency Management G4-DMA Disaster / Emergency Planning and Response

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We conduct regular drills and are vigilant and ready in terms of responding to and recovering from any emergency situation in a timely and effective manner so as to minimise disruption to our customers and enable their recovery if they are affected as well.

To ensure CLP can respond effectively to natural or man-made crises and minimise any impact on people, its assets, operations and our reputation, we have in place emergency response and crisis management plans. These plans lay down the processes, actions and responsibilities for responding to and managing a crisis from individual asset level right up to the overall Group.

#### **GROUP AND REGIONAL LEVEL**

Complementing the top level standard and guideline is the Group Crisis Management Plan that provides the necessary information to enable a crisis to be effectively handled at CLP Group level. It outlines our crisis management organisation, roles and responsibilities, procedures and processes, as well as all the tools needed to ensure our collective response to a Group crisis is well planned, well executed, and fully integrated across our organisation. The Plan also describes the relationship and interface between the handling of regional and group level crises, and places increasing emphasis on the processes that govern internal and external communication during emergencies to ensure the people responsible for managing the crisis have the necessary information to carry out their responsibilities and key stakeholders are informed.

#### **GENERATION PLANTS**

Each facility has its own Emergency Management Plan (EMP). These plans vary depending on the type of plant, the region in which it is located and what types of risks it faces. In order to be prepared for an emergency and to know how to put the plan into action, the facilities periodically conduct emergency response drills. Emergency Management Plans are reviewed as part of our internal Peer Review process.

Examples of emergency response drills in 2015 include:

- In our Paguthan Power Station in India, we conducted a counter-terrorist exercise with local police and government authorities.
- In Hong Kong, monthly emergency response drills are conducted across all three power stations with scenarios ranging from gas leakage; oil spill; medical emergency and communications failure. In addition, a quarterly security response exercise is held across our critical infrastructure to enhance security staff preparedness. Typhoon drills and emergency management drills are also conducted regularly within Hong Kong's Generation Business Group and Power Systems Business Group.

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#### TRANSMISSION AND DISTRIBUTION NETWORK

The increasing occurrence of extreme weather events such as a super typhoon can have a serious impact on the operation of our power system and consequentially, continuity of the electricity supply to the Hong Kong public.

We have procedures in place for a special operation mode under extreme weather conditions. It aims to mitigate the consequences of such an event and effectively manage communications both internally and externally. The timely and accurate communication of outage and repair statuses is a key element to keeping the public well informed in the event of widespread supply interruptions. To ensure our operators are well-versed and competent with the procedure, regular emergency drills are conducted by the personnel involved. Internal experienced operations personnel are assigned as auditors to pinpoint any inadequacies during the drills.

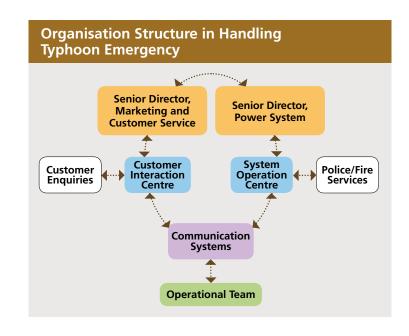
In addition, a number of initiatives have been implemented to mitigate the potential impact of extreme weather on our transmission and distribution system:

- Establishment of an Integrated Vegetation Management Operation Centre to enhance vegetation management to prevent faults;
- Allocation and positioning of more small-size mobile generators to provide temporary supply in rural areas with narrow roads; and
- Incorporation of additional manpower into typhoon response teams to improve emergency response capability.

#### **RETAIL**

Majority of our communication with the public is conducted at the retail level. When emergency events occur, we need to disseminate effectively to different stakeholders, information such as outage severity, restoration status, projections and appropriate safety messages.

In Hong Kong, our main interaction with the general public occurs in the Customer Interaction Centre (CIC), where our Customer Relation Officers handle enquiries. The CIC operates in emergency mode during adverse weather to handle the sudden upsurge of customer calls. If the circumstances require, we may also set up a back-up centre to accommodate these additional call agents handling calls diverted from the main CIC.



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We expect our suppliers to adhere to our Responsible Procurement Policy Statement which includes principles on legal compliance, respect for people, ethics and business conduct and environmental stewardship and encourage them to pursue continuous improvement and adopt best practice so that they too can be sustainable.

#### **OUR PROCUREMENT PRACTICES**

CLP's procurement function meets the company's business needs through strategic sourcing expertise, total cost philosophy and efficient procurement processes and collaboration with "best-fit" responsible suppliers.

All purchases are guided by the principles under CLP Code of Conduct, CLP Power Procurement Values and Principles and the CLP Group Responsible Procurement Policy Statement (RePPS). Under our Whistleblowing Policy, CLP encourages employees and related third parties to confidentially report any misconduct, malpractice or irregularities in any matters related to the Company. We encourage all our suppliers to abide by the above principles and require them to adopt similar standards and practices when doing business with us.

CLP is committed to conducting all our business with integrity. Our procurement process encourages fairness and the application of a high level of objectivity and impartiality in supplier selection. Our periodic internal review of procurement activities confirms no non-conformity in 2015.

We pursue sustainable development that meets the requirement of today's generation without compromising those of the future. In line with this concept, our RePPS stipulates our expectations on suppliers in terms of legal compliance, respect for people, ethics and business conduct, and environmental stewardship. The RePPS applies to all major CLP assets in Australia, Mainland China, Hong Kong and India. We will continue to operationalise the RePPS in our supplier selection and contract performance monitoring, at a pace and depth that suit the local environment.

Find out more about CLP Power Procurement Values and Principle.

Find out more about CLP Group's RePPS.

Highlight

### Recognition

CLP Power Fuel Supply Team was awarded the "Platinum" corporate certification by the Chartered Institute of Procurement and Supply (CIPS), signifying the effort and achievement in maximising value to customers and contributing to supply chain sustainability.



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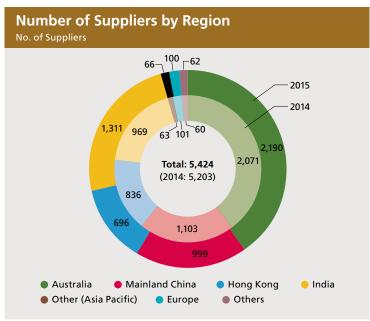
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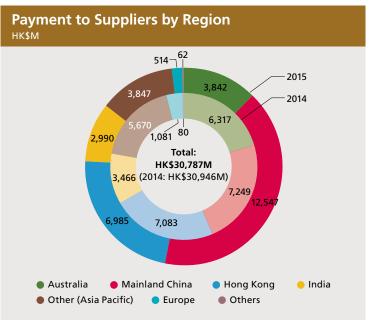
#### **OUR SUPPLY CHAIN**

Our suppliers and contractors provide a wide range of products and services including fuel and equipment for electricity generation, cables, substation construction, site work in power plants and electrical appliances for sale in customer service centers.

There were no significant changes to the CLP supply chain in 2015. For all major assets in Hong Kong, Mainland China, Australia and India, we procured from 5,424 suppliers for a total of HK\$30.79 billion in 2015. 86% of the total purchase amount was from local suppliers in Hong Kong, Mainland China, Australia and India, thus supporting the local community while meeting CLP's business needs.







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#### **SUPPLIER ASSESSMENT**

Suppliers are assessed for their capability to fulfil our business needs based on a combination of price and non-price factors such as safety, health, labour practices, environment, and quality as applicable.

We apply a consistent approach to identify sustainability issues in the product or service to be procured. With the aim of managing supply chain risk and actively seeking opportunities to uplift supplier capabilities, suppliers engaged for critical projects, that is 73% of 2015 total spend, were assessed for their relevant sustainability status and practices through: the RePPS Questionnaire; scoring in tender evaluation; and site visits or checking as appropriate. In 2015, CLP Power conducted site visits to seven key suppliers to understand their sustainability practices.

Safety is top priority in everything we do. We care about the safety of our contractors and the public. In addition, for projects with environmental criticality, we consider environmental impact and resource usage when designing project specifications and engaging suppliers. Capability in safety, health and environmental management systems are considerations in assessing CLP Power suppliers for projects with such criticality.

We continue to engage suppliers during contract execution. The CLP Power risk-based Supplier Assessment System (SAS) gathers feedback on our own performance as well as that of our key suppliers.

In 2015, 26 key suppliers were assessed under this system, all responded as having practices to monitor performance and compliance. Our assessment and monitoring mechanism confirmed no significant risk for: incidents of child, forced or compulsory labour; violation of human rights or right to exercise freedom of association and collective bargaining; and bribery and anti-competition. No supplier relationship was terminated due to the assessment result.

Due to our business nature, some suppliers do have room for further improvement on environmental performance. CLP has a long term goal to reduce the carbon intensity of our generating portfolio by 75% by 2050 and will continue to engage suppliers for opportunities to achieve this goal.



Emergency drill and evacuation training in Mainland China

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#### **COLLABORATION WITH SUPPLIERS**

In 2015, we continued to collaborate with suppliers on environmental initiatives. For example, at the building site of West Kowloon Cultural District substation, we achieved 95% re-use of construction materials on site, an environmental initiative that was externally verified and successfully moves towards zero waste construction targets. In Hong Kong, CLP Power is a Founding Member of the Green Council's Green Purchasing Charter, which promotes green procurement.

We procure products and services both locally and internationally where there are considerable variations in laws and practices relating to labour practices and human rights, as well as across national cultures. We require our suppliers to comply fully with all legal requirements regarding labour practices and human rights, including freedom of association and collective bargaining. CLP prohibits the employment of child, forced or compulsory labour in any of our operations and the same expectation is being applied to our supply chain.

CLP engages all staff and contractors to further reinforce a mutual caring culture within the safety family, while implementing various safety initiatives including forums, briefings and experience sharing to heighten safety awareness and mindfulness. We aim to uplift safety awareness, achieve the ultimate goal of "Zero Incidents", and make sure everyone goes home safely every day.

The tight construction labour supply situation in Hong Kong has been a challenge. CLP Power has been collaborating with contractors to manage the situation and strengthen contract management performance including contractors' compliance to the Employment Ordinance. We conducted checks on eight key contractors in 2015 and organised a forum on having a sustainable workforce in the construction industry.



Site visit to CLP Power's critical suppliers in Indonesia to seek for opportunities to uplift capability

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We are committed to protecting people's health, preventing incidents and injuries and minimising adverse environmental impacts as a part of our daily operations, with the goal of achieving safe, secure and environmentally responsible operations.

The Group level Health, Safety, Security and Environment (HSSE) Management System Standard has been implemented for over a year and a half since its launch in August 2014. The Standard enables our regional organisations to incorporate HSSE requirements into their business programs. This allows us to continue to maintain high standards in health, safety, security and environment and provides a platform for continuous improvement. It also promotes and encourages compliance with the international standards for Health & Safety and Environmental Management such as, OHSAS 18001 and ISO 14001.

In 2015, we issued a number of supporting guidelines and developed an e-learning package to assist our regional business units to implement the HSSE Management System Standard that we rolled out in the previous year.

The HSSE Management System Standard is composed of 15 elements:

- HSSE Leadership
- Occupational Health and Safety (OHS) Management

- Plant Integrity
- Security Management
- Environmental Management
- Hazard Identification, Risk Assessment and Control
- Management of Change
- Personnel Training and Competence
- Communication and Promotion
- Documentation and Information Management
- Contractor Management and Purchasing
- Emergency Preparedness and Response
- Incident Management
- Performance Monitoring and Reporting
- Periodic Review and Improvement
- Find out more about CLP Group's HSSE Management System Standard.

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Highlight

#### **CLP's first HSSE Audit**

In June 2015, an HSSE Audit was conducted at the Fangchenggang Phase II construction project. The objective of the Audit was to identify best practices, strengths and areas for improvement according to the HSSE Management System Standard and the 10 Critical Risk Standards.



#### **HEALTH**

The HSSE Management System Standard lists out our expectation on HSSE for the CLP Group. The second element in the HSSE Management System Standard outlines CLP's objectives for Occupational Health and Safety (OHS) Management. This element asserts that the achievement of the highest level of Health and Safety performance requires careful selection, training and placement of personnel and provision of proper tools, equipment, personal protection, clear performance standards, and safe work instructions and procedures.

All significant health incidents are reported according to the Incident Management process and the statistics to be included are stipulated in the CLP Group Performance Monitoring and Reporting Standard. We also report on the number of occupational diseases, although we do not have any workers involved in occupational activities who have high incidence or high risk of diseases related to their occupation.

Several Guidelines relating to occupational health were developed in 2015, which include: travel health, fatigue management, food and drinking water safety management and health risk assessment. In addition, we conducted regular health talks on topics which are of interest to our employees, for example, causes of back pain and ways to prevent it from occurring.

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#### **SAFETY**

For decades, a "Safety Comes First" culture has guided CLP well. Our goal is zero injuries in all our operations and safety is always our top priority wherever we do business.

The HSSE Management System forms a synchronised approach to improving our safety performance that is conducive to meeting our goal of zero injuries. The Group HSSE Committee, comprising of Group level senior management from each regional business, illustrates our commitment towards safety. This committee met three times in 2015. CLP also has a Group level safety and health team dedicated to coordinating and monitoring safety practices across the CLP Group.

Our assets have different levels of joint management and worker representation and approaches to help monitor the health and safety programmes. To best support the Group level policy statement, our assets have the flexibility to structure their own Safety and Health organisations and to design their approaches in providing relevant safety and health training, as well as monitoring of the percentage of contractors that have undergone the training.

For our contractors, we include safety training requirements in all contracts and expect 100% of our contractors to undergo safety training relevant to their duties. We conduct spot checks to ensure compliance.

Due to the higher risks posed by construction-related activities, the safety performance of new projects remains a key focus. Fangchenggang Phase II is the largest and most complex construction project ongoing in CLP at this time. For this reason, Fangchenggang Phase II has been a focus of attention during the year. A behaviour-based safety initiative was established and several Behaviour Safety Workshops were held at Fangchenggang Phase II to enhance the safety behaviour of both employees and contractors.

Ongoing safety support to various renewable projects continues, including regular safety visits to various renewable project construction sites in China, such as Xicun II, Xundian, Sandu, Laizhou and Laiwu II.

Highlight

#### Recognition

Fangchenggang, Jiangbian Hydro and Qian'an Wind achieved at the same time a Platinum five-star rating from the National Occupational Safety Association (NOSA) in 2015. It is the second consecutive year that Jiangbian Hydro and Qian'an Wind have achieved such a rating.

In July 2015, we shared CLP's work safety management experience and practices with Guangxi Work Safety Committee in Fangchenggang, to enhance work safety management across various government departments and enterprises.

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In 2015, the total number of days worked by contractors and sub-contractors was approximately 3.2 million man days, assuming a 9-hour work day.

CLP reports its safety performance on an annual basis using a number of metrics. We benchmark our safety performance by measuring our Lost Time Injury Rate (LTIR) and Total Recordable Injury Rate (TRIR). They refer to the number of lost time injuries or recordable injuries measured over 200,000 working hours of exposure, which is equivalent to around 100 people working for one year.

We recorded 16 cases of Lost Time Injuries (LTI) in our majority-owned assets or assets under our operational control in 2015, improving from 23 cases recorded in 2014. The combined TRIR of CLP employees and contractors fell from 0.41 in 2014 to 0.25 last year. However, one fatality happened in 2015 when a worker was electrocuted whilst carrying out maintenance work on site at a minority-owned asset in Dagangzi of Jilin Province in Mainland China.

CLP Group Safety Performance (Employees and Contractors) 64-LA6					
	2015	2014	2013		
Fatalities	0	1	1		
Fatality Rate	0.00	0.005	0.005		
Number of Lost Time Injuries	16	23	33		
Lost Time Injury Rate (LTIR)	0.07	0.11	0.16		
Total Recordable Injury Rate (TRIR)	0.25	0.41	0.39		
Number of Days Lost / Days Charged (employees only)	199	105	29		
Number of Occupational Disease (employees only)	0	0	0		

CLP Group Safety Performance by Region in 2015 G4-LA6							
	EMPLOYEES / CONTRACTORS						
	CLP HOLDINGS	HONG KONG	MAINLAND CHINA	INDIA	SE ASIA	AUSTRALIA	TOTAL
Fatalities	0/0	0/0	0/0	0/0	N/A	0/0	0/0
Fatality Rate	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	N/A	0.00 / 0.00	0.00 / 0.00
Number of Lost Time Injuries	0/0	0/4	0/1	2/1	N/A	6/2	8/8
Lost Time Injury Rate (LTIR)	0.00 / 0.00	0.00 / 0.07	0.00 / 0.02	0.54 / 0.03	N/A	0.28 / 0.29	0.10 / 0.06
Total Recordable Injury Rate (TRIR)	0.53 / 0.00	0.07 / 0.17	0.00 / 0.16	0.54 / 0.25	N/A	0.42 / 2.14	0.18 / 0.28
Number of Days Lost / Days Charged (employees only)	0	0	0	34	N/A	165	199
Number of Occupational Disease (employees only)	0	0	0	0	N/A	0	0

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### **Case Study**

### **Summer of Safety Campaign in Australia**

EnergyAustralia launched the "Summer of Safety" campaign in the end of 2014, which has been on-going throughout 2015.

Research shows that more incidents and injuries can happen at work in the lead-up and return from the summer break. To raise the level of safety awareness, all operational sites were required to conduct back-to-work safety workshops when employees returned from their break. These workshops were set up as a result of discussions between plant managers and safety professionals.



#### SAFETY AND NUCLEAR POWER

Nuclear can be a reliable, cost-effective and virtually emission-free electricity source. 2015 marked the 30<sup>th</sup> anniversary of CLP's partnership with CGNPC in Guangdong Daya Bay Nuclear Power Station (GNPS).

Electricity generated from the GNPS provides for roughly 30% of the power for our supply area in Hong Kong. Safe operation is always the top priority for us. At GNPS, the <u>defence-in-depth</u> principle (application of multiple independent and redundant layers of protection) is applied across a full spectrum of areas ranging from plant design to operational procedures to ensuring robust safety back-up support.

GNPS continued to operate smoothly in 2015, achieving a utilisation rate of 89.5%, compared to 87.8% in 2014. It maintained an excellent safety record and its performance compared favourably vis-a-vis indices promulgated by the World Association of Nuclear Operators (WANO). It also completed an extensive planned maintenance outage during the year as required by the National Nuclear Safety Administration every 10 years. In October 2015, there was one "Below Scale" Licensing Operating Event (also known as Level 0 event under the International Nuclear and Radiological Event Scale), which had no safety or environmental implications and caused no reduction to the supply of electricity to customers.

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Radiation levels that workers are exposed to are closely managed both collectively and at the individual level as part of the operating protocols. Most of the radiation dosage of the workers is incurred during planned refuelling outages when much of the work is undertaken at the nuclear generating units. The number of planned refuelling outages in a year as well as the work involved has been the primary driver behind the variation in collective radiation dosage over the years.

A lower collective radiation dosage was registered in 2015 compared to 2014, since learnings from the extra inspection work in 2014 to meet additional 10-year regulatory requirements were applied in the 2015 planned refuelling outage program to improve work efficiency.

Daya Bay Nuclear Power Operations and Management Company, Limited (DNMC) is the operator for GNPS. One of its duties is to ensure that the radiation dosage of individual workers meets the limits set by the State, that are aligned with the recommendations of the International Commission on Radiological Protection (ICRP), namely:

- An annual average of 20mSv over five years; and
- 50mSv within any one year.

Collective Radiation Dosage for Workers man-mSv						
2015	2014	2013	2012	2011		
1,035	1,512	1,769	946	993		

For radiation-related work at GNPS, the 2015 collective radiation dosage of 1,035 man-mSv translates into an average of about 0.5mSv per person per year, compared to the annual radiation dosage received in Hong Kong of 2.4mSv per person per year from the natural environment and about 3mSv per person per year from all sources.

In line with good business practice, Guangdong Nuclear Power Joint Venture Company, Limited (GNPJVC), the entity which owns GNPS, has made a provision for the expenses associated with the decommissioning of GNPS as required under the joint venture contractual agreement. The amount of such a provision is commercially sensitive.

Find out more about nuclear energy and safety at our website.



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#### **SECURITY**

Security Management, the fourth element listed in the HSSE Management System Standard, exists in order to protect our people, property, information and reputation against associated security risks. The security management process evaluates, in a systematic and risk-orientated way, the security status of any asset operated and owned by us. This enables the company to continuously evaluate its security processes and enhance them according to the perceived threat and vulnerability of the site. In 2015, a total of five power stations were assessed and this total will increase as the process becomes more ingrained across the CLP Group. At each site, annual security drills are conducted and overseen both at the regional and group level.

On the human rights front, we understand the importance that our security personnel are well-trained to help prevent reputational and litigation risks that arise from inappropriate conduct. This conduct is underpinned by our Value Framework and Security Management System, which requires each CLP region and their sites to develop an appropriate system to effectively address the threats faced. All of our in-house security staff are required to comply with CLP's Code of Conduct on an annual basis. In addition to national regulations and site-specific briefings, third-party vendor security staff receive training on CLP's harassment-free policy, guidance on minimum wage policy and other non-discrimination training during induction before being granted access to the site(s) they are assigned to.

Awareness of cyber security risks and preparedness against cyber-attacks are critical for infrastructures such as generation plants. The physical asset that generates and delivers energy to our communities depends increasingly on the security of the information technology and data that support them. Any disruption to that information or technology poses a significant threat to our operations. In our ongoing commitment to defend our networks from cyber threat, CLP continues to assess and strengthen our cyber security programme with new threats in mind. Embedding a strong cyber-safe culture across our daily business operations helps towards a secure and sustainable future for Hong Kong.

Find out more about cyber security risk in the Risk Management report of our 2015 Annual Report.

#### **ENVIRONMENT**

The fifth element in the HSSE Management System Standard outlines CLP's objectives for Environmental Management. This element states that the environmental risks associated with CLP Group's project life cycle shall be appropriately managed through compliance to requirements of regulators and the CLP Group – honouring CLP's commitments and meeting our stakeholder expectations.

For more information on CLP's environmental policies, practices and performance, please refer to the Sustainable Environment chapter.

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For 2015, the following most material aspects relevant to this chapter were identified:



**Environmental Compliance** 



**Emissions** 



### Why are the aspects highly material?

As laid out in our Value Framework, we are committed to responsibly managing the short-term and long-term impacts of our business on the environment.

It is our policy to comply fully with all applicable environmental laws and regulations. We are seeing more stringent environmental regulations in different countries as well as rising stakeholder expectations, which are crucial drivers for our focus on environmental compliance.

In terms of impacts, emissions are our top priority as they contribute to both air quality deterioration and climate change. Monitoring and tracking of our air and greenhouse gas emissions are important metrics to demonstrate our progress in emissions reduction.

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Sustainable Relationships Innovation Appendix Content Index Contact Us We have a range of internal policies, standards and guidelines, as well as a system for managing our environmental performance data, so as to ensure a systematic approach in managing our environmental impacts.

#### **OUR APPROACH**

We have a variety of internal environmental standards and guidelines to assist us in fulfilling our environmental commitments. Our current internal environmental standards take the view that, as a leader, we should require our operations, in particular those in locations where environmental regulatory controls are weaker, to perform beyond compliance.

We have now implemented a number of internal environmental standards to ensure certain good practices are mandated. For example, we have a requirement to perform environmental assessment on all power projects. This is important because in certain countries where we operate, environmental assessments may not always be required by regulation. A case in point is that renewable energy projects in India are exempted from environmental assessments.

Our experience in renewable energy projects in other countries however, is that renewable energy power projects do present their own unique environmental impacts, though not as conspicuous as air emissions from coal-fired power stations.

We reported last year that we have spent a substantial amount of effort in integrating our management approach on Health, Safety, Security, and Environment (HSSE) issues. We were able to demonstrate the success of this integration in 2015. Firstly, the overall HSSE management structure is clear and our approaches are now unified. This includes clear definition of roles at asset and regional level, as well as a consolidation and streamlining of how internal requirements are implemented. Secondly, the Group level HSSE Committee, chaired by our CEO, established a clear link between our assets, regions, and other related corporate committees in particular the Sustainability Committee. Thirdly, as the integration became more mature, we were able to share knowledge, expertise and lessons learnt much more effectively throughout CLP Group. Going forward in 2016, we have plans to instigate an even closer working relationship under the HSSE functions, with the objective of achieving excellence in HSSE performance.

Since we take an integrated approach to managing our operations, it is difficult to separate out the costs of environmental-related investments from the rest of the investment in the project. For example, the environmental mitigation measures may already be embedded in the original design or certain operational improvements may also have environmental benefits.

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# **ENVIRONMENTAL MANAGEMENT SYSTEM STANDARD**

One of the key standards to help manage our operational environmental risk is the requirement that power generation facilities in which we have operational control must establish effective environmental management systems which conform to the globally recognised ISO14001 Standard and achieve third-party certification within two years from commencement of operation or acquisition.

We are pleased to report that in 2015, all assets in this category achieved ISO14001 certification on time. In 2015, Laiwu windfarm and Jinchang Solar both achieved ISO14001 certification. Jinchang Solar was CLP's first solar project to achieve ISO14001. This project's environmental management system will be used as a model for our other solar projects.

On air emissions, any fossil-fuel based power plant developed after the effective date of our Power Plant Air Emissions Standard is required to operate within CLP prescribed limits on sulphur dioxide ( $SO_2$ ), nitrogen oxides ( $NO_X$ ) and particulates emissions, or to comply with local regulations, whichever is more stringent.

Find out more about the environmental management systems and environmental measures of our assets.





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Sustainable Relationships Innovation Appendix Content Index Contact Us We are committed to complying fully with all applicable environmental laws and regulations, as well as continuously improving our performance and adopting best practices which are often above and beyond compliance.

#### **OUR APPROACH**

On the business development side, we assess our potential environmental liability carefully before we commit to projects. CLP's Pre-Investment Environmental Risk Assessment process ensures that sufficient environmental considerations are given to every project as part of the approval process by the Investment Committee.

We currently track regulatory compliance-related cases and report on confirmed cases of regulatory non-compliance where legal sanctions have been imposed.

We are regulated by formal environmental grievance mechanisms established by regulatory authorities. More generally, our stakeholder engagement channels as well as public communications channels also allow for informal expressions of environmental grievances. Information that we receive through these channels is managed locally and currently not aggregated or reported at the Group level.

#### **ENVIRONMENTAL REGULATORY COMPLIANCE**

In 2015, we had one case of regulatory non-compliance and 13 licence limit exceedances. There was a minor restatement due to clarification from the local authority that one of the reported Environmental Licence Limit Exceedances for Yallourn in 2014 was not an exceedance and so the 2014 number was adjusted from four to three in 2015.

Environmental Regulatory Non-Compliances No. of Cases					
	2015	2014	2013	2012	2011
Environmental regulatory non-compliances resulting in fines or prosecutions	1	1	0	0	0
Environmental licence limit exceedances & other non-compliances	13	3	4	1	5

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Sustainable Relationships Innovation Appendix Content Index Contact Us **Environmental regulatory non-compliances** resulting in fines or prosecutions

For the year ending 31 December 2015, there was one environmental non-compliance resulting in a fine at Yallourn Power Station for which a penalty infringement notice was issued:

Yallourn Power Station, EnergyAustralia – EnergyAustralia was fined A\$7,584 by the Environment Protection Authority Victoria for the Yallourn Power Station breaching the Environment Protection Act 1970. The incident in February 2015 involved a discharge of ash slurry into the Morwell River. Around 8,600 kilolitres of salt water entered into the river after a welded point joint failed, causing the pipeline to rupture. The spill was diluted by river flows, minimising its impact on the environment. To prevent repeat incidents, EnergyAustralia has introduced process improvements including upgrades to alarms to automatically shut down ash line pumps and alert site staff to ruptures, installing CCTV cameras in high-risk areas and requiring hydraulic testing of new pipework prior to commissioning.

# **Environmental licence limit exceedances & other non-compliances**

Of the 13 non-compliances reported in the table above, 12 were due to the same operational problem we encountered at Jhajjar Power Station in India, resulting in the recurrence of the same exceedance in particulate emissions. As reported under Performance – India below, we have taken steps towards resolving the issue. The other licence limit exceedance case occurred at Tallawarra Power Station in Australia:

Tallawarra Power Station, EnergyAustralia – Dead fish were found near a water inlet. Water samples showed that dissolved oxygen content in the water was below the statutory limit.

Tallawarra Power Station has developed and implemented a plan to minimise the risk of any impact as a result of activating the Main Cooling Water and Attemperation pumps.

#### **Material Environmental Incident**

We also reported an environmental incident at Mount Piper Power Station in Australia, for which a formal incident report was required by the local authority, although the incident did not constitute as a licence exceedance nor as a non-compliance, and no penalty was imposed:

Mount Piper Power Station, EnergyAustralia – At Mount Piper, cooling water was discharged into Neubecks Creek in November 2015 when a drain valve was left open on a cooling water conduit that was being refilled during an outage. Approximately 250 to 750 kilolitres of water flowed down a storm water drain, and into Neubecks Creek. An assessment found there was no material harm to the environment. We have advised the Environment Protection Authority and will submit a formal incident report.

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#### **EMERGING REGULATIONS**

We also monitor a set of evolving environmental regulations which apply to our operations and react to anticipated regulatory developments as necessary. 2015 saw a number of emerging environmental regulations that shape the energy market conditions in which we operate.

#### **Group level**

We have carried out extensive research in the past two years on issues related to mercury emissions from coal-fired power stations. We face increasing regulatory control on mercury emissions in the locations where we operate, and we have just completed a research on the suite of control technologies available.

#### **Hong Kong**

To improve air quality in Hong Kong, the Hong Kong Government has been imposing caps on the emissions of our power plants for three specified pollutants, i.e. sulphur dioxide ( $SO_2$ ), nitrogen oxides ( $NO_x$ ) and respirable suspended particulates (RSP). 2015 marked a step change, with the emissions caps for  $SO_2$ ,  $NO_x$  and RSP reduced by up to 65% from 2014 levels. We were able to meet the new stringent emissions requirements through increasing consumption of natural gas, importing additional nuclear energy from Guangdong Daya Bay Nuclear Power Station (GNPS), making use of more low-emissions coal and enhancing the operational performance of our emissions reduction equipment.

The emissions caps for our power stations for 2017 and 2019 will be further reduced from the tight base of 2015, which will require us to use more natural gas for generation. We will continue to strike an optimal balance between meeting emissions caps and mitigating the fuel cost pressures. Furthermore in 2015, the Government reviewed the emissions allowances stipulated in the Fourth Technical Memorandum (TM) for 2019 and legislated a new set of emissions caps for 2020 and beyond, in which air emissions levels will be reduced by up to 12% compared to 2019 caps.

The Government has indicated its intention to have a further TM review in 2016, contingent upon the progress of the new gas-fired generation project for which a Development Plan was submitted to the Government at the end of 2015, followed by an environmental impact assessment study report in February 2016. CLP will continue to work closely with the Government and support the Government's environmental policy for achieving better air quality, while providing a safe and reliable power supply at reasonable cost.

#### **Mainland China**

The Mainland Chinese Government's emission control enhancement requirements for coal-fired power stations issued in 2013 for 2014-2020, will affect our operations in Fangchenggang Power Station in the Guangxi Province. In order to ensure Fangchenggang I and II meet these requirements within the required time frame, CLP has been working to enhance the environmental mitigation measures of both plants, including upgrading Fangchenggang I's desulphurisation, denitrification and dust emissions control equipment.

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Sustainable Relationships Innovation Appendix Content Index Contact Us We are confident that we will meet the more stringent emissions requirements on time. We are closely monitoring any further plans the Mainland Chinese Government has to reform the power sector, in particular the 13th Five-Year Plan (2016-2020). The Government has made it clear that it will continue to support the development of clean energy including renewable, nuclear power and high-efficiency coal-fired power generation.

#### **Australia**

At a recent meeting of Ministers, there was an agreement to strengthen national ambient air quality reporting standards for airborne fine particles. Ministers agreed to adopt reporting standards for annual average and 24-hour PM2.5 particles of 8µg/m³ and 25µg/m³ respectively, aiming to move to 7µg/m³ and 20µg/m³ respectively by 2025. Ministers also agreed to establish an annual average standard for PM10 particles of 25µg/m³. Victoria and the Australian Capital Territory will set, and South Australia will consider setting, a more stringent annual average PM10 standard of 20µg/m³ in the state, while ensuring nationally consistent monitoring and reporting against the agreed National Environment Protection Measure standards. The decision was also taken to review PM10 standards in 2018. The review will be co-led by the New South Wales and Victorian governments, in discussion with other jurisdictions.

#### India

On 7 December, 2015, the Government of India amended its Environment (Protection) Rules, 1986, by prescribing new limits for water consumption and air emissions for thermal power stations. As per these new norms, all existing plants need to limit specific water consumption up to 3.5m³/MWh by 6 December 2017, and this limit for new plants (to be installed after 1 January 2017) is set at 2.5 m³/MWh. Similarly, all units of 500 MW and above, that are installed between 1 January 2003 to 31 December 2016, need to limit their PM, SO<sub>2</sub> and NO<sub>x</sub> emissions to 50 mg/Nm³, 200 mg/Nm³ and 300 mg/Nm³ respectively, while these limits for new units (to be installed after 31 December 2016) are 30 mg/Nm³, 100 mg/Nm³ and 100 mg/Nm³ respectively. We welcome tightening of these norms and will work towards achieving them.

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#### **Carbon Related**

Our assets currently do not operate in any locations where mandatory or voluntary carbon trading schemes are in place. However, we believe this will change in Mainland China and possibly Australia.

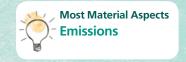
Mainland China There are seven pilot carbon trading schemes in Mainland China, and the Mainland Chinese Government announced it will implement a national emissions trading scheme in 2017. Cap-and-trade is one of the policies that the Government is implementing to support meeting its targets, including peaking its carbon emissions by 2030, lowering its carbon intensity by 60-65% by 2030 from the 2005 level, and having 20% of its energy coming from non-fossil fuels by 2030.

#### Highlight

Australia The centre piece of the Government's Direct Action Policy, the Emissions Reduction Fund (ERF), came into effect in November 2014 following the repeal of the previous Government's Carbon Tax Scheme from July 2014. Additionally, a legislated Safeguard Mechanism (SGM), designed to complement the ERF, is now in place. The SGM is designed to cap emissions nationally at their historical levels and to ensure that emissions abatement purchased by the ERF is not counteracted by increases in emissions over time. The arrangement for the electricity generation sector treats all generators with a single emissions baseline based on the sector's maximum annual emissions over the previous five years. The sector is not expected to breach its baseline before 2020, if at all. The new Prime Minister has stated that Direct Action remains the Government's main policy vehicle for achieving Australia's national emissions reduction targets.



# **Greenhouse Gas Emissions**



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Sustainable Relationships Innovation Appendix Content Index Contact Us We are part of a sector that is a significant source of carbon emissions and so we are looking to our Climate Vision 2050 and all its targets to help guide us towards the goal of moving towards zero emissions.

#### **CLIMATE VISION 2050 PERFORMANCE**

### Group Carbon Intensity G4-EN18

In 2007, we developed our Climate Vision 2050, which was centred around an ambitious science-based target of reducing the carbon intensity of our generating portfolio by approximately 75% by 2050, compared to our 2007 level. We also developed milestone reduction targets in between, taking into account assumptions on technological advancements and regulatory change.

Our performance up to 2012 was quite encouraging, however local priorities in Asia on energy security and access, favoured the continued development of fossil-fuelled assets. In 2014, the Group's carbon intensity increased back up to 0.84 kg CO<sub>2</sub>/ kWh. However, in 2015, the Group's carbon intensity has fallen back down to 0.81kg CO<sub>2</sub>/ kWh, mainly due to:

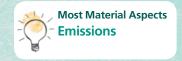
- Less generation from our coal-fired Castle Peak Power Station in Hong Kong, and more gas-fired generation at Black Point Power Station to further reduce emissions from power generation;
- Less generation from our coal-fired Fangchenggang Power Station in Mainland China, as demand has become suppressed, and

• Less generation from our coal-fired Mount Piper Power Station in Australia, due to maintenance and uncertainty over coal supply.

Although our present portfolio composition makes it challenging for us to achieve our interim targets within the original timeframe set, we remain committed to our original long-term Climate Vision 2050 target. With the Paris Agreement delivered at COP21 in December, articulating the greater ambition to move from maintaining the global average temperature rise from below 2°C to 1.5°C, we remain committed to our long-term target and will review it once the new projection scenarios are released by the Intergovernmental Panel on Climate Change (IPCC) in 2018.

CLP's Progress Towards 2020					
	CO <sub>2</sub> EMISSIONS INTENSITY	RENEWABLES	NON- CARBON EMITTING		
2015 Performance	0.81kg CO <sub>2</sub> / kWh	16.8%	19.5%		
2020 Target	0.6kg CO <sub>2</sub> / kWh	20%	30% (inclusive of renewables)		

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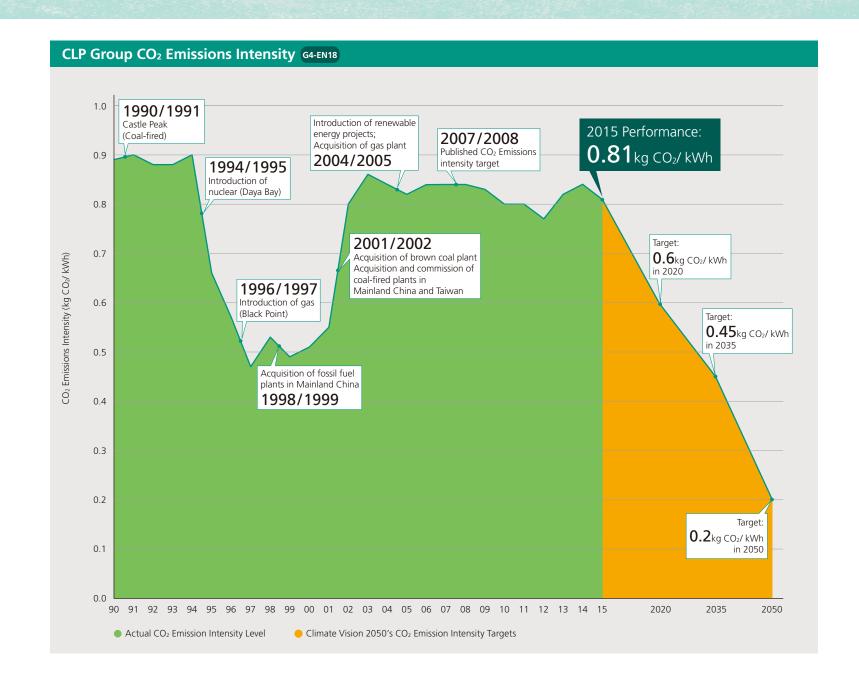
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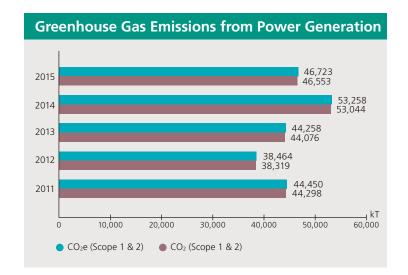
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### **Group Carbon Emissions**

Due to the same reasons for the decline in our 2015 Group carbon intensity outlined above, CLP Group's total  $CO_2$  and  $CO_2$ e emissions in 2015 also decreased by around 12% compared to 2014.

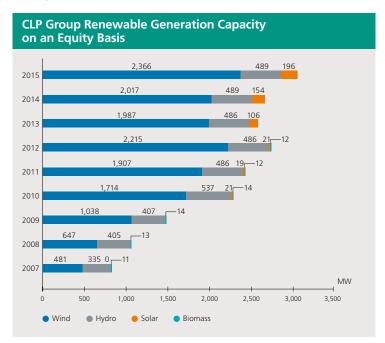




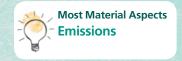
### **Group Renewable Energy Portfolio**

Total renewable energy generation capacity and non-carbon emitting generation capacity were 16.8% and 19.5%, respectively. This is an improvement over last year and is a result of the ongoing development of CLP's renewable portfolio, particularly in Mainland China and India.

Find out more about our fossil fuel generation capacity, as well as our existing assets and assets in the pipeline, in the Sustainable Operations chapter.



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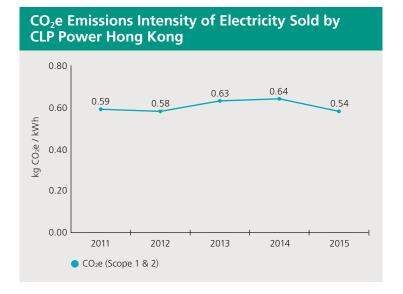
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#### HONG KONG CARBON INTENSITY G4-EN18

The carbon intensity of the electricity used by our customers in Hong Kong decreased by more than 14%, from 0.63kg CO<sub>2</sub>/ kWh in 2014 to 0.54kg CO<sub>2</sub>/ kWh in 2015. Our kg CO<sub>2</sub>e/ kWh also decreased from 0.64 in 2014 to 0.54kg CO<sub>2</sub>e/ kWh in 2015. This was a result of reduced coal consumption and more gas consumption to meet the Government's emissions requirements in Hong Kong, plus increased output from Guangdong Daya Bay Nuclear Power Station (GNPS) in Mainland China.



#### Highlight

# **United Nations Framework Convention on Climate Change COP21**

The Paris Agreement provides the policy signals we need to continue to scale up our renewable energy business, as well as for meeting our Climate Vision 2050 targets, particularly the next set of targets for 2020, which include having 20% renewable energy and a carbon intensity reduction of over 28% compared to our 2007 level.

CLP will review the potential business opportunities as well as risks, arising from the Intended Nationally Determined Contributions (INDCs) commitments submitted by the nations we operate in. We aim to complete our post-COP21 review soon after the Paris Agreement is open for ratification.

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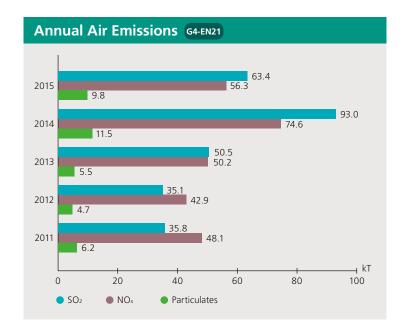
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Sustainable Relationships Innovation Appendix Content Index Contact Us We ensure that all key environmental impacts are identified and managed in a responsible manner and air emissions is one of our top priorities.

#### **PERFORMANCE**

Group emissions of  $SO_2$ ,  $NO_X$  and Total Particulates in 2015 compared to 2014, decreased by around 32%, 25% and 15% respectively. This was due mainly to:

- the use of more gas and less coal in Hong Kong, along with lower utilisation of Castle Peak A which has higher emissions than Castle Peak B:
- less generation from Mount Piper power station in Australia and Fangchenggang power station in Mainland China; and
- improvement in emissions control operations at Jhajjar power station in India.





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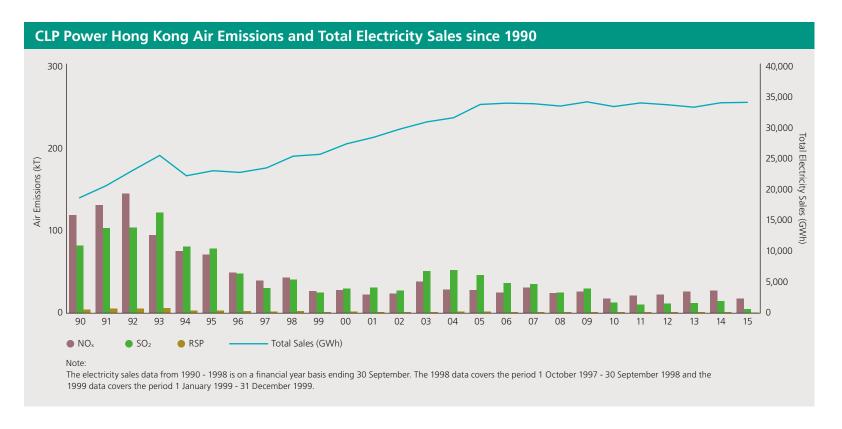
#### Hong Kong G4-EN21

Our effort to reduce our air emissions dates back to 1990. More than 85% emissions reduction in  $SO_2$ ,  $NO_x$  and RSP have been achieved since 1990, while electricity demand has grown by over 80% during the same period.

In 2015, we managed to meet the stringent emissions caps set out by the Government, which requires CLP to reduce its  $SO_2$ ,  $NO_x$  and RSP emissions by up to 65% from 2014 levels. While the above required consumption of more natural gas entailed a

higher cost than coal generation, we were able to maintain our highly reliable electricity supply at a reasonable tariff level.

We continue to improve our operations to help benefit the environment. For example, Black Point Power Station initiated a performance improvement project for its Combined Cycle Gas Turbine units. With the modification of the gas turbine components, we expect to improve the emissions and efficiency performance of the units, together with increase in unit capacity. The upgrade of the first unit is targeted for completion in 2016.



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### Our fuel mix strategy in Hong Kong

A diversified fuel mix is crucial for energy security and helps us maintain a balance between meeting emission caps requirements and mitigating fuel cost pressure. In 2015, we continued to optimise our diversified fuel mix which consists mainly of coal, nuclear and natural gas. We increased the usage of gas as well as low emission coal in order to meet the stringent emission requirements.

The results of the public consultation on Hong Kong's future fuel mix for electricity generation launched in 2014, concluded that the majority of respondents supported reducing Hong Kong's carbon intensity by moving towards more natural gas generation locally. Consequently in March 2015, in the public consultation on future development of the electricity market, the Hong Kong Government announced a new policy objective, which is to increase Hong Kong's percentage of local gas generation to around 50% of the total fuel mix by 2020. To support this fuel mix direction, CLP has been engaging with the Government and key stakeholders on a proposal to build additional gas-fired generation capacity at Black Point Power Station.

#### **Case Study**

With the increasing use of natural gas, the availability of secure, reliable and competitive gas supplies for our power station will be a key factor. The current natural gas supply includes the Second West-East Gas Pipeline (WEPII) and the Yacheng gas field in South China Sea. Since our gas source from the Yacheng gas fields is depleting and approaching the end of its life cycle, we have obtained a medium-term gas supply from the small Wenchang gas field, close to the Yacheng gas field. Wenchang gas can be supplied to CLP through the same pipeline as Yacheng, providing a cost-effective solution to supplement our needs in the medium term.

The landslide in Shenzhen on 20 December 2015, which led to temporary suspension of natural gas supplies to Hong Kong through WEPII, has brought into sharp perspective, the importance of having access to multiple sources of natural gas.

In order to secure additional sources of gas supply, we are evaluating the feasibility for developing a "Floating Storage and Regasification Unit" (FSRU) in Hong Kong. The facility would allow Hong Kong to minimise the natural gas supply interruption risk through source diversification, as well as broadening our access to competitive liquefied natural gas supplies around the world.

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#### India

We had some events of particulate emissions exceedances at Jhajjar Power Station during 2014 and so we initiated a number of actions in 2015 to avoid future occurences. We:

- Replaced all filter bags at electrostatic precipitator (ESP) units;
- Modified equipment design to ensure hoppers were empty and proper ash evacuation was taking place;
- Filtered out the outside dust by introducing 10 and 20 micron filters to ensure the compressor house was dust free;

- Built an operator room at drier floor to facilitate good monitoring of compressor and electrostatic precipitator / fabric filter;
- Carried out gas distribution test using Computational Fluid Dynamics to ensure equal gas distribution in flue path; and
- Made the ESP control room as the Permit Room for Ash Handling Plant to expedite the work procedure.

Since the implementation of the above actions, particulate emissions were within the annual statutory emission limit in 2015, despite some temporary exceedances due to operational conditions such as start-ups.

#### **Case Study**

### **Emissions Reduction and Stakeholder Engagement in India**

Driven by rising pollution levels and higher stakeholder expectations, there is increasing demand to improve reporting transparency in India. These expectations come from various stakeholders such as regulators and civil society members. We understand these expectations and have proactively sought to meet them.

In 2015, the Central Pollution Control Board of India (CPCB) mandated all major industrial facilities to provide online access to their environmental performance data, such as emissions and discharge quality. Our Paguthan Power Station voluntarily participated in the pilot of a similar initiative by the Gujarat Pollution Control Board (GPCB) in 2013. This experience helped us implement CPCB's requirements at

our Paguthan and Jhajjar Power Stations during 2015. Now, the ongoing status of the environmental parameters of these facilities is communicated to CPCB live.

The Indian government tightened environmental norms of many industries such as thermal power generation in 2015. In response, we made significant investments to optimise the efficiency of emissions control equipment at Jhajjar Power Station such as the ESP, fabric filters, fly ash handling systems and road cleaning equipment for fugitive dust mitigation. We also arranged for a tour of Jhajjar Power Station for officials of the Ministry of Environment, Forests & Climate Change to share our environmental management practices and credentials. Such engagements helped us better understand the expectations of various stakeholders and share our approach and views, enabling us to bridge gaps in "actions" versus "expectations".

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Sustainable Relationships Innovation Appendix Content Index Contact Us We are committed to using all resources, including water and other natural resources efficiently and conservatively, and conduct water risk assessments to anticipate and manage the potential impacts of water stress on our operations.

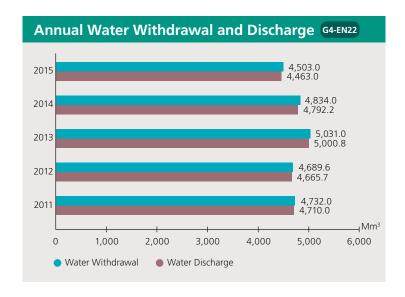
#### **OUR APPROACH**

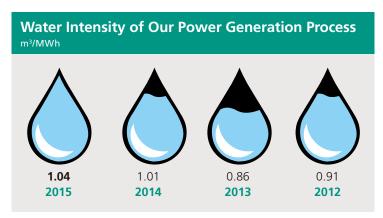
Water is required for most types of power generation. Our fossil fuel-based power stations require process water as well as water for cooling. For hydro power stations, water is the key element driving our turbines. For other renewable energy power stations, the use of water, though still essential, is of a much smaller scale.

#### WATER CONSUMPTION

The largest volume of water we withdraw from water bodies is for cooling purposes and this is confined to our fossil-fuel based power stations. However, the majority of this water is discharged back to their sources after appropriate treatment to ensure no adverse environmental impact is introduced.

Our facilities monitor their total water withdrawal and discharge. We also report the water intensity of our generation plants. We encourage facilities to track their total water recycling. For indicative purposes, we recycled approximately 619,000 Mm<sup>3</sup> in 2015.





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#### WATER AVAILABILITY

Regarding water availability, we manage our water resource risks through a number of means. We assess the water availability in the planning stage of projects including the likelihood of water scarcity in the future. During operations, our power stations will ensure that all licensing requirements and necessary engagements with local stakeholders are in place to maintain our license to operate. Such engagement programmes are specifically designed to suit the local situations, for example:

- Tallawarra Power Station in Australia the cooling water is withdrawn from Lake Illawarra, a large coastal lagoon of approximately 36 km<sup>2</sup>. We have water use permits, there is no competing use of the resource and we have maintained a regular dialogue with the local regulators regarding the utilisation of this water body; and
- Jhajjar Power Station in India water is withdrawn from the JLN Canal, which receives water from perennial rivers of the Himalaya, as per a regulatory permit granted to the power station. There is no competing use as such as this water resource is under the local government's rationing scheme.

Because of the water treatment processes we have put in place in our power stations, none of our operations would significantly impact the respective water receiving bodies. However, there were three incidents involving water discharge in EnergyAustralia in 2015. We have carried out thorough assessments of the incidents, and will put in place appropriate measures to ensure similar incidents will not recur.

#### WATER CONSERVATION

Depending on site-specific conditions, operational situations and age, our power stations have introduced a range of water conservation initiatives. Some of these were introduced in the design stage, and some were initiated after commissioning, for example:

- Jhajjar Power Station in India designed as a Zero Liquid Discharge (ZLD) power station, meaning that no water or waste water is discharged from the site. The waste water generated is treated and reused for dust suppression, gardening and other suitable uses within the premises;
- Mount Piper Power Station in Australia also designed as ZLD; and
- Fangghenggang Power Station, Mainland China waste water streams such as desulfurisation waste water, acid waste water, and coal-bearing wastewater, are treated and used in various activities such as coal yard spraying and plant washing, irrigation and ash spraying instead of being discharged.

As part of our power station maintenance work, we also carry out studies to identify opportunities to reduce water consumption. These include new initiatives, improving the efficiencies of existing operations, or correcting faults. For example, Tallawarra Power Station carried out thermography surveys of its drains to identify leaks. The identified leaks were repaired during the outage and water use was reduced.

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Sustainable Relationships Innovation Appendix Content Index Contact Us We endeavour to reduce the waste we produce and work with qualified parties and partners to reuse or recycle our waste as much as we can.

#### **OUR APPROACH**

Waste is a by-product of the construction, demolition and operation of our facilities. Due to the different nature of assets in our power generation fleet, different types of waste are generated. From our coal-fired power stations, the most significant amount of waste generated is coal ash from coal combustion, and the production of gypsum from the flue gas desulphurisation process. Beyond that, the volume of solid and liquid waste we generate is small and the risk of significant environmental spills or leakages is low.



# HAZARDOUS & NON-HAZARDOUS WASTE 64-EN23

We also monitor our waste generation by tracking the amount of both solid and liquid forms of hazardous and non-hazardous waste produced and recycled by our facilities on an annual basis.

In 2015, the total amount of waste produced was 12,096 tonnes of solid waste (excluding ash and gypsum by-products) and 3,031 kilolitres of liquid waste. Out of the solid waste produced, 38% of the hazardous and non-hazardous waste was recycled. Out of the liquid waste produced, 45% of the non-hazardous and hazardous waste was recycled.

In addition, most of our facilities have both hazardous and non-hazardous waste recycling and reduction programmes. For example, Yallourn Power Station in Australia has a programme of awareness and education focussed on correct segregation of wastes for recycling and disposal that aims to promote a culture of reducing and recycling waste.

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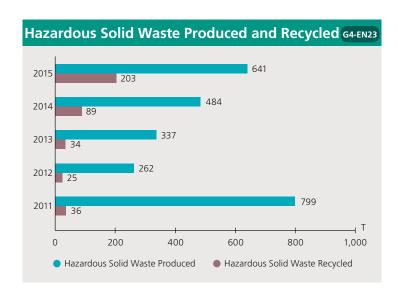
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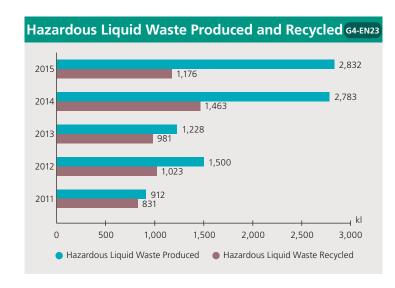
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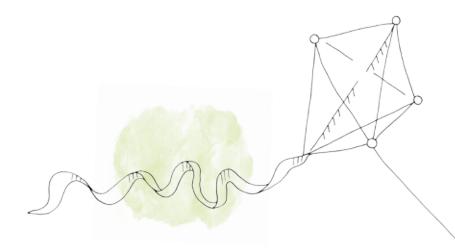
#### WASTE RECYCLED

In 2015, the amounts of ash and gypsum recycled or sold were 1,587 and 143 kilotonnes respectively. Below are examples of programmes for recycling or selling coal ash at our coal-fired power stations:

- Mount Piper Power Station, Australia During 2015, a substantial amount of fly ash was reclaimed and reused within the Cement production market. A small amount of bottom ash was also reclaimed for cement products and potting mix trials;
- Castle Peak Power Station, Hong Kong Pulverised fuel ash (PFA) is classified at the Ash Classification Plant in CPPS in accordance with British Standard BS3892: Part 1:1997. Classified PFA (CPFA) that fully complies with the standard is sold to local concrete production companies as a direct replacement for cement in concrete production while the substandard quality ash, such as furnace bottom ash (FBA), raw PFA and reject PFA are sold to a local cement plant for cement production;

- Fangchenggang Power Station, Mainland China All gypsum produced was sold for reuse; and
- Jhajjar Power Station, India All coal ash is sold to cement and fly ash brick manufacturers. All gypsum produced is also sold to cement manufacturers.

Levels of Ash and Gypsum By-Products Recycled and Sold  Kilotonnes (kT)												
	2015 2014 2013 2012											
Ash	Ash <b>1,587</b> 1,663 1,334 495											
Gypsum	143	166	222	210								



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**145** 2015 SUSTAINABILITY REPORT

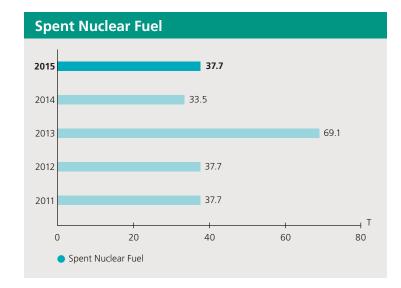
#### **NUCLEAR WASTE**

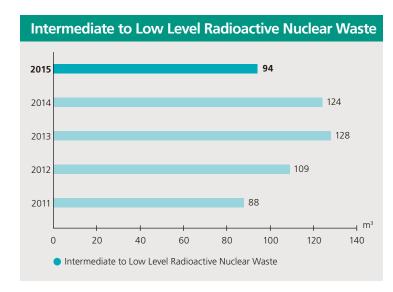
In accordance with national policy and international practices, Guangdong Daya Bay Nuclear Power Station (GNPS) stores its spent nuclear fuel onsite in a dedicated storage pool for each reactor for a number of years before passing it to a service provider licensed by the Mainland Chinese Government for reprocessing. The operation of the service provider is supervised by the National Nuclear Safety Administration (NNSA) and its environmental impact is monitored by the Ministry of Environmental Protection (MEP). The policy in Mainland China on reprocessing spent nuclear fuel is similar to that of a number of European countries.

Intermediate to low-level solid radioactive waste arises from operational processes and technical maintenance of the systems and equipment at GNPS. The waste is packed and stored in a dedicated facility onsite on an interim basis, and is provided with security to prevent unauthorised access. The waste will be transferred to a final repository operated by a separate service provider away from GNPS, using the shallow burial method, which is commonly adopted in the United States, France and the United Kingdom. The operation of the repository is expected to come under the supervision of the national nuclear regulator according to the relevant nuclear safety regulations.

As a minority shareholder of GNPS, CLP is not in the position to report the mass or inventory of high level radioactive waste (HLW) from reprocessing the spent fuel from the plant, as this is the responsibility of the licensed service provider. The licensed service provider is obliged to dispose of HLW safely as required by the Chinese authorities.

In 2015, a total of 37.7 tonnes of spent nuclear fuel was produced. The 2015 quantity remains low and difference in quantities across the years is a result of operational fluctuations.





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Sustainable Relationships Innovation Appendix Content Index Contact Us We recognise the growing importance of biodiversity, particularly since renewable energy tends to be located in more remote undeveloped areas and so we manage our potential biodiversity impacts at a site-specific level as the issues are location-specific.

#### **OUR APPROACH**

The regions we operate in face very different levels of regulatory controls on biodiversity, from assessment requirements to ecological compensation. We reported previously that, because of this variance in regulations and local awareness, it is challenging to tackle biodiversity issues because the availability of local expertise is also correspondingly low.

However, some governments have recently been moving the agenda up. Notably, the Hong Kong government has recently issued a public consultation on its draft Biodiversity Strategy and Action Plan (BSAP) for Hong Kong. This is largely driven by the Convention on Biological Diversity (CBD) in 1992. Mainland China signed the convention in 1993 and extended the CBD to Hong Kong in 2011. In light of this, we expect to see more focus on biodiversity in our region in the foreseeable future.

In response, CLP has set a biodiversity goal under our Sustainability Framework, and we have developed a detailed guideline on Biodiversity Impact Assessment internally. We believe that if we were to properly address our biodiversity impacts, the most important step is to perform the assessment properly. This guideline has been developed to serve this

purpose. We continue to face the challenge in finding local expertise, but we are improving the quality of our biodiversity assessment gradually.

In our past reports, we have described our work on biodiversity across the Group. Some of these efforts have become ongoing activities such as the vegetation management work along our transmission lines in Hong Kong, the fish management regime in place at our Jiangbian hydro power station in Mainland China, as well as the bird cataloguing work by Paguthan Power Station in India.

G4-EN11 G4-EN12 For our transmission and distribution network in Hong Kong, biodiversity within protected areas is particularly material. Protected areas include country parks, marine parks and the Mai Po Natural Reserve (a RAMSAR site), which are identified as having high biodiversity value. We have a total of about 104 km of 400kV overhead lines that are in designated country parks and the Mai Po Natural Reserve (about 52 km structure length). A series of ordinances regulate and guide our design, construction and decommissioning works and equipment used in these areas to minimise impact to the surrounding ecosystems.

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Sustainable Relationships Innovation Appendix Content Index Contact Us G4-EN13 Biodiversity improvement initiatives are usually longterm ongoing efforts. We provide some updates on our efforts in 2015:

- Yallourn Power Station, Australia The 2005 and 2011 Conservation Management Plan and Federal Offset Plan outline the requirements for a native vegetation net gain. All conservation sites are on EnergyAustralia land or crown land within the EnergyAustralia Mining Licence boundary. There is also a Progressive Rehabilitation Plan and a Conservation Management Plan for the Yallourn Mine that specifies the actions and plans for the life of the Mine and its final rehabilitation. This considers and requires a net biodiversity gain for losses due to mining. These efforts are all ongoing ones. Biodiversity offsets have generally scored a net gain although some areas were significantly affected during the February 2014 fires and are slowly recovering;
- Cathedral Rocks Wind Farm, Australia This asset is located within approximately 2,300 hectares of native vegetation protected under a Heritage Agreement. Implementation of weed and pest control annual plan is part of the Cathedral Rocks Heritage Agreement Environmental Management Plan. These activities mitigate the impacts of feral pests and invasive weed species on the flora and fauna within the Heritage Area;
- Jhajjar Power Station, India There is no ecologically sensitive area within 15 km radius of the power station's boundary. The closest is Bhindavas Wildlife Sanctuary which is 17 km from the power station. About 24,000 trees were planted during 2015 in the power station's premises to enrich local biodiversity;

- Paguthan Power Station, India While there have been no specific actions taken precisely on biodiversity during 2015, we continue to maintain and conserve rich biodiversity in our plant and township estate. This has been possible due to meticulous maintenance of the green habitat with over 36,000 trees beside large lawns. Beyond plant and estate boundaries, we have planted over 90,000 trees over the last few years. Student engagement events were held during the year under the program 'Green Clubs' to encourage environmental awareness and the importance of biodiversity; and
- Jianghian Hydro Power Station, Mainland China We have maintained a fish culture sanctuary, managed by a fish specialist to breed, rear and release fish species into Jiulong River as biodiversity compensation. We release on average 30,000 fishes annually.



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### **Largest Sky Woodland in Hong Kong**

Being an urban jungle of high-rise buildings with few precious green areas due to dense population and limited open space, CLP Power Hong Kong created the first and the largest Sky Woodland on the rooftop of a power substation. It aims to promote Green Rooftops across the city.

In 2006, CLP teamed up with the University of Hong Kong, and started to develop and test the concept of building a green roof on the rooftop of a power substation. After years of research and design, the project was launched in 2013, and was presented with the Gold Award for the Transmission and Distribution Project of the Year at the Asian Power Awards for its distinctive feature and sustainable design. In 2014, we applied various technologies to the Sky Woodland to enhance its overall functionality, including installation of automated irrigation systems to collect rainwater for irrigation and solar panels to power the irrigation systems using renewable energy.

**Case Study** 

In 2015, the Sky Woodland was home to 80 trees made up of 32 native species. We will further enhance its functionality by installing scientific monitoring equipment such as humidity and temperature measuring devices in 2016.

We hope that the success of the Sky Woodland project can generate interest and discussion among other businesses and utilities, while providing a blueprint for future rooftop greening projects in Hong Kong. It is also believed that the project can heighten the environmental awareness of the city.



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For 2015, the following most material aspects relevant to this chapter were identified:



**Employment** 



**Diversity and Equal Opportunity** 



**Labour / Management Relations** 



**Training and Education** 



**Equal Remuneration for Women and Men** 



**Non-discrimination** 



**Local Communities** 



### Why are the aspects highly material?

Maintaining strong relationships both internally and externally is critical for the sustainability of our business.

In order to attract and retain good talent, we are committed to creating jobs and a working environment that is free from discrimination, embraces diversity and equal opportunity, provides equal remuneration for both women and men, nurtures development through training and education and ensures regular channels of communications with management.

To ensure we continue to have a social licence to operate, it is critical that the communities in which we operate not only trust us, but also view our company as one that can contribute to the sustainable development of their future.

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We view our people as our greatest asset and being key to the sustainability of our company – the team work and collegiality of our talented multi-disciplinary employee base is a source of great pride.

#### **OUR HUMAN RESOURCE POLICIES**

We operate in a number of different countries across the Asia-Pacific region, and there is considerable variation between them with respect to labour law, codes of employment practice, and national cultures. In some countries the framework of labour law is well developed and comprehensive, in others it is more basic. Consequently our Human Resource policies have to balance three considerations: our Group-wide Value Framework as a responsible employer, the requirement to comply fully with labour rules and regulations in each of the countries we operate in, and sensitivity to local culture and business needs.

In each country we operate in, as a minimum standard, our local HR policies comply with all relevant local rules and regulations on compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity and other benefits and welfare. We also comply fully with any local legal requirements with respect to the minimum

wage. In practice, our policies and remuneration and benefits often significantly exceed local legal requirements. Our Groupwide policy is to hire the most suitable and capable individuals without any discrimination. We place great importance on treating employees fairly, including ensuring a fair wage, fair working hours and fair treatment regardless of gender, race or other measures of diversity.

G4-LA13 Our approach to the remuneration of men and women is based on equal opportunity and non-discrimination. We apply the same level and structure of remuneration for men and women, and there are no differences in how their pay is determined.

It is not our Group policy or market practice to provide the same employment benefits to temporary or part-time staff as to full-time or permanent staff. However, the benefits for our temporary and part-time employees are competitive with local market practice and meet or exceed local legal requirements.

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# POLICIES ON LABOUR STANDARDS AND HUMAN RIGHTS

CLP prohibits the employment of child, forced or compulsory labour in any of our operations. In 2015 we did not identify any operation or supplier as having significant risk of child labour, young workers exposed to hazardous work, or forced or compulsory labour.

We are aware of the provisions of the UN Framework and Guiding Principles on Business and Human Rights (the Ruggie framework) and its potential implications for our business. However we have yet to carry out a detailed assessment of these implications on our business activities.

Our employees have the freedom of association to join organisations and professional bodies of their choice. We respect and comply fully with all legal requirements in regards to union membership and collective bargaining in the countries we operate in. However, our management philosophy is that the most appropriate way to engage with our colleagues is through direct communication rather than through intermediary organisations.

In Australia we engage in collective bargaining with some employees via certified Enterprise Bargaining Agreements. These agreements include both notice period and provisions for consultation and negotiation.

In 2015 we did not identify any operations in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk.



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#### **OUR ORGANISATION AND RESOURCES**

To successfully implement our investment strategy, we must ensure that we are effectively organised, adequately resourced, and equipped with the necessary capabilities.

We continuously review our organisation to ensure that it supports our investment strategy and the continued efficient and safe operations of our businesses. In addition, we need to have the organisational agility to adapt to an increasingly complex and volatile business environment and meet the challenges presented by the accelerating pace of technological innovation and digital disruption.

Last year we reviewed the use of short-term contracts in Hong Kong, and have set a limit on the use of these in order to ensure that short-term contracts are not used where permanent employment would be more appropriate.

In addition to our employees, all of our businesses make use of external contractors, that is staff who are employed by third party contractors to CLP rather than directly by CLP.

Enhancing our information on the use of contractors is important for three reasons:

- So that we have a full and accurate picture of the total human resources needed to meet our business needs;
- To ensure that the employment and other rights of staff employed by contractors are respected; and
- To support our strategic workforce planning and ensure that we are not outsourcing core capabilities.

In 2015, we have taken steps to strengthen our data collection and in future years we plan to report more fully on our use of contractors, taking into account the definitional, data collection and procurement policy issues associated with this.

In all of our operations the majority of employees are local. As an international business, however, we also need to move selected staff between operations for reasons including individual development, transfer of know-how, and project resourcing. We plan and manage these movements through our Management Development and Succession Planning process.

In 2015, a total of 510 headcounts were employed in wind, solar and hydro projects, reflecting the progressive shift in our generation portfolio to renewable energy.

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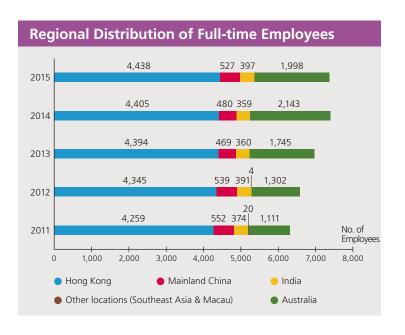
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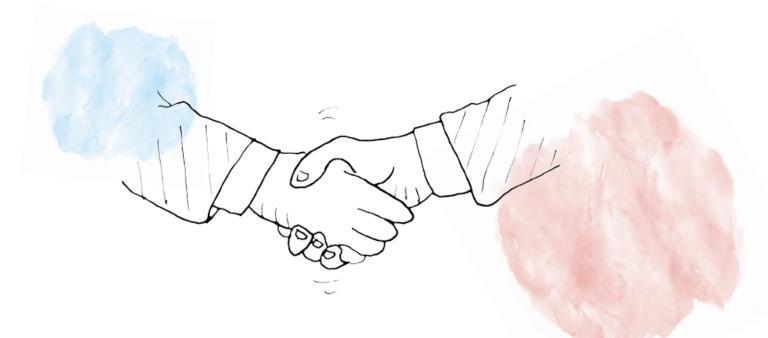
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Regional Distribution of Part-time Employees  No. of Employees									
	2015	2014							
Hong Kong	23	23							
Mainland China	0	0							
India	0	0							
Other locations (Southeast Asia & Macau)	0	0							
Australia	257	159							
Total	280	182							



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Employment Type by Region 64-10 % of Employees										
2015 2014										
	PERMANENT	SHORT- TERM CONTRACT	PERMANENT	SHORT- TERM CONTRACT						
Hong Kong	80.8	19.2	81.4	18.6						
Mainland China	70.0	30.0	73.3	26.7						
India	99.7	0.3	99.7	0.3						
Australia*	98.3	1.7	98.0	2.0						
Total	85.8	14.2	86.6	13.4						

*2014 data exclude Moun	t Piper and Wallerawang staff
-------------------------	-------------------------------

Gender Distribution by Region G4-10 % of Employees									
	20	)15	20	14					
	MALE	FEMALE	MALE	FEMALE					
Hong Kong	82.2	17.8	82.5	17.5					
Mainland China	79.3	20.7	78.3	21.7					
India	90.2	9.8	91.1	8.9					
Australia*	57.4	42.6	54.7	45.3					
Total	75.7	24.3	75.2	24.8					

<sup>\*2014</sup> data exclude Mount Piper and Wallerawang staff

Age Distribution by Region G4-10 % of Employees											
			2015					2014			
	BELOW 18	18-29	30-39	40-49	49 50 AND ABOVE BELOW 18 18-29 30-39 40-49 ABOV						
Hong Kong	0.1	12.3	20.7	27.4	39.5	0.02	12.4	20.8	29.2	37.6	
Mainland China	0.0	18.8	27.9	38.3	15.0	0.0	17.7	27.3	40.8	14.2	
India	0.0	32.0	42.1	19.4	6.5	0.0	27.6	42.6	22.0	7.8	
Australia*	0.0	25.0	34.5	20.0	20.5	0.0	27.1	37.1	19.2	16.7	
Total	0.05	17.3	26.1	25.8	30.8	0.01	17.4	26.7	27.0	28.9	

<sup>\*2014</sup> data exclude Mount Piper and Wallerawang staff

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# ENSURING OUR CAPABLITIES TO IMPLEMENT OUR STRATEGY

Our core requirement is to ensure that we attract, retain and deploy employees with the capabilities needed to construct, operate and maintain power facilities across the full range of fuel types. In particular, we need to retain and maintain our excellence in engineering.

The recent Group Investment Strategy Review highlighted the importance of greenfield projects to our future, particularly in our primary growth markets of Mainland China and India. Given this strategy, in 2015 we strengthened Group Operations resources and capabilities significantly, through a combination of external recruitment and internal transfers of staff, in order to allow us to unlock value and enhance performance through common standards and processes in project management, asset management, procurement and safety.

In EnergyAustralia, a major reorganisation was undertaken through the third quarter of 2015 to provide a clear, fit-for-purpose and accountable operating model that would ensure we meet the business challenges in the Australian operating environment. In all, over 1,200 changes were addressed including the establishment of new positions, modifications of current positions and removal of old vacant positions. Included in this change, we progressed the harmonisation of contracts to new standard contracts, introduced standardised job grading including full evaluation and alignment to CLP Group's practice, and met the aimed reduction of establishment positions.

In India, the focus has been on developing our talent through initiatives like cross-functional transfers, short-term assignments and mentoring by seniors from other functions.

We use manpower forecasting models to project our recruitment and development needs for skilled labour over a five-year period and develop our resourcing plans.

#### Highlight

### Leveraging Our Capabilities to Implement Our Strategy

Leveraging our capabilities means both being able to deploy key skills to where they are needed across the Group, and capturing and retaining critical experience in order to ensure we are not losing it through retirement or sub-contracting our core capabilities.

An important example of leveraging our capabilities was our resourcing plan for the Fangchenggang II construction project in 2015. We posted seven employees to the project in 2015, in order to expose them to project management and construction experience, and capture that learning to support our future project resourcing requirements around the region.

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Key contributors to our ability to attract and retain staff are competitive remuneration, competitive retirement and medical benefits, good vacation provision and attractive career development opportunities for high performers.

Each year we use independent external consultants to benchmark our remuneration and benefits with our major recruitment markets to assess how competitive we are. In order to ensure that we respect the interests of both our employees and shareholders as key stakeholders, decisions on remuneration are subject to our corporate governance process and the approval of the Human Resources & Remuneration Committee.

Retirement benefits are a significant component of total remuneration at CLP. The retirement benefit plans for staff employed by the Group entities in Hong Kong are regarded as defined contribution schemes. The current scheme, the CLP Group Provident Fund Scheme (GPFS), provides benefits linked to contributions and investment returns on the scheme. Contributions paid to define contribution schemes, including GPFS and MPF as required under the Hong Kong Mandatory Provident Fund Schemes Ordinance, totalled HK\$231 million (2014: HK\$222 million), of which HK\$65 million (2014: HK\$64 million) was capitalised. Staff employed by the Group entities outside Hong Kong are primarily covered by defined contribution schemes in accordance with local legislation and practices. Total contributions amounted to HK\$153 million (2014: HK\$161 million).

Average Length of Service Years by Region No. of Years									
	2015	2014							
Hong Kong	17.9	18.2							
Mainland China	14.2	15.0							
India	11.5	5.7							
Other locations (Southeast Asia & Macau)	N/A	N/A							
Australia 4.4 4.6									



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#### TRAINING AND DEVELOPMENT

G4-LA11 Our career development opportunities reflect our high rate of internal promotion compared to external recruitment, and this is based on our strong management development and succession planning process. For example, of our current 11 members of Senior Management, four were external appointments and seven internal promotions. Two members of our senior management team joined CLP as graduate trainees.

Whilst it is well recognised that at least 80% of individual development is derived from on-the-job experience, we are also committed to maintaining our investment in formal training and development programmes. Training activities include job specific skills, generic management or supervisory skills, and language training. They are delivered both internally and through attendance at external courses and conferences.

G4-LA10 To support our succession planning process we run a number of regular management development programmes at the Group level for high potential staff. In addition to their formal development content, these programmes strengthen personal networks across the Group and expose participants to a cross-cultural learning environment.

In EnergyAustralia, 294 staff members took part in 21 development programmes that focused on presentation skills, leading change, leadership and business acumen in 2015. In addition,16 EnergyAustralia colleagues received education assistance during the year.

In 2015, a number of our employees took part in the following programmes:

- Personal leadership programme for executive development at the Institute for Management Development, a leading European Business School;
- Accelerating Management Talent Consortium Programmes at the Ivey Business School;
- Tsinghua Executive Consortium Programme;
- Hong Kong Young Leaders Program organised by the Global Institute for Tomorrow which is supported by the Hong Kong Government's Efficiency Unit and the Hong Kong Jockey Club;
- World Business Council for Sustainable Development Future Leaders Programme; and
- Emerging Leaders Programme at the Indian Institute of Management, Ahmedabad.

In India, staff members took part in development programmes that focused on areas like personal, team, organization leadership, interpersonal effectiveness, and strategic innovation, in 2015. In Hong Kong and India we also have an established programme to provide financial assistance to staff undertaking further education, which sponsored 32 and 24 staff in Hong Kong and India respectively in 2015.

Our industry is changing rapidly, and we have expanded our range of strategic partnerships related to learning and development to help us navigate the future successfully.

Our senior management team has access to the strategic thinking and research capability of the globally respected Chatham House, and we are working closely with them on an industry-specific research project.

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Employee Training of Our Workforce G4-LA9  Average Hours								
	2015	2014						
BY GENDER								
Male	59.5	48.7						
Female	49.7	27.1						
BY PROFESSIONAL CATEGORY								
Managerial	45.2	24.1						
Professional	57.0	38.6						
General & Technical Staff	58.6	49.2						
BY REGION								
Hong Kong	55.1	51.3						
Mainland China	66.8	88.1						
India	34.3	31.6						
Australia*	63.5	16.5						
*2014 data oveludo Mount Pipor and Wallerawang staff	57.2	43.4						

<sup>\*2014</sup> data exclude Mount Piper and Wallerawang staff

### Highlight

# Pilot programme with École Polytechnique Fédérale de Lausanne (EPFL)

During the year we also began a pilot programme with École Polytechnique Fédérale de Lausanne, a leading technology research institute. Twenty-three of our high potential staff from across the Group attended the programme to strengthen their understanding of the disruptive changes driven by technological innovation and digitisation that are happening to the electricity industry. Through the programme, participants learned about the impact of such changes on European utilities, how that may affect our business model, and the need to prepare CLP for the transformational changes facing the industry.

We also held regular expert briefings for senior staff on key emerging topics. In 2015, these briefings have included digital disruption, electro-mobility, and the future of coal.

Employee Training by Region, Gender and Professional Category 64-LA11 % of Employees												
				2015					2014			
	BY GENDER BY PROFESSIONAL CATEGORY						BY G	ENDER	BY PROF	ESSIONAL CAT	EGORY	
	MALE	FEMALE	MANAGERIAL	PROFESSIONAL	GENERAL & TECHNICAL STAFF	TOTAL	MALE	FEMALE	MANAGERIAL	PROFESSIONAL	GENERAL & TECHNICAL STAFF	TOTAL
Hong Kong	96.9	98.9	98.7	99.3	95.4	97.2	95.0	84.7	79.9	92.8	94.9	93.2
Mainland China	100.0	99.1	100.0	99.4	100.0	99.8	97.9	97.1	100.0	92.9	99.4	97.7
India	86.3	87.2	90.7	86.1	85.5	86.4	91.7	100.0	92.3	91.0	96.0	92.5
Australia*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>\*2014</sup> data exclude Mount Piper and Wallerawang staff

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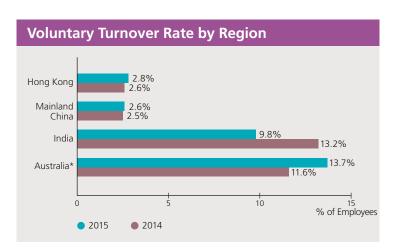
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#### **TALENT RETENTION**

Our ability to retain staff is reflected in our voluntary turnover (VTO) rates, which are typically below the local market average in most of our operations. The VTO for Australia of 13.4% is above the local market average of 10%, predominantly because a large percentage of EnergyAustralia's staff works in call centers, which typically have a VTO rate significantly higher than that for other staff groups. In the table below, we show our voluntary staff turnover rate by age group, gender and geographical location.



\*2014 data exclude Mount Piper and Wallerawang staff

Voluntary Turnover Rate by Region, Age Group and Gender % of Employees														
	2015							2014						
		ВҮ	AGE GRO	OUP		BY GI	ENDER		BY	AGE GRO	DUP		BY GE	NDER
	BELOW 18	18 TO 29	30 TO 39	40 TO 49	50 AND ABOVE	MALE	FEMALE	BELOW 18	18 TO 29	30 TO 39	40 TO 49	50 AND ABOVE	MALE	FEMALE
Hong Kong	0.0	5.3	6.1	2.0	1.7	2.5	4.7	0.0	5.1	4.7	1.6	2.0	2.1	5.3
Mainland China	0.0	5.9	4.1	0.5	1.3	2.7	1.9	0.0	7.7	2.8	1.0	0.0	2.4	2.9
India	0.0	9.9	11.6	6.5	8.3	9.6	11.5	0.0	17.3	13.5	10.1	3.8	13.6	9.0
Australia*	0.0	15.6	18.9	11.2	5.5	12.6	15.2	0.0	14.6	10.5	10.8	9.1	11.1	11.8

<sup>\*2014</sup> data exclude Mount Piper and Wallerawang staff

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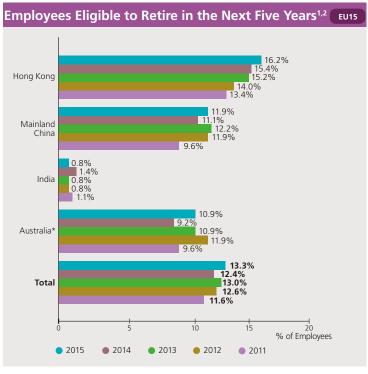
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# ADDRESSING LONG-TERM HUMAN CAPITAL CHALLENGES

To be a sustainable business we also have to anticipate and plan for the longer term internal and external Human Capital challenges that we face. The most significant of these are:

- We have an ageing workforce in our core Hong Kong business, as a result of low turnover and a high average length of service. However, it is also important to recognise that retirement creates opportunities, as it enables us to offer promotion and career development opportunities to our younger staff and allows us to create employment opportunities for young people. The percentage of staff eligible to retire in the next five years is shown in the table below. In 2015, we recruited 315 new staff in Hong Kong. The average age of these new recruits is 23.3, which is significantly below the average age of our Hong Kong workforce.
- We face demographic pressures in some markets due to ageing populations and the high demand for engineers.
   Consequently, we will continue to diversify our sources of recruitment for engineers, both geographically and in terms of gender diversity.
- Historically we have had limited geographical mobility of our Hong Kong-based staff due to cultural and personal reasons. This has inhibited our ability to deploy our core capabilities effectively outside of Hong Kong, and we are now taking active steps to increase mobility.
- Young engineers in some parts of the world have an increasing preference to work in renewable energy. Given that our renewable energy business is concentrated in India and Mainland China, we have created opportunities for Hong Kong-based engineers to be seconded to these projects, and six assignments were confirmed last year.



- 1 The percentages given refer to full-time permanent staff within each location, who are eligible to retire within the next five years.
- 2 There were no permanent staff in "Other locations (Southeast Asia & Macau)" since 2012.
- 3 2013 data excludes Mount Piper and Wallerawang staff.

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To address our long-term challenges we have implemented a number of initiatives.

Firstly, we have had established a senior management forum, which meets regularly, to review and optimise the use of engineering resources. A key task being addressed by this forum is increasing the mobility of engineering staff across the Group. For example, we seconded three young engineers from India to Hong Kong last year. These cross-business assignments contribute to the transfer of know-how, sharing of best practices and individual development.

Secondly, we are progressively increasing the number of graduate engineering trainees, and diversifying the sources of recruitment. In addition to Hong Kong, last year we hired more extensively throughout Mainland China and India, and we will seek to increase the number of female engineers. For example, to strengthen our talent pipeline to support our long term business development, we recruited nine graduate trainees in Mainland China and India last year including four female engineering graduates. Our apprentice and technician intakes have also been progressively expanded.



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#### **INCREASING DIVERSITY AND INCLUSIVENESS**

Given that we employ predominantly local staff in each of the countries that we operate in, CLP is already a very diverse organisation from an ethnic perspective.

Historically, utilities have had a significantly higher percentage of male than female employees. In our case this is compounded by our operating in countries across Asia Pacific and, for cultural reasons, there have been relatively low levels of female participation in the workforces of these countries.

We operate across a number of culturally diverse countries and respect the local differences that result from this. Consequently some diversity-related initiatives reflect locally specific considerations. An example is the evolving role of EnergyAustralia's Diversity and Inclusion Council which aims to build an inclusive culture within the company. The four priority areas that the Council support are Return to Work, LGBTIQ, Domestic Violence and Indigenous rights.



CLP female mentors and female engineering students join the closing ceremony of the CLP Mentoring programme

### Highlight

### **Increasing Gender Diversity**

We are taking a number of initiatives to increase gender diversity:

- We measure and report gender diversity across the Group to increase the visibility of the issue to the Group Executive Committee and the Human Resources & Remuneration Committee.
- In Hong Kong, we have sought the views of female employees, via focus groups, on how to ensure that we remain a female friendly employer. In 2015, we have enhanced our facilities for female employees, including breastfeeding facilities, and guidelines on lactation breaks.
- We successfully completed the female engineering mentoring programme with the Hong Kong Institute of Engineers in 2015 and held a closing ceremony for the programme. We invited a number of our female engineers from Hong Kong, Mainland China and India to join the event to help strengthen their networks.
- In India, there was a greater focus on gender sensitisation with sessions organised for the Internal Complaints Committee (which investigates and deals with complaints relating to sexual harassment) as well as the senior leadership team and staff in Human Resources on aspects including relevant law, gender sensitivity, and best practices.

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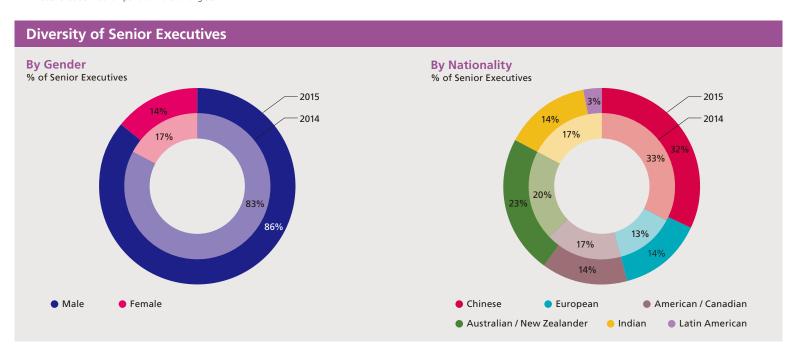
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Gender Distribution by Professional Category % of Employees												
			20	)15					20	14		
	MANAGERIAL		PROFES	GENERAL & TECHNICAL STAFF			MANAGERIAL		PROFESSIONAL		GENERAL & TECHNICAL STAFF	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Hong Kong	76.6	23.4	79.3	20.7	85.0	15.0	76.9	23.1	80.1	19.9	84.8	15.2
Mainland China	90.0	10.0	83.1	16.9	77.1	22.9	78.3	21.7	85.7	14.3	75.5	24.5
India	93.0	7.0	92.8	7.2	83.8	16.2	94.9	5.1	93.7	6.3	83.8	16.2
Australia*	71.0	29.0	58.4	41.6	55.0	45.0	73.8	26.2	62.1	37.9	47.2	52.8

<sup>\*2014</sup> data exclude Mount Piper and Wallerawang staff



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# EMPLOYEE ENGAGEMENT AND COMMUNICATION

We engage with our employees through a variety of channels, the most important of which is ensuring effective day-to-day communication through our organisation and management structure.

In addition, we have locally specific communication channels including Team Briefing, an established Joint Consultation Committee structure in Hong Kong, and CEO briefings to management on key issues. As a regional business we also invest in technology, such as our intranet and video conferencing, to provide effective Group-wide channels of communication.

We conduct regular Employee Opinion Surveys to understand our employees' views. These surveys are carried out by independent external consultants to ensure objectivity and to maintain confidentiality of the responses. The most important outcome of the survey is the measurement of an overall Employee Engagement Index in relation to the local market norm. The most recent Employee Opinion Survey result for Hong Kong payroll staff was completed in early 2015. Our Employee Engagement Index was significantly above the Hong Kong norm.

# DEALING EFFECTIVELY WITH GRIEVANCES AND COMPLAINTS

Each of our businesses has an employee grievance procedure in place that reflects our Value Framework and any applicable local legal requirements. For example in Hong Kong, CLP's Grievance Resolution Policy encourages employees to discuss issues freely and openly with their supervisors. They are encouraged to bring issues forward to the

Human Resources Department or higher level of management if they think the issues are not resolved or are being unjustly handled. There will be no discrimination, coercion or retaliation for doing so.

With respect to complaints of discrimination and harassment, we have clear policies in place, supported by employee training. Our Group-wide Harassment policy sets a common framework of principles and our detailed policies in each country are fully compliant with local legislation. Following the introduction of a Hong Kong-specific policy to ensure compliance with Hong Kong legislation and codes of practice, a series of refresher training sessions were held last year for Hong Kong staff.

In the case of any employee having concerns, we follow established procedures to address grievances. We investigate all complaints of discrimination and harassment. These procedures ensure fairness and independence in the investigation process, and respect for the confidentiality of the parties involved. In Hong Kong and Australia complaints may also be made to relevant external bodies such as the Equal Opportunities Commission in Hong Kong and the Human Rights and Equal Opportunity Commission in Australia.

Substantiated Complaints G4-HR3 No. of Complaints									
	2015	2014							
Harassment	1	2							
Discrimination	0	0							
Human Rights Grievances	0	0							
Labour Practices Grievances	0	0							

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We strive to build and maintain the trust of the communities we provide power to and operate in, so that we can continue to contribute to their development into healthy, resilient and sustainable communities.

#### **OUR APROACH TO COMMUNTY INVESTMENT**

Through the provision of electricity, CLP has been powering the economic and social development of communities for over a century. We hold investments for decades and our people and assets are firmly embedded within the local communities. As a power company with a long-term commitment to the Asia-Pacific region, one of the keys to the overall success of our business is the public acceptance of CLP as a provider of essential services. We believe we can strengthen our social licence to do business if we engage and empower the communities in which we operate.

Care for the Community is one of CLP's core values – it is a value shared by the company as well as our employees. We are committed to serving our community by providing multiple initiatives to deliver maximum value for our stakeholders.

As outlined in our CLP Group Community Investment, Sponsorship and Donation Policy, we apply our skills and resources strategically to projects, programmes and initiatives that have a positive impact on community development for the short and long term. To identify community needs, we work in close partnership with community groups and NGOs. We strive to create impact through collaboration, capacity-building initiatives, employee volunteerism and strategic giving.

Find out more about CLP Group Community Investment, Sponsorship and Donation Policy.

Over the years, we have developed and invested in a wide range of initiatives to serve our communities. Our community initiatives focus on four pillars: Climate Change and the Environment, Youth Education and Development, Community Health and Wellness and Arts and Culture. These are aligned with some of the Sustainable Development Goals (SDGs), which emphasise the universal need for societal development and progress.

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#### **CLP's Community Initiative Approach**

### **Business Needs**

# **Group Community Initiative Policy**

### **Community Needs**



#### **LOCAL INITIATIVES**

## Community Health & Wellness



To serve the needs of the socio-economically disadvantaged including life-skills development and healthcare access

# Youth Education & Development



To equip future leaders with the knowledge and skills necessary to tackle complex challenges and develop a skilled workforce

# Climate Change & the Environment



To enhance the public's understanding of the nexus between energy and climate change, environment, energy efficiency and conservation

#### **Arts & Culture**



To contribute to the development and appreciation of arts to improve our quality of life and encourage creative thinking



Programme Measurement & Reporting via CLP Group

Stakeholder Feedback

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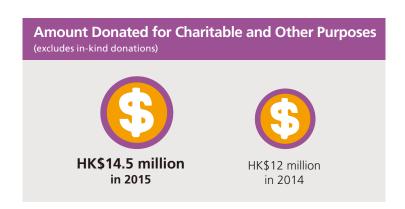
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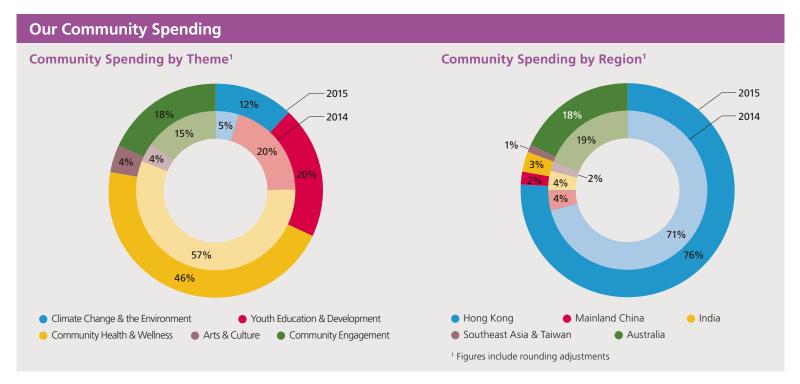
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#### RESOURCES CONTRIBUTED 64-EC7

We invest both money and time into our communities. In 2015, the majority of money was spent in the Community Health and Wellness pillar (46.2%). In terms of countries, most of the funding was used in Hong Kong (75.7%). Our cash donations to charities increased to HK\$14,519,000 in 2015 from HK\$12,019,000 in 2014.





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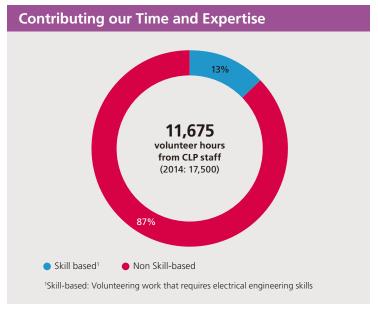
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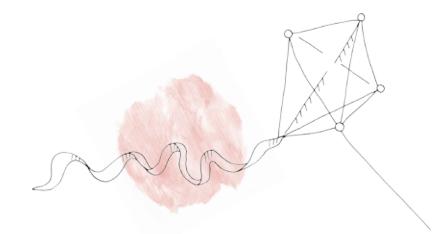
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Our staff contribute their time and expertise to the communities where they work. In 2015, our staff contributed 11,675 hours of voluntary service, 13% of which was skill-based volunteering.





### Highlight

# Recognition in Hong Kong: CLP VOLUNTEERING

1,000+ CLP volunteers contributed 9,800+ hours

CLP received the Corporate Award of the Hong Kong Volunteer Award and the Grand Caring Award (Enterprise Group) of the Corporate Social Responsibility Recognition Scheme organised by the Federation of Hong Kong Industries.



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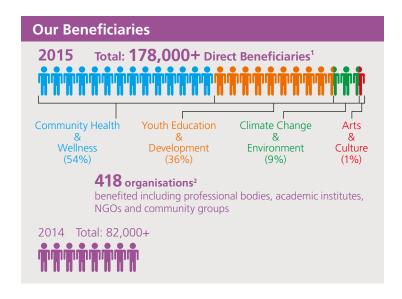
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### OUR IMPACT G4-EC7

In 2015, we initiated, sponsored or donated to 620 activities and engaged with 624 partners. As a result, we directly benefited more than 178,000 people versus over 82,000 people in 2014.





<sup>1</sup>Direct Beneficiaries: The number of people directly reached by or engaged in a community initiative, such as those who have participated directly in a programme, or benefited from the improvements made to relevant facilities or environment.

We create positive indirect economic impact on the society as many of our programmes are geared towards education, better health care and quality of life improvement in rural areas, all of which are known to contribute indirectly to economic improvement.

To understand the impacts of our community initiatives, we adopt global standards that measure a company's contribution to the community. These standards also support companies in evaluating the outputs and long-term benefits of the community investments.

Since 2009 we have been periodically using the London Benchmarking Group (LBG) methodology to measure and evaluate the social-economic impact of our community investment initiatives. We are now exploring new impact measurement tools to more comprehensively reflect the value of our wide range of contributions.

Furthermore, as part of our efforts to improve the integrity of our community investment data across the Group, a standardised online reporting system will be launched in 2016.

<sup>&</sup>lt;sup>2</sup>In some cases, the impact of the initiatives is better reflected by the benefiting organisation as a whole instead of the countable number of people.

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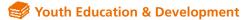
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#### **2015 INITIATIVE HIGHLIGHTS**

As different communities have different needs, our business units in different countries are given the flexibility to prioritise and address the specific needs and sensitivities of the existing cultures, traditions and values of the local communities. Our local teams, who have the best knowledge of local priorities, are able to work with local governments and organisations to provide solutions that best match their needs. In 2015, we have implemented community initiatives in 100% of the regions in which we operate.

The following are the highlights of the 2015 community initiatives in every country, further classified in accordance with our four pillars.









Find out more about the four pillars in the Community Initiative Approach section.

#### **Case Study**

# Power Your Love Programme – Integration of energy saving and improving the well-being of society

We launched the Power Your Love programme – one of the first in the world to combine energy saving with a mission to help the less fortunate in society in 2015. The programme aimed to save energy and transfer the electricity saved to people in need.

The programme attracted great support from the public, our business customers and our community partners. More than 200,000 of our residential customer accounts participated and saved 9.5 million kWh of electricity. As a result, CLP donated HK\$6 million from a shareholders' fund, together with some HK\$60,000 of public donation, to help pay for the electricity bills of about 20,000 underprivileged residential households, including the elderly, the severely disabled and families in need.



The Hong Kong Government officials and CLP's Senior Management jointly officiated the launch ceremony

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# -[Hong Kong]

The success of our business is closely aligned with the well-being of the community we serve. In Hong Kong, our community initiatives focus on three areas: the environment, youth and education, and community well-being. We work closely with local NGOs and community groups to identify evolving needs in society and to devise programmes that will bring an enduring impact. These collective efforts have brought fruitful outcomes in 2015. During the year, we initiated and supported 392 community projects in Hong Kong.

#### **ELDERLY YUM CHA**

about elderly people We treated elderly people to dim sum breakfasts. The event was supported by district council members, catering associations. NGOs and local community groups.

# hot meals per month

### **CLP HOTMEAL CANTEENS**

about

Hot meals were provided to the needy in Sham Sui Po, Kwai Tsing and Kwun Tong areas.



### ONE SCHOOL ONE ENGINEER PILOT **PROGRAMME**

Students learned about energy and the engineering profession secondary students through the programme.

### **SHARING THE FESTIVE JOY**

800+ elderly people

CLP volunteers celebrated three festive holidays with over 800 elderly people.





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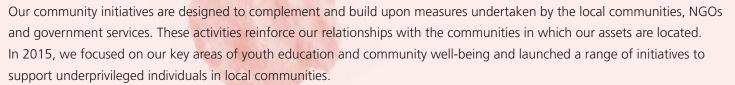
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### -[Mainland China]-





### **BUILDING A BETTER LEARNING ENVIRONMENT**

about

We sponsored three schools in Jiangbian, Sichuan to upgrade their facilities and funded two school libraries in Fangchenggang, benefiting the students.

1*.*300 students

Donated 60+ sets of computers to a secondary school in Sandu, Guizhou, enabling its students to restart their computer classes.

### **COMMUNITY INFRASTRUCTURE**

1,100+villagers

Benefited from improved village roads and drainage sponsored by Sandu Wind Farm in Guizhou.

300 residents CLP sponsored daily living necessities for residents in Nanning, Guanaxi.



#### **ERADICATION OF POVERTY**

RMB70.000 donated

Money donated to the governments of Yunnan and Sichuan on Poverty Eradication Day.





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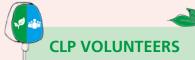
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700+ hours

contributed to help organise charity events, and visit schools and elderly homes.

Volunteers participated in tree planting activities near our power plants and nearby villages.

### SUPPORT-A-STUDENT-PROGRAMME

230 students CLP colleagues donated funds and matched by the company on a one-to-one basis, provided financial assistance to 230 students of nine schools in three provinces.



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# -[India]



CLP India believes in being an active participant in the social and economic development of the communities in which we operate. Our initiatives reflect the needs and expectations of the local communities. In 2015, we actively participated in a wide range of community initiatives, focusing primarily on the areas of health care, youth education, community infrastructure support and the empowerment of women.

#### **HEALTH CARE**

about **6**,**000** villagers in Bharuch District in Paguthan

benefited from the non-subvented health care projects funded by **CLP India** 

3.000 young children

Received vaccinations under the Pulse Polio Programme.

25,000+ villagers

Our signature Mobile Health Van medical outreach programme in Jhajjar continued to provide free treatment and consultation for villagers nearby.

### WOMEN EMPOWERMENT

250 +village women

Received cloth stitching training in Jhajjar

200 women An awareness session was held for 200 mothers and their daughters in Jhajjar to encourage them to join the Indian Government's "Save Girl Child, Educate Girl Child" programme.



### **COMMUNITY INFRASTRUCTURE**

3.000+

Benefited from improved public facilities such as children's park villagers in Paguthan and bus stands.

> CLP funded a feasibility study on solid waste management and the water scheme in local villages.



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### [India]



#### **PROMOTING SPORTS**

- CLP sponsored the Mumbai Marathon 2016 and URJA cricket Cup 2015.
- We supported **200** mentally-challenged children in Bharuch to participate in the district level Olympics.



#### **YOUTH & EDUCATION**

- CLP volunteers ran supplementary evening classes for 400 children in 10 villages to reduce non-schooling and drop-outs.
- We supported the government's School Enrolment Scheme.
- Through the Educational Support Scheme, we provided financial and mentoring support for 100 students.
- Computer literacy classes were conducted for 50 young people and students to enhance their employability.
- We sponsored vocational training for tribal young people.



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### –[Southeast Asia & Taiwan]

When operating in different countries, it is important that our initiatives reflect the needs and expectations of the local communities. In 2015, we participated in a range of community initiatives, focusing primarily on the areas of youth education, health, environment and cultural development.



#### THAILAND

In Thailand, Natural Energy Development Co., Ltd. (NED) continued to support stakeholder engagement programmes and initiatives, focusing on youth and education and conservation of traditional culture. Its GreeNEDucation Centre has served as an important platform in raising awareness about renewable energy in the community. Additionally, NED participated in the Innovation Expo to promote home solar energy system and renewable energy knowledge.





#### **TAIWAN**

Ho-Ping's community initiatives continued to focus on health, environment and cultural development. Throughout 2015, Ho-Ping supported numerous sports events and cultural activities, as well as a broad range of community events including beach cleaning and blood donation. Through these efforts, Ho-Ping successfully engaged with key stakeholders in Hualien and Yilan counties.



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### -[Australia]-



EnergyAustralia works closely with the local communities in which it operates with the aim of building a reputation as a trusted local operator. Consistent with this approach, in 2015, EnergyAustralia formed a dedicated Social Enterprise team. The team focuses on community engagement, arts & culture, local community infrastructure enhancement works and sporting sponsorships.

# GOALS TO END HUNGER CAMPAIGN

A\$25,000 donated

(= **58,950** meals for the needy)

EnergyAustalia donated the amount in a joint campaign with Port Adelaide Football Club and Foodbank South Australia to provide meals for the needy.

# WATERLOO WIND FARM COMMUNITY FUND

A\$20,000 sponsored

Through the Waterloo Wind Farm Community Fund, four organisations received sponsorship to support local conservation, community groups, school programmes and improvement to local amenities.

# PARTNERSHIP WITH SWIM AUSTRALIA

400+ swimming schools

As part of EnergyAustralia's continuing partnership with Swim Australia to promote swimming safety, the SwimSAFER Week provided the public with valuable information on safety skills in and around water through swimming schools.

### **ARTS & CULTURE**

In addition to a photography award, EnergyAustralia also sponsored dancing events, which attracted young performers from across the wider Gippsland and Latrobe Valley area.



### YOUTH & EDUCATION

Fr

**A\$65,000** sponsored

EnergyAustralia sponsored the amount to support 23 indigenous students to complete their schooling.

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#### **EFFECTS ON LOCAL COMMUNITIES**

All our power plants have a potential to impact local communities, in both positive and negative ways. We try to mitigate any concerns through the following measures:

- Communications with local governments to explain the nature of the project before construction starts and obtain their help in liaising with local people;
- Following all applicable laws and regulations regarding land acquisition and environmental impact;
- Providing employment opportunities where possible;
- Contributing to local services such as schools or hospitals; and
- Offering to receive local people and school children at the plant and explain what we do.

The public could occasionally experience injuries in conjunction with our assets, and we do our best to ensure our assets are well protected and the public is safe. In 2015, there were no legal judgments, settlement cases or pending legal cases concerning diseases that were delivered against, reached with, or commenced against, the CLP Group.

G4-508 On society regulatory compliance, generally speaking we did not identify any non-compliance with laws or regulations in 2015 other than what is reported in the Governance, Operations and Environmental chapters.

We do not conduct formal human rights reviews or impact assessments on our assets. We believe our ongoing engagement with various stakeholders and communities in which we operate will provide feedback to us should significant issues arise.

CLP abides by established government regulations on provisions for people who are resettled by government for the purpose of building power stations. While resettlement and compensation are often undertaken by government entities, CLP assumes an active role in the stakeholder consultation process.

On the rare occasion, where displacing or negatively impacting existing local communities or indigenous people is inevitable, we would take care to respect them and make every effort not to violate their rights. In 2015, CLP had no incidents of violations involving rights of indigenous people.

Most markets have regulatory bodies which have formal grievance channels for specific issues, such as the local environmental protection department or agency for environmental-related issues or consumer or energy regulator for customer-related issues. We have a wide range of open/public engagement channels through which we can receive any concerns, interests or feedback at any time during the year. General complaints against the company are typically handled by our Public Affairs team who work with the relevant colleagues to resolve the issue at hand.

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We are committed to enhancing the competitive position of our business, maintaining shareholder returns and creating long-term growth in shareholder value.

The Shareholders' Communication Policy forms the basis for extensive and ongoing engagement with our shareholders and the investment community. The effectiveness of the Policy is regularly reviewed by the Audit Committee.

Find out more about Shareholders' Communication Policy.

Major channels of communication through which we provide information to our shareholders and the investment community include:

- Our Annual General Meeting (AGM);
- Our Annual Report, Interim Report, Sustainability Report online and Quarterly Statements;
- Analyst briefings and webcast on the Company's interim and annual results, as well as on Hong Kong business updates;
- Senior Management and Investor Relations undertake roadshows, attend conferences, organise site visits and hold further one-on-one meetings with institutional investors;
- Regular communications between the Company Secretary and institutional investors on corporate governance practices;
- Annual webcast on the environmental, social and governance aspects of the business – CLP's third webcast was held in April 2015;
- Financial statistics for recent years, and latest investor information (such as share price, dividend information, calendar of important dates, etc.) are posted on our website and regularly updated; and

• The CLP website, which includes information on the Company's corporate governance principles and practices, updates on the Group's affairs and other information for shareholders.

Find out more about our <u>financial statistics</u>, <u>corporate governance</u> and <u>our</u> third ESG webcast.

Communication channels encouraging feedback from our shareholders to help us understand the latest industry trends from the investment community include:

- Face-to-face dialogue, including the "Shareholders' Corner" at our AGM;
- Feedback forms sent out with our Annual Report to obtain shareholders' views on the report and on additional information that they would like to receive in the following year's Annual Report, together with questions that they would like to have answered in the "Frequently Asked Questions" section of our website;
- Comments, queries and research reports from equity analysts;
- Shareholders' hotline and investor relations' email contacts;
- Shareholder correspondence our aim is to provide a substantive reply within seven days to written shareholder queries; and
- Visits to our facilities through our Shareholders' Visit Programme, which is unique amongst Hong Kong companies. Since the programme was initiated in 2003, we have organised over 770 tours of shareholders visits to our facilities and welcomed a total of about 31,000 shareholders and their guests (as of June 2015).

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We contribute to the development of sound government policies and laws that balance the social, economic and environmental needs of the communities we serve.

Every one has the right to have access to energy and so each national Government has the challenge of delivering on this goal. As a consequence, the power sector is a sector that has been and continues to be a heavily regulated sector, regardless of whether the market is 'regulated' or 'deregulated', as regulations exist for both types of markets.

Hence, regular communications between the power sector and its regulators and government is expected. These communications traditionally focused more on operational compliance to delivering the power required, as well as in the environmentally and socially responsible manner expected by the regulators and/or government.

However, there is an increasing need to communicate and discuss new emerging challenges that will require not just operational changes, but more strategic and even deep-rooted systemic changes in the energy system. As a result, engagement of the power sector and its regulators with local and international technical and strategic industry experts, whether in-house or externally, is imperative to delivering on sustainable low carbon energy systems for the future.

In 2015, key concerns or interests that have been raised by governments and regulators are reported in 2015 Key Stakeholders Concerns or Interests.

Go to the 2015 Key Stakeholders Concerns or Interests section.

In this Sustainability Report we have made a particular effort to address these areas:

- Hong Kong: the Market Regulation and Planning section addresses the local government's concerns on tariff review, future development of the electricity market, additional generation capacity and 2020 emissions cap;
- Mainland China: the <u>Health, Safety, Security and</u> <u>Environment</u> section addresses safety concerns, especially for nuclear power;
- India: the <u>Air Emissions</u> section addresses the Indian environmental regulator's tightening requirement on transparency of environmental performance reporting; and
- Australia: the <u>Sustainable Environment</u> chapter and <u>Industry and Professional Organisations</u> section addresses interests on climate change policy and renewable energy target.

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We engage with industry and professional organisations and experts to share knowledge, information, experience and best practice, as well as to stay abreast of current and emerging developments, trends and opportunities for our business.

International engagement with peers, industry experts, research and academic communities, as well as non-governmental organisations (NGOs), helps us to strengthen our relationships with both local and international stakeholders to:

- Continually monitor emerging trends and assess potential related business risks and opportunities;
- Introduce best practices to improve operational efficiency and business performance;
- Explore new technologies and potential business paradigms to uphold our license to operate;
- Strengthen our internal capacity for addressing emerging issues; and
- Stimulate thought leadership and share our experience and knowledge to build trust and credibility in the international community as well as amongst our local stakeholders, including government, industry, academia and general public.

Although we often adopt international standards and practices, we do not often endorse international charters and principles due to the fact that we take these initiatives very seriously and do not adopt them unless we are certain we can meet all the relevant criteria or requirements robustly. Although we do not officially adopt them, we do often follow or reference best practices included in such charters since we are always looking to continuously improve.



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# Industry and Professional Organisations

International	( and

ORGANISATION	ABOUT THE ORGANISATION	CLP'S INVOLVEMENT				
World Business Council for Sustainable Development (WBCSD)	WBCSD is a CEO-led organisation of over 180 forward-thinking companies that galvanises the global business community to create a sustainable future for business, society and the environment.	CLP has been a member since 2001. Our CEO is a Council Member and has been a member of the Climate and Energy Cluster Board since 2014.				
	society and the environment.	During 2015, under one of WBCSD's Low Carbon Technology Partnership Initiatives (LCTPi), CLP joined forces with 15 other world's leading energy and technology companies to join forces, and agreed on a shared vision to accelerate the deployment of renewable energy to limit global temperature rise under 2°C.				
World Energy Council (WEC)  Formed in 1923, WEC is a UN-accredited global energy body, represented by more than 3,000 member organisations located in over 90 countries. WEC informs		We have engaged with WEC since 2001. Our CEO is currently the chairman of WEC Hong Kong Membership Committee (WECHKMC).				
	global, regional and national leaders on energy strategies and facilitates the world's energy policy dialogue.	CLP continues to contribute to the World Energy Trilemma report. CLP has also participated in a study group looking into ways to secure reliable power supplies to mega-cities.				
MIT Joint Program on the Science and Policy of Global Change (MITJP)	MITJP was founded in 1991 and is a joint effort of two distinct centers: the MIT Center for Global Change Science (CGCS), and the MIT Center for Energy and Environmental Policy Research (CEEPR). MITJP focuses on studying the interactions between human activities and the Earth systems to provide a foundation of scientific knowledge that will aid decision-makers in confronting the world's challenges.	CLP has been a sponsor of the MITJP since 2011.  CLP continues to participate in regular meetings to capture various emerging issues and global challenges related to climate, energy, technology, environment and economics. In 2015, CLP's main focus was on extreme weather and adaptation measures in the context of climate change.				
IERE is a worldwide, non-profit organisation established in 1968. It serves executives, senior managers, engineers, and researchers who are responsible for electricity and energy-related R&D and solutions.		CLP has been a regular member of IERE since 2000 and an Executive Member since 2014.  CLP continued to participate in the joint R&D programme on Methanol as an Aging Marker for Power Transformers				

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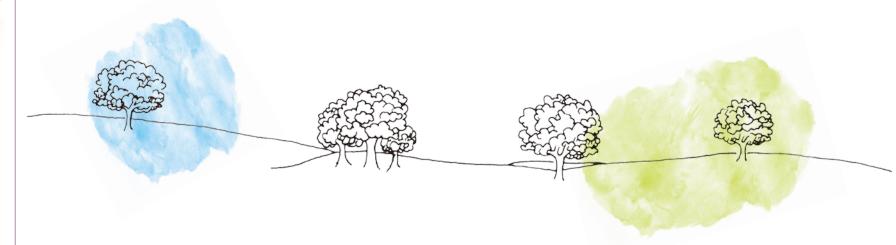
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# Industry and Professional Organisations

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ORGANISATION	ABOUT THE ORGANISATION	CLP'S INVOLVEMENT
International Emissions Trading Association (IETA)	The International Emissions Trading Association (IETA) is a non-profit business organisation founded in 1999 to establish a functional international framework for trading in greenhouse gas emission reductions.	CLP has been a corporate member of IETA since 2009.  In 2015, CLP participated in various IETA workshops and conferences to exchange views and updates on the latest international trends, and particularly the Chinese Emissions Trading Scheme (ETS).
International Integrated Reporting Council (IIRC)	IIRC is a global coalition of regulators, investors, companies, standard setters, the accounting profession and NGOs. It aims to enable integrated reporting to be embedded into mainstream business practice in the public and private sectors.	CLP was involved as a Working Group member from 2010-2014 and was one of the original pilot companies of the <ir> Framework.  Our CFO became a Council member of the IIRC in 2015.</ir>
Global Reporting Initiative (GRI)	GRI is a network-based NGO that helps businesses, governments and other organisations understand and communicate the impact of business on critical sustainability.	CLP is one of the early adopters of the GRI reporting guidelines.  In 2015, CLP became a member of the Stakeholder Council and the Corporate Leadership Group on Reporting 2025.



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# Industry and Professional Organisations

Hong Kong		
ORGANISATION	ABOUT THE ORGANISATION	CLP'S INVOLVEMENT
Hong Kong Institution of Engineers (HKIE)	With the vision of supporting "sustained excellence in the engineering profession", the HKIE sets standards for training and admission of engineers. It sets strict rules governing the conduct of its members; and as a learned society, it enables its members to keep abreast of the latest developments in engineering.	Many CLP colleagues are active within the HKIE, participating in trainings, events and as Committee Members for a number of Divisions including the Gas & Energy Division, the Nuclear Division and the Environmental Division. The Managing Director of CLP Power is a local representative of HKIE.  In 2015, we jointly ran a CLP Mentoring Program with the HKIE for female engineering students.
Business Environment Council (BEC)	BEC is an independent, non-profit organisation set up by the business sector in 1992. It promotes environmental excellence by advocating the uptake of clean technologies and practices which reduce waste, conserve resources, prevent pollution and improve corporate environmental and social responsibility.	CLP is a founding member of BEC and our CEO currently sits on the Board.  CLP is proactively involved in four advisory groups: Climate Change Business Forum Advisory Group, Energy Advisory Group, ESG Advisory Group and Transport & Logistics Advisory Group.
Hong Kong Green Building Council (HKGBC)	HKGBC is a non-profit organisation established in 2009. It aims to raise green building awareness by engaging the public, the industry and the government, and to develop practical solutions for Hong Kong's unique, subtropical built environment of high-rise, high density urban area, leading Hong Kong to become a world's exemplar of green building development.	CLP is an institutional member of HKGBC and our Senior Director – MACS sits on the Board.  In 2015, we were involved in the Industry Standards Committee and Public Education Committee and we provided guidance on the direction of programme development and activities.

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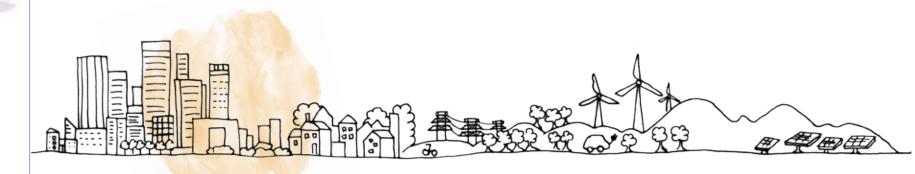
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Mainland Cl	nina AMARIA	
ORGANISATION	ABOUT THE ORGANISATION	CLP'S INVOLVEMENT
China Nuclear Energy Association (CNEA)	CNEA is a national non-profit and non-governmental organisation established in 2007. The CNEA's missions are to implement the national policies on nuclear energy development, promote industrial independent innovation and technical advancement, and support the improvement of safety, reliability and economics of nuclear energy utilisation.	Hong Kong Nuclear Investment Company (HKNIC) joined the CNEA in 2007 and is a standing member of the Governing Council of CNEA.  In 2015, we participated in CNEA's committee meetings and Annual Meeting. We also attended the World Nuclear Development Forum organised by CNEA.
China Electricity Council (CEC)	Established in 1988, CEC is a joint organisation of China's power enterprises and institutions. Functioning as a bridge between the government and power enterprises, CEC serves its members by appealing to the government on their requests and protecting their legal rights, encourages its members to fulfil their social responsibilities, and promotes the healthy development of the whole industry.	CLP joined the CEC in 1999 and the Managing Director of our China Business Unit is a member of the Standing Committee of this organisation.  In 2015, we were actively involved in the discussions of key China power sector initiatives including the Reliability Index, 2015 Power Supply-Demand forecast and China Power Sector reform.



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India (1916)	THEFRE				
ORGANISATION	ABOUT THE ORGANISATION	CLP'S INVOLVEMENT			
TERI Council for Business Sustainability (TERI-CBS)	During 2015, TERI renamed its Business Council for Sustainable Development to Council for Business Sustainability. It is an independent and credible platform for corporate leaders to address issues related to sustainable development and promote leadership in environmental management, social responsibility and economic performance.	CLP India has been an active member of TERI-CBS since 2011 and actively participates in the Chief Sustainability Officers (CSO) Forum. Our Managing Director – India is a member of the Executive Committee of TERI-CBS.  Our engagement involves regular participation in knowledge sharing meetings, conferences and development of case-studies to promote industry best practices.			
Indian Wind Power Association (IWPA)	Set up in 1996, IWPA is a non-profit organisation which represents the wind energy sector in India. IWPA aims to mainstream wind energy in India and advocate an increase of the penetration of wind energy in the grid to at least 20% by the year 2020.	CLP India has been a member of IWPA for over six years.  We participate in this platform for peer-to-peer learning, knowledge sharing as well as providing inputs. IWPA acts as a stakeholder in the wind industry and looks into matters that potentially affect the growth of wind power sector.			
Confederation of Indian Industry (CII)	CII is a non-government, non-profit, industry ledorganisation, playing a proactive role in India's development process. CII charts progress through dialogues with the central Government on policy issues and interfacing with thought leaders across industries.  CLP India has been a member of CII for a period of Our Managing Director — India is the Co-Chair for National Committee on Power.  CLP India participated in multiple forums hosted If for the power sector to resolve looming challenged the power sector. Learnings can be adopted to accent the power sector. Learnings can be adopted to accent the power sector to resolve looming challenged the power sector. Learnings can be adopted to accent the power sector.				
Association of Power Producers (APP)	In 2010, Private Power Developers came together to constitute the Association of Power Producers (APP) to highlight the issues faced by the private sector, and to ensure timely redressal of such issues to assure that the capacity addition targets can be met.	CLP India has been a founding member of APP and is one of the active members of the body. We have been playing an instrumental role, for example, our Managing Director – India was the Chairperson in 2014.  CLP India played a vital role in policy advocacy in fuel related matters, PPA issues, measures to improve DISCOMS health amendments to Electricity Act 2003, Tariff Policy, and standard bridging documents (SBDs).			

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Australia		
ORGANISATION	ABOUT THE ORGANISATION	CLP'S INVOLVEMENT
The Clean Energy Council	The Clean Energy Council is the peak body representing Australia's clean energy sector. It is an industry association made up of more than 600 member companies operating in the fields of renewable energy and energy efficiency.	EnergyAustralia has been a member of the Clean Energy Council since its creation in 2007 and has participated in various technical working groups.  In 2015, we provided inputs to the review of the National Renewable Energy Target maintenance of effective solar installation standards and the development of an energy storage roadmap.
Energy Supply Association of Australia (esaa)	esaa seeks to positively influence government policy decisions to ensure that Australia enjoys the benefits of a safe, secure, reliable, sustainable and competitively-priced electricity and natural gas supply. esaa members include government-owned corporations and private companies who retail, generate or supply electricity and natural gas to consumers in Australia.	EnergyAustralia has been a full member of esaa since its creation in 2005, and it has participated in policy committees, assisted in development of policy and implemented advocacy activities.  Key activities in 2015 included negotiations with the Commonwealth Government on its Safeguard Mechanism for the electricity sector, analysis of the impact of renewable energy on the National Electricity Market, and the identification of appropriate electric and natural gas vehicle targets for Australia to support industrial growth.

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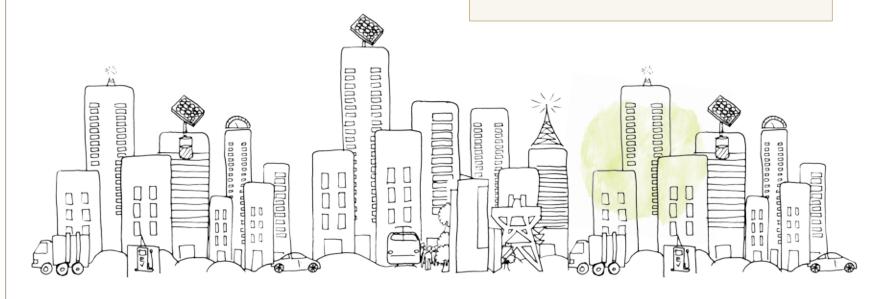
For 2015, the following most material aspect relevant to this chapter was identified:



### Why are the aspects highly material?

To be a sustainable business, we adapt to a changing business environment by identifying emerging trends, developing capabilities and applying commercially viable advanced technologies with innovative business approaches.

With megatrends such as demographic and social change, climate change and resource scarcity, technological breakthroughs and rapid urbanisation, there is increasing pressure from customers demanding for more choice and control while governments need to ensure energy security. Demand-side management is fast becoming one of the resulting trends especially in developed economies and cities.



# Research and Development G4-DMA Research and Development

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We support and sponsor academic and industrial research in areas relating to our industry and have traditionally been involved mainly in the deployment of proven technologies, but as times are changing fast, we find ourselves looking for more upstream opportunities in demonstration and tracking research and development of strategic importance.

#### RESEARCH AND DEVELOPMENT

We continued to monitor and assess emerging technologies and their applicability for us, including battery storage, carbon capture and storage, smart grid and distributed generation. We also maintained and built an active network of utility peers, researchers and academics focusing on technology, energy, environment, policy and cleantech investments. We continued to nurture innovation, research and knowledge development to build business insights of emerging risks and opportunities.

Our relatively modest R&D expenditure of HK\$ 2.38 million for the year of 2015 was largely used to support research programmes in universities, international R&D projects and inhouse studies. Some examples of the R&D activities in 2015 are provided below.

# MIT Joint Program on the Science and Policy of Global Change (MITJP)

We continued to sponsor MITJP and hosted various MIT speakers to share the latest global energy trends and climate issues with our Senior Management, local academics and key stakeholders in Hong Kong. The key focus included the expectations and implications of COP21 and the evolving energy policies in Mainland China.

### International Electric Research Exchange (IERE)

CLP continued working with international utilities on IERE's Methanol Marker Project. The multi-year R&D project subsequently introduced a new technology to Hong Kong's Power Systems Business Group for equipment health monitoring. CLP learned the advanced methodology and also facilitated the technical exchanges amongst the international communities of IERE.

### **Solar Resource Monitoring Programme**

We have completed the data collection phase for all solar monitoring stations and continued to explore different approaches to data analytics utilising the detailed solar data collected from the programme. Explorative trials on applying optimisation and artificial neural networks were conducted by CLP Research Institute and further work will be conducted by a local university in Hong Kong.

### "Utility of the Future" study

CLP joined a World Business Council for Sustainable Development programme where a number of international utilities joined forces to support MIT's "Utility of the Future" study. The study is part of MIT's "Future of ..." series and is dedicated to examining how distributed resources and renewables will impact the conventional business model and practices.

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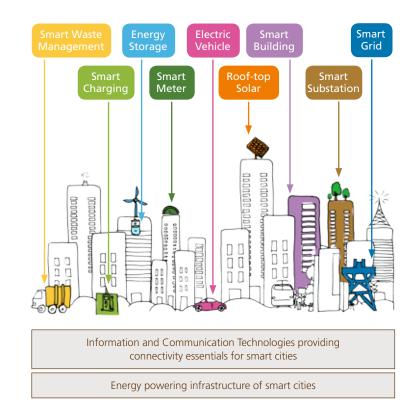
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We have been involved in the investment or development of over 12,000MW new thermal and renewable power plants across the Asia-Pacific region in the last 15 years, which has strengthened our project development experience and capabilities, including in project financing and engineering, procurement and construction management.

### **OUR EXPERTISE (SMART CITIES)**

Between 1990 and 2014, the urban population in the Asia Pacific region has increased by nearly 1 billion people, with almost half of that growth in China. According to a report by the International Migration Organisation, an estimated 120,000 people are expected to flock into cities daily by 2050. Rapid urbanisation is now being considered one of the megatrends that will shape our future. It demands attention from governments, businesses and the public as it requires significant resources to support the new infrastructure that is needed.

Along with improved living standards, citizens around the world, in particular those living in urban areas, are demanding sustainable energy, cleaner air and more efficient transport systems. There is a trend towards more customer control, deciding when and how they use energy. They also desire a higher quality living and working environment. The phenomenal growth of Information and Communication Technologies (ICT) being deployed in recent decades has provided ubiquitous connectivity and intelligent automation. Ultimately, the notion of smart cities has emerged and global cities like Barcelona, Stockholm, Seattle, Seoul, Singapore, New Delhi and Hong Kong are embarking on building their own version of a smart city.





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Whilst there is no "one-size-fits-all" model for smart cities, they share some common attributes. ICT acts as the neural system of a smart city connecting its citizens to enable them to work, live and travel more efficiently and comfortably. Smart cities are "smart" only if their governments are committed to supporting them through policies, incentives and investment. Energy represents the most fundamental and critical element as it is required to power every aspect of a smart city.

CLP has been providing safe and reliable energy for over a century. Over the years, we have acquired and applied our expertise to develop and operate a high quality power system to serve our customers. We have been continuously evaluating and exploring different new technologies and related economic benefits through CLP Power Hong Kong, CLP Research Institute, CLP Engineering and EnergyAustralia. One of our strengths is to embrace new technologies and tailoring them to meet local needs. Some examples are highlighted in the following sections.

### From Reliable Power System to Smart Grid

A city requires a reliable, safe and cost-effective power system that can support the activities of its citizens. Advances in ICT has led to the popularisation of smart grids around the world. With the application of smart grid technology, operators can now monitor and control their power facilities remotely, intelligently and accurately. These ICT-based systems are backed by hundreds and thousands of sensors and controllers deployed in our facilities, feeding their real-time data to the control center. The control engineers can then monitor and control the power system with a high degree of accuracy and efficiency, which in turn, delivers excellent service. The use of these ICT-

based systems has greatly improved system reliability and resilience.

CLP Power Hong Kong has achieved world-class performance in areas such as safety, supply reliability and operational efficiency. In order to deliver new and improved services to our customers, we continue to explore new technologies that make the grid "smarter" to meet energy challenges in an economic, sustainable and socially responsible manner. For example, we have introduced intelligent substations which use digital technologies to improve equipment connectivity, making them more reliable and flexible.

Our Smart Grid Experience Centre in Hong Kong, which showcases the many features and benefits of different smart grid technologies, has attracted over 12,700 visitors, including some 5,400 shareholders, since 2011.

### From Internet-of-things to Smart X

Internet-of-things (IoT) refers to different sensors, controllers or ICT systems that are linked together via the internet. They offer different products and / or services to individual customers, businesses and governments. They range from a simple switch that is controlled remotely via a smart phone to a complex traffic monitoring system. Through the IoT, citizens can get the latest information they require at or near real time. With the ease and rapid development of IoT, many functions within a smart city can be optimised and enhanced, for instance, controlling traffic dynamically, home security, energy efficiency in buildings and waste management. It enables a level of visibility and control that was not previously possible.



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Smart X represents a variety of applications utilising the IoT. With connectivity and intelligent learning algorithms, these devices and systems make our living and work space more comfortable (smart thermostat), efficient (smart lighting), secure (smart home), flexible (smart meter), reliable (smart grid) and adaptable (smart building).

CLP has gained extensive experience and knowledge on the development of smart meters in both Australia and Hong Kong. Smart meters are electronic meters that can provide additional information on energy consumption and enable two-way communication between customers and utilities. By integrating smart meters, CLP is able to provide more energy options and choices for our customers and to help them save energy.

In Australia, our subsidiary EnergyAustralia participated in the Smart Grid, Smart City project in New South Wales, which generated significant smart meter knowledge and experience that will help us better meet our customers' needs in the future. In Hong Kong, we have successfully completed a smart meter pilot programme, "myEnergy", in 2014 for residential and small-to-medium commercial customers. Through the pilot programme, we helped our customers identify energy saving opportunities and to better manage their electricity usage. CLP submitted the encouraging findings of myEnergy to the Government and is working with the Government to explore greater use of smart meters in the future.



### **Benefits of Smart Meters**

#### **Operational benefits:**

Power companies can improve operational efficiency through automating day-to-day processes. Supply reliability can also be improved through automated fault location, which in turn reduces duration of service disruption.

#### **Customer benefits:**

Customers can achieve saving by adjusting their consumption habits as they learn more about their electricity usage and are provided with more options.

#### **Societal benefits:**

Public safety can be improved since power companies are more informed about system status, reducing the risks of fire hazards and incidents



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# From Integrated Renewables to Energy Storage

Renewable energy generation will be an integral part of future energy systems. Harnessing unlimited renewable energy, particularly solar energy, is becoming more affordable. It also offers a low-carbon solution to our constant need for cleaner and more economic energy in city buildings. However, due to the high cost of land, renewable energy will more likely be developed at a small scale and distributed locally within a city.

Energy storage, particularly battery technology, has seen rapid growth and cost reduction within the last decade. With energy storage devices, we can overcome the intermittent generation profile of wind and solar resources and accelerate more uptake of renewable energy. In addition, energy storage can also provide emergency backup power and spinning reserve for the grid.

Today, CLP has over 3,000MW of renewable energy projects in our generation portfolio spreading across the Asia-Pacific region. These facilities include utility-scale wind and solar farms, roof-top solar panels and building integrated photovoltaic (BIPV). CLP has worked with different battery systems for various applications for years. The success of the integration and utilisation of storage devices will depend heavily on their overall economic benefits, technology maturity, performance reliability and safety considerations.

# From Mass Transit Systems to Electric Vehicles (EVs)

Electrification of mass transit systems is already very common in major cities around the world. Both public and private EVs are increasingly popular and it is largely driven by rapid technology advancement and emissions control incentives. The need to equip smart cities with the necessary charging infrastructure, convenient payment model, and parking space information will eventually surface in most smart cities.

CLP has long been a supporter of EVs and public charging station deployment. In 2015, we owned and operated 77 electric vehicles including two electric buses with 142 public charging points in our service areas within Hong Kong. We have extended our free charging service until the end of 2016 and introduced a new service in 2015 to facilitate the installation of private chargers by our customers in residential or commercial buildings.



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### From Data Management to Data Analytics

Data is an integral part of all smart cities. With IoT and Smart X being increasingly deployed, a large volume of real time data is generated. This voluminous and complex data, also known as Big Data, will require extensive data management, sophisticated analytics and visualisation capabilities to provide insight and enable faster decision making. In Hong Kong, we recently published the location data of our EV charging stations on the Government's open data portal, which facilitates the development of mobile apps.

CLP has been managing bulk metering data since the 1980s, when we first implemented interval meters in Hong Kong. The smart meter deployment in Victoria, Australia and the recent pilot programmes in Hong Kong have also enabled us to build extensive capabilities in Big Data management and analytics.

As the importance of ensuring personal privacy and public security increases, cyber-security has also become our top priority and newly acquired expertise.

# **Towards a Low-carbon and Sustainable Future**

The definition of a smart city is constantly evolving. Each city has its own technological, economical and aspirational drivers that will define its own vision of a smart city. Ultimately, historical, cultural, political and social factors will play a role in the final implementation. However, the role of electricity supply within all smart cities will be common and the trend is towards a low-carbon, economical, efficient and intelligent power system.

CLP has been actively working on the development and deployment of smart meters, demand side management, distribution automation, renewable energy, building energy management systems, micro-grid, EV charging network, intelligent substations, condition monitoring, open data and big data management. We believe the knowledge, experience and skills we have acquired, will enable us to shape and participate in the development of smart cities in the Asia-Pacific region.

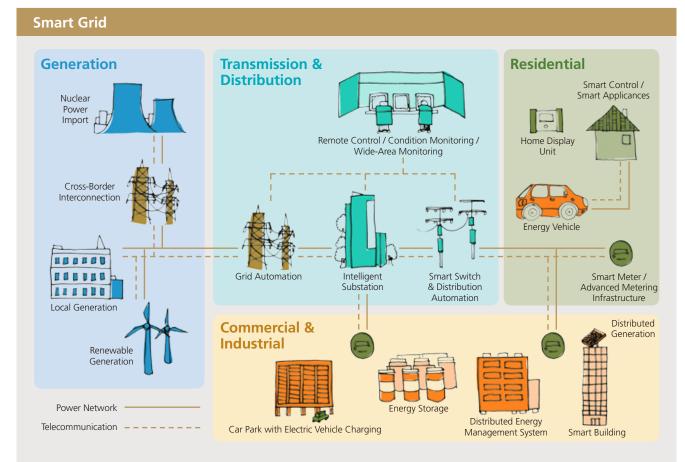
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#### Highlights of a smart grid:

- A power system must be designed and operated in a safe, reliable, efficient and environmentally responsible manner;
- A smart grid enables the integration of renewable energy at all levels;
- The smart meters, a key component of smart grids, are electronic meters that can provide granular usage data, two-way communications, remote meter reading and equipment control capabilities;
- A smart grid allows utilities and our customers to interact such that certain load consumptions can be controlled to meet system needs;
- A smart grid enables the integration of different distributed energy resources, including local generation and storage devices, and
- A smart grid leverages telecommunications and advanced technologies to provide better monitoring capabilities such as intelligent substations, outage management systems, equipment health monitoring and distribution automation.

### Reporting Scope 64-17 64-20

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In 2015, there were three major changes of our reporting scope:

- Addition of the Laiwu I Wind Farm and Xicun I Solar Power Station to our environmental reporting scope, which completed their first full calendar year of operation under CLP ownership in 2015;
- 2) Removal of Waterloo Wind Farm as our equity interest was sold in 2015; and
- 3) Removal of Iona Gas Plant in Australia as it was sold in 2015.

Below is the definition of the company boundary for each of the main categories of data included in this Report. Please refer to our <u>2015 Annual Report</u> for more details on the entities included in our consolidated financial statements.

#### **FINANCE**

Selected financial figures are extracted from our Annual Report and include the financial statements of CLP and its subsidiaries as well as the Group's interests in Joint Ventures and Associate 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 accounting policy for consolidation on pages 191-192 of our 2015 Annual Report.

#### **ENVIRONMENT**

#### **Resource Use and Emissions**

Includes all entities which hold power assets, transmission and distribution infrastructure or fuel storage facilities:

- That pose material impact to the environment;
- That are under CLP's operational control, defined as full authority to implement CLP's operating policies; and
- That have been operating for a full calendar year.

100% of the performance data for in scope entities is reported without adjustment of the data to reflect our equity share, unless otherwise stated.

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#### **CLIMATE VISION 2050 TARGET PERFORMANCE**

Includes all entities which hold power assets, transmission and distribution infrastructure or fuel storage facilities.

- Entities are included on an equity basis, meaning the definition of operational control is not considered, only whether CLP holds an equity share; and
- The scope includes all entities that were in operation at some point during the reporting year, meaning assets which were acquired during the reporting year are included despite not having been in operation for a full calendar year under CLP ownership.

Performance data is consolidated on an equity basis – i.e. if CLP holds a fraction of the total entity, performance is consolidated on a pro rata basis in accordance with CLP's equity holding.

Some statistical data derived from our overseas operations may not be strictly comparable because local and/or regulatory definitions may vary.

#### **PEOPLE: EMPLOYEES**

Includes all people employed by CLP entities or their subsidiaries. It does not include employees in our Joint Ventures, Joint Operations or Associate.

#### **PEOPLE: SAFETY**

Includes all entities which hold power assets, transmission and distribution infrastructure, fuel storage facilities or regional office areas:

- That are majority owned by CLP; and
- That are under CLP's operational control, defined as full authority to implement CLP's operating policies; and
- That are under construction or in operation.



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Governance 64-505	Note	Unit	2015	2014	2013	2012	2011	Global Reporting Initaitve Reference (G4)	HKEx ESG Reporting Guide Reference
Governance									
Convicted cases of corruption		cases	0	0	0	0	0	G4-SO5	B7.1
Breaches of Code of Conduct		cases	6	7	12	14	6		

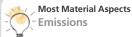
Financial G4-EC1	Note	Unit	2015	2014	2013	2012	2011	Global Reporting Initaitve Reference (G4)	HKEx ESG Reporting Guide Reference
Financial Information									
Economic value generated									
Revenue		HK\$M	80,700	92,259	104,530	104,861	91,634	G4-EC1	
Economic value distributed									
Operating costs	1	HK\$M	46,682	64,655	81,563	78,474	65,711	G4-EC1	
Staff expenses		HK\$M	3,649	3,980	3,017	2,935	2,623	G4-EC1	
Finance costs	2	HK\$M	4,337	4,332	6,522	6,423	6,005	G4-EC1	
Dividends	3	HK\$M	6,822	6,619	6,493	6,301	6,063	G4-EC1	
Taxes	4	HK\$M	1,818	1,571	839	882	615	G4-EC1	
Donations		HK\$M	15	12	8	4	4	G4-EC1	
Economic value retained	5	нк\$м	17,377	11,090	6,088	9,842	10,613	G4-EC1	

Note	Unit	2015	2014	2013	2012	2011	Global Reporting Initaitve Reference (G4)	HKEx ESG Reporting Guide Reference
6								
7	number	0	0	0	0	0	G4-LA6	B2.1
7	number	0	1	1	N/A	N/A	G4-LA6	B2.1
8	rate	0.00	0.00	0.00	N/A	N/A	G4-LA6	B2.1
8	rate	0.00	0.01	0.01	N/A	N/A	G4-LA6	B2.1
9	number	8	4	5	N/A	N/A	G4-LA6	
9	number	8	19	28	N/A	N/A	G4-LA6	
8, 9	rate	0.10	0.05	0.06	N/A	N/A	G4-LA6	
8, 9	rate	0.06	0.15	0.22	N/A	N/A	G4-LA6	
8, 10	rate	0.18	0.26	0.23	N/A	N/A	G4-LA6	
8, 10	rate	0.28	0.51	0.50	N/A	N/A	G4-LA6	
11	number	199	105	29	240	674	G4-LA6	B2.2
	6 7 7 8 8 9 9 9 8, 9 8, 9 8, 10 8, 10	6 7 number 7 number 8 rate 8 rate 9 number 9 number 8, 9 rate 8, 9 rate 8, 10 rate 8, 10 rate	6 7 number 0 7 number 0 8 rate 0.00 8 rate 0.00 9 number 8 9 number 8 9 rate 0.10 8, 9 rate 0.10 8, 10 rate 0.18 8, 10 rate 0.28	6 7 number 0 0 7 number 0 1 8 rate 0.00 0.00 8 rate 0.00 0.01 9 number 8 4 9 number 8 19 8,9 rate 0.10 0.05 8,9 rate 0.06 0.15 8,10 rate 0.18 0.26 8,10 rate 0.28 0.51	6 7 number 0 0 0 7 number 0 1 1 8 rate 0.00 0.00 0.00 8 rate 0.00 0.01 0.01 9 number 8 4 5 9 number 8 19 28 8,9 rate 0.10 0.05 0.06 8,9 rate 0.06 0.15 0.22 8,10 rate 0.18 0.26 0.23 8,10 rate 0.28 0.51 0.50	6 7 number 0 0 0 0 0 7 number 0 1 1 1 N/A 8 rate 0.00 0.00 0.00 N/A 8 rate 0.00 0.01 0.01 N/A 9 number 8 4 5 N/A 9 number 8 19 28 N/A 8, 9 rate 0.10 0.05 0.06 N/A 8, 9 rate 0.06 0.15 0.22 N/A 8, 10 rate 0.18 0.26 0.23 N/A 8, 10 rate 0.28 0.51 0.50 N/A	6 7 number 0 0 0 0 0 0 7 number 0 1 1 1 N/A N/A 8 rate 0.00 0.00 0.00 N/A N/A 8 rate 0.00 0.01 0.01 N/A N/A 9 number 8 4 5 N/A N/A 9 number 8 19 28 N/A N/A 8, 9 rate 0.10 0.05 0.06 N/A N/A 8, 9 rate 0.06 0.15 0.22 N/A N/A 8, 10 rate 0.18 0.26 0.23 N/A N/A 8, 10 rate 0.28 0.51 0.50 N/A N/A	Note         Unit         2015         2014         2013         2012         2011         Reporting Initiative Reference (G4)           6         7         number         0         0         0         0         0         G4-LA6           7         number         0         1         1         N/A         N/A         G4-LA6           8         rate         0.00         0.00         0.00         N/A         N/A         G4-LA6           8         rate         0.00         0.01         0.01         N/A         N/A         G4-LA6           9         number         8         4         5         N/A         N/A         G4-LA6           9         number         8         19         28         N/A         N/A         G4-LA6           8, 9         rate         0.10         0.05         0.06         N/A         N/A         G4-LA6           8, 9         rate         0.06         0.15         0.22         N/A         N/A         G4-LA6           8, 10         rate         0.18         0.26         0.23         N/A         N/A         G4-LA6           8, 10         rate         0.18         0.2

All 2015 data on this page have been independently verified by PricewaterhouseCoopers except those numbers which are shaded in grey

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Environment G4-EN22 G4-EN22 G4-EN23	Note	Unit	2015	2014	2013	2012	2011	Global Reporting Initaitve Reference (G4)	HKEx ESG Reporting Guide Reference
Resource Use and Emissions	12								
Coal consumed (for power generation)		TJ	450,937	541,865	433,763	361,819	419,357	G4-EN3	A2.1
Gas consumed (for power generation)		ΤJ	95,591	63,268	73,510	86,200	101,166	G4-EN3	A2.1
Oil consumed (for power generation)		_ LT	2,892	2,345	1,973	8,200	1,508	G4-EN3	A2.1
$CO_2$ e emissions from power generation (Scopes 1 & 2)		kT	46,723	53,258	44,258	38,464	44,450	G4-EN15 G4-EN16	A1.2
$CO_2$ emissions from power generation (Scopes 1 & 2)	13	kT _	46,553	53,044	44,076	38,319	44,298		
Nitrogen oxides emissions (NO <sub>x</sub> )		kT	56.3	74.6	50.2	42.9	48.1	G4-EN21	A1.1
Sulphur dioxide emissions (SO₂)		kT	63.4	93.0	50.5	35.1	35.8	G4-EN21	A1.1
Total particulates emissions		kT	9.8	11.5	5.5	4.7	6.2	G4-EN21	A1.1
Water withdrawal								G4-EN8	A2.2
from marine water resources		Mm <sup>3</sup>	4,447.6	4,774.5	4,987.9	4,648.6	4,688.6		
from freshwater resources		Mm³	48.8	52.9	37.2 (14)	35.4	37.9		
from municipal sources		Mm³	6.6	6.6	6.2 (14)	5.8	5.5		
Total		Mm <sup>3</sup>	4,503.0	4,834.0	5,031.0	4,689.6	4,732.0		
Nater discharged								G4-EN22	
cooling water to marine water bodies		Mm³	4,447.6	4,774.5	4,987.9	4,648.6	4,688.6		
treated wastewater to marine water bodies		Mm³	1.1	1.3	1.2	1.1	0.8		
treated wastewater to freshwater bodies		Mm³	12.6	14.5	10.1	14.0	18.1		
wastewater to sewerage		Mm³	1.6	1.8	1.5	1.7	1.8		
wastewater to other destinations		Mm³	0.1	0.1	0.1	0.3	0.6		
Total		Mm³	4,463.0	4,792.2	5,000.8	4,665.7	4,710.0		
Hazardous waste produced	15	T (solid) / kl (liquid)	641 / 2,832	484 / 2,783	337 / 1,228	262 / 1,500	799 / 912	G4-EN23	A1.3
Hazardous waste recycled	15	T (solid) / kl (liquid)	203 / 1,176	89 / 1,463	34 / 981	25 / 1,023	36 / 831	G4-EN23	
Non-hazardous waste produced	15	T (solid) / kl (liquid)	11,455 / 199	21,142 / 78	7,700 / 0	10,830 / 21	6,301 / 0	G4-EN23	A1.4
Non-hazardous waste recycled	15	T (solid) / kl (liquid)	4,414 / 199	4,172 / 78	1,853 / 0	2,719 / 4	3,699 / 0	G4-EN23	
Environmental regulatory non-compliances resulting in fines or prosecutions		number	1	1	0	0	0	G4-EN29	
Environmental licence limit exceedances & other non-compliances		number	<b>13</b> (17)	3 (16)	4	1	5	G4-EN29	
Climate Vision 2050 Target Performance (Equity Basis)	18								
Total renewable energy generation capacity		% (MW)	16.8 (3,051)	14.1 (2,660)	16.3 (2,579)	20.2 (2,734)	18.3 (2,424)		
Non-carbon emitting generation capacity		% (MW)	19.5 (3,543)	16.7 (3,152)	19.4 (3,071)	23.8 (3,226)	22.0 (2,916)		
Carbon dioxide emissions intensity of CLP Group's generation portfolio		kg CO₂ / kWh	0.81 (19)	0.84 (19)	0.82 (19)	0.77	0.80	G4-EN18	A1.2
Carbon Emissions Intensity of CLP Power Hong Kong Electricity Sold									
CO <sub>2</sub> emissions intensity of electricity sold by CLP Power Hong Kong		kg CO₂ / kWh	0.54	0.63	0.63	0.58	0.59		
$\mathrm{CO}_2\mathrm{e}$ emissions intensity of electricity sold by CLP Power Hong Kong		kg CO₂e / kWh	0.54	0.64	0.63	0.58	0.59		

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Employees G4-LA9	Note	Unit	2015	2014	2013	2012	2011	Global Reporting Initaitve Reference (G4)	HKEx ESG Reporting Guide Reference
Employees									
Employees based on geographical location								G4-9	B1.1
Hong Kong		number	4,438	4,405	4,394	4,345	4,259		
Mainland China		number	527	480	469	539	552		
Australia		number	1,998	2,143	1,745	1,302	1,111		
India		number	397	359	360	391	374		
Other locations (Southeast Asia & Macau)		number	_	_	_	4	20		
Total		number	7,360	7,387	6,968	6,581	6,316		
Employees eligible to retire within the next five years	20							EU15	
Hong Kong		%	16.2%	15.4%	15.2%	14.0%	13.4%		
Mainland China		%	11.9%	11.1%	12.2%	11.9%	9.6%		
Australia		%	10.9%	9.2%	10.9%	11.9%	9.6%		
India		%	0.8%	1.4%	0.8%	0.8%	1.1%		
Other locations (Southeast Asia & Macau)	21	%	N/A	N/A	N/A	N/A	0.0%		
Total		%	13.3%	12.4%	13.0%	12.6%	11.6%		
Voluntary staff turnover rate	22, 23							G4-LA1	B1.2
Hong Kong		%	2.8%	2.6%	1.9%	_	_		
Mainland China		%	2.6%	2.5%	2.6%	_	_		
Australia		%	13.7%	11.6%	9.4%	_	_		
India		%	9.8%	13.2%	10.1%	_	_		
Other locations (Southeast Asia & Macau)		%	N/A	N/A	N/A	-	-		
Training & Development									
Training per employee	24	average hours	57.2	43.4 (25)	5.5	5.6	5.4	G4-LA9	B3.2

All 2015 data on this page have been independently verified by PricewaterhouseCoopers except those numbers which are shaded in grey

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#### **Notes to the KPI Tables**

- 1 For simplicity sake, operating costs included earnings attributable to other non-controlling interests and netted with other gain, finance income and share of results (net of income tax) from joint ventures and associate.
- 2 Finance costs include payments made to perpetual capital securities holders.
- 3 The 2014 figure was adjusted to align with current year's presentation basis.
- 4 Represents current income tax but excluding deferred tax for the year.
- 5 Represents earnings attributable to shareholders (before depreciation, amortisation and deferred tax) for the year retained.
- 6 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. Safety data are based on information at the time of publication.
- 7 Fatality is the death of an employee or contractor personnel as a result of an occupational illness / injury / disease incident in the course of employment.
- 8 All rates are normalised to 200,000 worked hours, which is approximately equal to the number of hours worked by 100 people in one year.
- 9 An occupational illness / injury / disease sustained by an employee or contractor personnel causing him / her to miss one scheduled workday / shift or more after the day of the injury. Lost Time Injury does not include the day the injury incident occurred or any days that the injured person was not scheduled to work and it does not include restricted work injury.
- 10 Total Recordable Injury is the sum of all occupational injury incidents, illness other than first aid cases. They include Fatalities, Lost Time Injury, Restricted Work Injury, Medical Treatment.
- 11 Time ('days') that could not be worked (and is thus 'lost') as a consequence of a worker or workers being unable to perform their usual work because of an occupational accident or disease. A return to limited duty or alternative work for the same organisation does not count as lost days.
- 12 Covered operating facilities where CLP has operational control for the full calendar reporting year.
- 13 Includes Yallourn and Hallett facilities' CO<sub>2</sub>e emissions as CO<sub>2</sub> emissions data were not available.
- 14 Data updated to align with reporting definition.
- 15 Waste categorised in accordance with local regulations.
- 16 Yallourn's data updated to reflect compliance status as per local Environmental Protection Authority's notification.
- 17 In 2015 environmental license limit exceedances are counted as one single event per month at the facility level even if there were multiple instances in the month. In 2015, there were 12 environmental license limit exceedances at our Jhajjar power station due mainly to start up, shut down and maintenance and repairs. Because of legacy reporting reasons, concentration license limit exceedances at our Fangchenggang power station are not included in our Group level reporting but are listed in the footnotes of the Fangchenggang Asset Performance Statistics sheet, available on the CLP Group website. We are considering fine tuning our reporting practices for this data point.
- 18 Performance data is consolidated on an equity basis i.e. if CLP holds a fraction of the total entity, performance is consolidated on a pro rata basis in accordance with CLP's equity holding (it would include all majority and minority share facilities in the CLP Group portfolio).
- 19 CGN Wind not included as per the Greenhouse Gas Protocol due to its accounting categorisation.
- 20 The percentages given refer to full-time permanent staff within each location, who are eligible to retire within the next five years.
- 21 There were no permanent staff in "Other locations (Southeast Asia & Macau)" since 2012.
- 22 Voluntary turnover is employees leaving the organisation voluntarily and does not include dismissal, retirement, separation under a separation scheme or end of contract.
- 23 In Mainland China, voluntary staff turnover rates refer to both permanent and short-term employees. In all other regions, voluntary staff turnover rates refer to permanent employees only.
- 24 The average training hours do not include non CP / AP / SAP re-authorisation web based training.
- 25 Training per employee from 2014 is reported in average hours of training. Prior to 2014, Training per employee is reported in average days of training.

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Content Index Contact Us The Sustainability Committee is appointed by the Board to oversee CLP's position and practices on sustainability issues. The new terms of reference (which are set out in the CLP Code and on the CLP's and the Stock Exchange's <u>websites</u>) were adopted in February 2015 with the objective that the Committee oversees management and advises the Board on matters required to enable:

- the CLP Group to operate on a sustainable basis for the benefit of current and future generations;
- sustainable growth by maintaining and enhancing CLP Group's economic, environmental, human, technological and social capital in the long term; and
- the effective management of CLP Group's sustainability risk.

The Committee is chaired by the CEO, Mr Richard Lancaster, and comprises Mr Nicholas C. Allen, Mrs Fanny Law, Ms Irene Lee, Mr Andrew Brandler and the Chief Corporate Development Officer, Ms Quince Chong. The Committee meets as frequently as required but not less than twice a year. Any Committee member may call a meeting of the Committee.

#### **RESPONSIBILITIES**

The Committee is accountable to the Board. Its primary responsibilities include the review of:

- CLP's sustainability standards, priorities and goals and to oversee CLP Group level strategies, policies and practices on sustainability matters to attain those standards and goals;
- the adequacy and effectiveness of CLP Group level frameworks insofar as they are related to sustainability matters;
- key international trends in legislation, regulation, litigation and public debate as regards social, environmental and ethical standards of corporate behaviour;
- sustainability risks, opportunities and performance of CLP with regard to the impact on stakeholders from CLP's operations, reputation of CLP and CLP's social license to operate and to recommend strategies for improvements;
- CLP's community, charitable and environmental partnerships, strategies and related Group level policies and make recommendations to the Board on any changes to those partnerships, strategies and policies; and
- CLP's public reporting as regards its performance on sustainability matters.

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#### **SUMMARY OF WORK DONE**

Between 1 January 2015 and 29 February 2016 (the Relevant Period), the Committee met four times and discharged its responsibilities in its review of CLP's sustainability standards, performance and reporting. The work performed by the Committee during the Relevant Period are summarised in the following paragraphs.

#### **Sustainability Standards**

CLP's sustainability standards stem from our commitment to enable sustainable growth of the Company from generation to generation. The standards are encompassed in CLP's Value Framework, Climate Vision 2050 and other policies and statements.

In light of the development of the new United Nations Sustainable Development Goals, a review of CLP's Sustainability Framework was conducted in 2015. The Committee endorsed management's proposal to retire the existing Sustainability Framework as the relevant goals are now embedded within CLP's operations and proceeded to endorse the new Sustainability Principles, which are categorised under four focus areas of environment, community, people and economic sustainability, which CLP believes are fundamental to its business. The Sustainability Principles set a foundation for more strategic goal setting and encourage the Company to be forward looking.

Given the importance of COP21 in Paris, the Committee had monitored the climate change-related developments throughout the year, including the submission of Intended Nationally Determined Contributions (INDCs) by countries to the United Nations Framework Convention on Climate Change (UNFCCC) and the rise of the investor movement towards divestment of companies with exposure to coal.

The Committee also received several updates throughout the year on climate change related developments in the lead up to the COP21 meeting in Paris in December. The Committee noted that after several years of limited progress, momentum appeared to be building globally for regulatory action to support carbon reduction. The Committee observed that this momentum gave rise to several medium term sustainability risks and opportunities, including the approach of investment funds and insurance companies and the trend to divest interests in companies with exposure to coal. In response to these developments, the Committee is overseeing a review of the Group's strategy to manage carbon risk and opportunity.

In 2015, we strengthened our understanding of the evolving topic of Human Rights and carried out a benchmarking exercise with companies recognised as having best practices in this area.

The Committee endorsed the preparation of our 2015 Sustainability Report to be in accordance with the Core Level of the GRI G4 Reporting Guidelines that were launched in 2013.

During the Relevant Period, the Committee also reviewed the reporting standards and goals for the upcoming years, as well as emerging sustainability risks and opportunities for the business.

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#### **Sustainability Performance**

CLP's sustainability performance is monitored by a Sustainability Framework which includes 15 sustainability goals which have been embedded within CLP's operations and is reflected in various investor-related sustainability ratings. The Committee reviewed the achievement of these goals which rest on an approach whereby:

• each business sets its own targets under each of the 15 goals as a contribution to the Group's sustainability objective as part of its business planning process;

- each target should make an efficient and positive contribution to business value – this aspect of CLP's activities is treated as part of everyday business operations and should also increase the value of the business to its shareholders; and
- performance against the targets set during the annual business planning process is assessed at year end, at both business unit and Group level and incorporated into the overall annual CLP Group's performance assessment process.

The following table highlights the 2015 performance in achieving the sustainability goals.

Critical Area – Objective	Goals	2015 Highlights	Examples of Relevant KPIs*
People – meet the evolving expectations of our stakeholders	<ul> <li>Zero injuries in all our workplaces</li> <li>Support a healthy workforce</li> <li>Develop committed and motivated employees</li> <li>Meet or exceed customer expectations</li> <li>Earn and maintain community acceptance</li> <li>Operate our business ethically</li> </ul>	<ul> <li>Strong safety performance including zero employee or contractor fatalities</li> <li>Many initiatives across the Group supporting healthy lifestyle and work life balance initiatives</li> <li>Relatively low turnover rates</li> <li>Excellent customer service performance in Hong Kong and continued improvement in customer service performance in Australia</li> <li>Numerous and varied community engagement initiatives organised and supported throughout the Group</li> <li>Compliance with the Code of Conduct, including reporting six breaches of the Code, none of which were material to the Group's financial statements or overall operations</li> <li>Continuing progress on implementing responsible procurement practices in line with CLP's Procurement Policy</li> </ul>	<ul> <li>Health and safety (e.g. number of fatalities, lost time injury incidence rate, total recordable injury rate)*</li> <li>Employee turnover (e.g. voluntary turnover rates)*</li> <li>Level of employee engagement (e.g. number of meetings with the Managing Director / General Manager events, feedback from survey)</li> <li>Customer satisfaction (e.g. 12-month average customer satisfaction percentage, same day reconnection percentage, percentage of calls answered within 30 seconds)*</li> <li>Community initiative &amp; engagement (e.g. number of engagements, number of programmes sponsored)*</li> <li>Ethical behaviour (e.g. compliance with the Code of Conduct)*</li> <li>Progress in implementing CLP's Responsible Procurement Policy Statement, including requirements in supplier selection and monitoring*</li> </ul>

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Critical Area – Objective	Goals	2015 Highlights	Examples of Relevant KPIs*
Business Performance – continually increase business value	<ul> <li>Create long-term shareholder value</li> <li>Adapt proactively to a changing business environment</li> <li>Enhance individual and organisational capability</li> </ul>	<ul> <li>Strong performance relative to business plans</li> <li>Execution of risk management processes in accordance with the CLP Group Risk Management Policy</li> <li>Constructive engagement activities with government and meaningful engagement with industry stakeholders</li> <li>Opportunities for new energy efficiency products and services and more advanced generation technologies pursued</li> <li>Several staff training initiatives pursued, training man-days targets met and succession planning initiatives implemented</li> </ul>	<ul> <li>Performance against business plan metrics, primarily earnings, capital expenditure and operating expenditure</li> <li>Management of risk in accordance with the CLP Group Risk Management Policy</li> <li>Engagement with governments and major industry stakeholders</li> <li>Number of partnerships / projects to support research and development of new technologies</li> <li>Development and training (e.g. number of training man-days, succession index)*</li> </ul>
Energy Supply – deliver world- class products and services	<ul> <li>Supply energy reliably</li> <li>Be operationally efficient</li> <li>Adopt emerging technology in a timely manner</li> </ul>	<ul> <li>A wide variety of quantitative operational performance targets set and largely achieved across the Group</li> <li>Demand Response programmes ongoing and other energy efficiency improvement programmes executed in Hong Kong</li> <li>Power station energy efficiency improvement programmes executed</li> <li>Different types of new and more efficient power generation technologies investigated and pursued</li> </ul>	<ul> <li>Service performance (e.g. unplanned customer minutes lost, average service availability, average supply restoration)</li> <li>Operational performance (e.g. equivalent forced outage rate, energy efficiency targets)</li> <li>Incremental efficiency improvements of existing assets; pursue new products and opportunities*</li> <li>Contribute thought leadership to industry level discussions, expand our renewables portfolio, and investigate and consider adopting new technologies</li> </ul>
Environment – minimise environmental impacts	<ul> <li>Move towards zero emissions</li> <li>Move towards a more sustainable rate of resource use</li> <li>Move towards no net loss of biodiversity</li> </ul>	<ul> <li>Group carbon emissions intensity decreased in 2015 relative to 2014 due mainly to increased gas consumption in Hong Kong and decreases in output from coal-fired assets in China and Australia</li> <li>Many initiatives to decrease water use and waste production across the Group</li> <li>Biodiversity efforts conform to local regulations and comply with Group's Environmental Impact Assessment guidelines</li> </ul>	<ul> <li>Reducing emissions (e.g. operational efficiency improvements, use of lower emitting fuel)*</li> <li>Reducing resource use (e.g. water and waste recycling)*</li> <li>Minimising our impact on biodiversity (e.g. including biodiversity impact assessments in environmental impact assessments, land rehabilitation)*</li> </ul>

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Content Index Contact Us The Committee reviewed CLP's sustainability performance against external sustainability indices with a view to identifying and focusing on the potential areas of sustainability performance for further improvement.

A summary of selected 2015 sustainability ratings for CLP's 2014 sustainability performance is shown in the following table. The scoring for the year reflects the performance of the year before.

Index Name	2015 Score	2014 Score	2013 Score	
Dow Jones Sustainability Index (DJSI)	57	63	64	CLP named to DJSI Asia Pacific and DJSI Asia Pacific 40 again in 2015. The global electric utility industry average score decreased from 54 (2013) to 52 (2015).
				Relatively speaking, other companies around the world outside of the electric utility industry have improved their sustainability performance and as a result our scores have been declining on a comparative basis.
Carbon Disclosure Project (CDP)	96	95	94	The CDP score includes two different components. Our Disclosure score increased by one point to 96 while our Performance score was "C" in 2015, downgraded from "B" in previous years. Downgrade is likely a result of CLP's absolute increase in carbon emissions from 2013 to 2014.
Hang Seng Corporate Sustainability Index	АА	АА	AA+	CLP was recognised as having the best overall score in the utilities industry with the strongest performance in Organisational Governance.
Bloomberg ESG	Overall: 64.88	Overall: 64.05	Overall: 68.18	The 2015 score reflects our 2014 performance. The 2013 score reflects our 2012 performance when certain operational issues resulted in lower emissions, thus resulting in a higher environmental score compared to other years such as that for 2014.

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#### **Sustainability Reporting**

In view of CLP's move towards Integrated Reporting, combined with the Stock Exchange's December 2015 decision to strengthen the ESG Reporting Guide in the Listing Rules, CLP has continued its practice of commissioning independent assurance of selected key performance indicators published in its Sustainability Report in accordance with International Standard on Assurance Engagements 3000(Revised), Assurance Engagements other than Audits or Reviews of Historical Financial Information. Since 2014, CLP's independent assurance has also been in accordance with International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements. The number of key performance indicators has also increased from 29 data points in 2014 to 31 in 2015.

The overall scope of CLP's Sustainability Reporting, which predates the introduction of the ESG Reporting Guide, is wider than that of the ESG Reporting Guide, which is organised around two ESG subject areas: environmental and social. Our Sustainability Reporting was constructed around the GRI Guidelines and evolved to incorporate those areas, objectives and goals which we considered most relevant to our business. This year our Sustainability Report was written in accordance with the Core Level of the GRI G4 Reporting Guidelines. The Committee reviewed the 2014 CLP Group Sustainability Report, the 2015 CLP Group In Essence Sustainability Report and Sustainability Assurance findings.

There is a table, in our Sustainability Report, which refers the

reader to the relevant sections of our Sustainability Report where we set out in detail the manner in which CLP has met, and in many respects exceeded, the terms of the ESG Reporting Guide. The Five-year Summary of statistics on the Group's environmental and social performance on pages 260 and 261 of the <u>Annual Report</u> includes cross-references to the KPIs suggested in the Stock Exchange's ESG Reporting Guide.

The Committee was also briefed on longer term ESG trends, including the continuing increase in expectations on reporting and transparency. Prospective risks and opportunities which might arise as a result of the 2015 release of the United Nation's revised Sustainability Development Goals were also discussed.

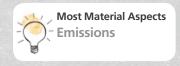
#### **LOOKING AHEAD**

The Sustainability Committee will continue to review its role in offering effective support to the Board and oversight to management in the development, implementation, measurement and reporting of the Group's performance on social, environmental and ethical matters as a whole with a view to enabling the CLP Group to operate on a sustainable basis for the benefit of the current and future generations.

**Richard Lancaster** 

Chairman, Sustainability Committee Hong Kong, 29 February 2016

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Our reporting methodology encapsulates a number of different internationally recognised reference guidelines to serve as the basis of reporting for different sections of this report.

#### **GLOBAL REPORTING INITIATIVE (GRI)**

The content of this report is prepared in reference to the GRI G4 Guidelines as well as the Flectric Utilities Sector Disclosures. The GRI is a network-based NGO which produces a comprehensive sustainability reporting framework that has become the most widely recognised guideline for sustainability reporting in the world. CLP has been reporting with reference to the GRI Guidelines since 2007. This is the second year that CLP has adopted the GRI G4 Guidelines since it was published in 2013. The GRI Content Index can be found here.

### HONG KONG STOCK EXCHANGE **ENVIRONMENTAL, SOCIAL AND GOVERNANCE** (ESG) REPORTING GUIDE

In many aspects, this report not only satisfies but goes beyond the requirements of the Hong Kong Stock Exchange Environmental, Social and Governance (ESG) Reporting Guide (ESG Guide). The Hong Kong Stock Exchange first published the ESG Guide in 2012 as "recommended practice" for issuers. In December 2015, the Hong Kong Stock Exchange upgraded the ESG Reporting requirements from voluntary to a "comply or explain" approach. The upgrade of the General Disclosures to "comply or explain" will be effective for issuers with financial years commencing on or after 1 January 2016. The upgrade of the Key Performance Indicators (KPIs) in the "Environmental" Subject Area to "comply or explain" will be effective for listed companies with a financial year

commencing on or after 1 January 2017. As a Hong Kong listed company, CLP first reported according to the ESG Guide in 2012. We continued to do so in 2015 and reported according to the updated ESG Guide. The full ESG Content Index can be found here.

#### **GREENHOUSE GAS EMISSIONS**

CLP's greenhouse gas (GHG) emissions inventory covers the six originally specified gases in accordance with the Kyoto Protocol. We have also considered the seventh one added under the Kyoto Protocol, namely nitrogen trifluoride (NF<sub>3</sub>), but have deemed it immaterial to our operations. Our GHG emissions are reported with reference to: the World Resources Institute (WRI) / World Business Council for Sustainable Development (WBCSD) GHG Protocol, the Intergovernmental Panel on Climate Change's Guidelines for National Greenhouse Gas Inventories 2006, and international standard ISO 14064.

To facilitate implementation, in 2007, we developed the first version of our Group-wide GHG reporting guideline with reference to the aforementioned guidelines. The reporting guideline is regularly reviewed in accordance with CLP practice at least every three years.

### **FINANCIAL DATA**

All financial data in this report is in alignment with the figures published in the audited financial statements as published in our Annual Report. The financial statements are prepared in accordance with Hong Kong Financial Reporting Standards (HKFRS) issued by the Hong Kong Institute of Certified Public Accountants (HKICPA) and the Hong Kong Companies Ordinance.

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#### REPORTING SYSTEMS FOR ENVIRONMENT

#### **Group Operations Information System**

This customised system, previously known as Group Environmental Information System, represents the first cloud-based Group-wide reporting system for CLP. The system provides a user friendly environment, with a built-in internal data approval sequence, as well as automated presentation and reporting functions. The system was launched in the fourth quarter of 2014.

#### Air Emissions (SO<sub>2</sub> / NO<sub>x</sub> / Total PM)

We continuously monitor air emissions for facilities under CLP's operational control through real-time systems installed on site. We supplement this approach with stack sampling and mass-balance calculation methodologies accepted by local regulations if and when it is required by regulators or we deem it necessary.

#### **Fuel Consumption for Power Generation**

Fuel consumption calculations for facilities under CLP's operational control depend on the type of fuel. For coal consumption, fuel consumed is calculated based on invoices and receipts for coal deliveries as well as recorded actual coal used in the combustion process. Gas consumed for electricity generation is based on calculations from meter readings recorded at the respective facility. Oil consumption for electricity generation is calculated based on

measurement of changes in the volume of oil storage tanks. Fuel consumption for power generation is reported in Terajoules (TJ).

# **Environmental Regulatory Non-Compliances Resulting in Fines or Prosecution**

This number is compiled for all assets under our operational control and each incident is classified and recorded according to notifications from local authorities and based on prevailing regulatory or legal definitions. Each incident is classified and recorded at the time of notification of the fine or prosecution. Instances of Environmental license limit exceedances & other non-compliances and Environmental regulatory non-compliances resulting in fines or prosecutions are mutually exclusive.

#### **Carbon Emissions Intensity**

In order to track progress against our "Climate Vision 2050" data is collected directly from most of our facilities but for a few minority-owned facilities where we have difficulty in directly obtaining the data, best conservative estimates are made based upon historical performance data or benchmarking with similar facilities. Our carbon emissions are tracked at both facility and Group levels under the categories of Scope 1: Direct GHG Emissions and Scope 2: Indirect GHG Emissions as defined by the GHG Protocol. Due to data availability constraints, we include Scope 1 and Scope 2 emissions for those facilities which fall within our Environmental Scope, and Scope 1 emissions only for those facilities which fall outside our Environmental Scope. The Group's carbon intensity calculation is based upon net electricity sent-out from all operating facilities across our portfolio.

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#### REPORTING SYSTEMS FOR SAFETY

#### **Group Safety Information System (GSIS)**

Safety incident on the assets which fall within CLP's safety reporting scope is collected and centralised via our IT-based system. GSIS is currently used in most of the assets in Hong Kong, Mainland China and India.

For the definition of the safety performance, it is clearly shown in the CLP Group HSSE Management Standard – Performance Monitoring and Reporting (HSSE-STD-14-001).

# REPORTING SYSTEMS FOR HUMAN RESOURCES

#### **Human Resources Information System**

The human resources teams within each of our major business units including Hong Kong, Australia, India and Mainland China each have their own information system in place to collect local employment-related data. Consolidation of Group level data is coordinated by our Group Human Resources (GHR) function.

The Human Resources metrics we use are designed to be relevant to our business, and to provide us with meaningful and reliable information that enables us to manage the attraction, retention and development of staff, and to report externally. Definitions of our human resources metrics are provided in the Notes to the Key Performance Indicators table.

# REPORTING SYSTEMS FOR CODE OF CONDUCT VIOLATIONS

Our <u>Code of Conduct</u> applies across the entire CLP Group of Companies including CLP Holdings, its wholly owned subsidiaries, and joint ventures or companies in which CLP holds a controlling interest. All employees of CLP, irrespective of their positions and functions, are expected to fully adhere to the principles contained in the Code. In the case of joint ventures or companies in which CLP does not hold a controlling interest, the representatives concerned are expected to act in accordance with the Code themselves and to make a concerted effort to influence those with whom they are working to act to similar standards of integrity and ethical behaviour. Likewise, contractors working for CLP are encouraged to follow CLP's Code of Conduct for the duration of their contract with CLP.

Potential violations of the code are reported to Group Internal Audit (GIA) by employees, vendors, contractors and GIA auditors. Communications are received via: anonymous letters, anonymous emails and phone calls to GIA. All potential violations of the Code are investigated by GIA (other than human resources-related potential violations which are investigated by GHR). Only GIA and GHR assess whether an issue is a violation of the Code of Conduct. Management is responsible for the discipline of their employees who violate the code. Management's proposed disciplinary action is reviewed for consistency by the Code of Conduct Committee.

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# REPORTING SYSTEMS FOR NON-FINANCIAL (OPERATIONS) DATA MANAGEMENT

The demand on reporting robust, accurate and timely non-financial data in the jurisdictions where CLP operates have increased over time. With some of these requirements progressively becoming mandatory, effective data reporting processes are essential to ensure that our non-financial data reported and communicated to the various stakeholders and the community is accurate and robust.

In 2015, we introduced an updated process for non-financial data reporting and assurance. More responsibilities are now placed with responsible staff at asset, regional and Group level, thus achieving a desired level of check and balance. At the same time, an upgraded online system for operational data was introduced to facilitate effective and streamlined data collection and approval, while reducing the chance of human error. Through the design and implementation of such a data system, we also aligned the non-financial data reporting process and timeline with financial data. The new requirements have been formally documented under the internal Standard for Non-Financial (Operations) Data Reporting and have been fully implemented.



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Content Index Contact Us Generation Performance of Our Facilities in 2015 EU1 EU2 EU30

Facility	Business Type	Generation Type	Generating Capacity (MW)	Equity Ownership (%)	Equivalent Availability Factor (EAF) <sup>1</sup> / Availability Factor (AF) <sup>2</sup> / Service Factor (SF) <sup>3</sup>	Generation Sent-Out (GWh)	Thermal Efficiency	Energy Intensity (kJ/kWh)
Hong Kong								
Black Point	Power Generation	Gas	2,500	70%	84.83%	8,899	44.82%	8,032
Castle Peak	Power Generation	Coal	4,108	70%	85.04%	15,176	33.30%	10,811
Penny's Bay	Power Generation	Oil	300	70%	100.00%	0.6	19.01%	18,937
Transmission & Distribution Network	Power Delivery	N/A	N/A	100%	N/A	N/A	N/A	N/A
Mainland China	-							
Dali Yang_er	Power Generation	Hydro	49.8	100%	47.15%	123	N/A <sup>4</sup>	N/A <sup>5</sup>
Fangchenggang I	Power Generation	Coal	1,260	70%	88.90%	2,933	35.49%	10,144
Huaiji	Power Generation	Hydro	129	84.90%	39.40%	373	N/A <sup>4</sup>	N/A <sup>5</sup>
Jiangbian	Power Generation	Hydro	330	100%	57.77%	1,208	N/A <sup>4</sup>	N/A <sup>5</sup>
Jinchang	Power Generation	Solar	85	51%	99.99%	128	N/A <sup>4</sup>	N/A <sup>5</sup>
Laiwu I	Power Generation	Wind	49.5	100%	99.62%	64	N/A <sup>4</sup>	N/A <sup>5</sup>
Penglai I	Power Generation	Wind	48	100%	99.70%	92	N/A <sup>4</sup>	N/A <sup>5</sup>
Qian'an I and II	Power Generation	Wind	99	100%	98.07%	153	N/A <sup>4</sup>	N/A <sup>5</sup>
Xicun I	Power Generation	Solar	42	100%	57.17%	89	N/A <sup>4</sup>	N/A <sup>5</sup>
India								
Jhajjar	Power Generation	Coal	1,320	100%	82.46%	5,406	36.29%	9,920
Paguthan	Power Generation	Gas	655	100%	99.01%	621	40.75%	8,834
Australia								
Cathedral Rocks	<b>Power Generation</b>	Wind	66	50%	88.91%	168	N/A <sup>4</sup>	N/A <sup>5</sup>
Hallett	Power Generation	Gas	203	100%	86.90%	30	17.22%	20,906
Mount Piper	Power Generation	Coal	1,400	100%	86.55%	5,109	35.11%	10,253
Tallawarra	Power Generation	Gas	420	100%	91.48%	2,496	49.73%	7,239
Yallourn	Power Generation	Coal	1,480	100%	84.60%	10,256	24.27%	14,833

#### Remarks

- 1. Equivalent Availability Factor (EAF): is the proportion of available hours less full load equivalent of de-rated in a period of one year (8,760 hours).
- 2. Availability Factor (AF): is the fraction of hours in a period of one year (8,760 hours) when a plant is available to generate electricity.
- 3. Service Factor (SF): = Total hours of operation (when generator is connected to the grid) during a period of one year (8,760 hours).
- 4. N/A: In this context, N/A means "Not Applicable" as renewable generation does not have a thermal efficiency because power is not generated through thermal process.
- 5. N/A: In this context, N/A means "Not Applicable" as energy intensity is not calculated for renewable energy.

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## **Safety Management Systems of Our Facilities in 2015**

	Business	Generation	Generating Capacity	Equity Ownership	Safety Management	NOSA Audit in	SHE Peer Review
Facility	Туре	Туре	(MW)	(%)	System	2015 (Grading)	in 2015
Hong Kong							
Black Point	Power Generation	Gas	2,500	70%	OHSAS 18001	N/A	Nil
Castle Peak	Power Generation	Coal	4,108	70%	OHSAS 18001	N/A	Yes
Penny's Bay	Power Generation	Oil	300	70%	OHSAS 18001	N/A	Nil
Transmission & Distribution Network	Power Delivery	N/A	N/A	100%	OHSAS 18001	N/A	Nil
<b>Mainland China</b>							
Dali Yang_er	Power Generation	Hydro	49.8	100%	NOSA	4	Nil
Fangchenggang I	Power Generation	Coal	1,260	70%	OHSAS 18001 & NOSA	5	Nil
Huaiji	Power Generation	Hydro	129	84.90%	NOSA	4	Nil
Jiangbian	Power Generation	Hydro	330	100%	OHSAS 18001 & NOSA	5	Yes
Jinchang	<b>Power Generation</b>	Solar	85	51%	OHSAS 18001 & NOSA	3	Yes
Laiwu I	Power Generation	Wind	49.5	100%	NOSA	Baseline Audit	Nil
Penglai I	Power Generation	Wind	48	100%	NOSA	4	Nil
Qian'an I and II	Power Generation	Wind	99	100%	OHSAS 18001 & NOSA	5	Nil
Xicun I	Power Generation	Solar	42	100%	<b>Under Development</b>	Nil	Nil
India							
Jhajjar	Power Generation	Coal	1,320	100%	NOSA	Not Ready	Nil
Paguthan	Power Generation	Gas	655	100%	NOSA	Not Ready	Nil
Australia							
Cathedral Rocks	Power Generation	Wind	66	50%	OHSAS 18001	N/A	Nil
Hallett	Power Generation	Gas	203	100%	AS4801	N/A	Nil
lona	Gas Storage	N/A	N/A	100%	OHSAS 18001	N/A	Nil
Mount Piper	Power Generation	Coal	1,400	100%	OHSAS 18001	N/A	Yes
Tallawarra	Power Generation	Gas	420	100%	AS4801	N/A	Nil
Yallourn	Power Generation	Coal	1,480	100%	OHSAS 18001	N/A	Nil

#### Remark

- Under Development System being set up with resources and staff support in place.
- N/A Not applicable to the type of operation.
- Nil Not required by operational licence/did not conduct audit or review in 2015.
- NOSA National Occupational Safety Association
- OHSAS Occupational Health and Safety Management System Standard

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## **Environmental Management Systems of Our Facilities in 2015**

Facility	Business Type	Generation Type	Generating Capacity (MW)	Equity Ownership (%)	Environmental Management System		Particulate Control Equipment	Low NO <sub>x</sub> Burner	FGD	Water Management	Waste Management
Hong Kong											
Black Point	Power Generation	Gas	2,500	70%	✓	✓	NA	✓	NA	✓	✓
Castle Peak	Power Generation	Coal	4,108	70%	✓	✓	✓	✓	✓	✓	✓
Penny's Bay	Power Generation	Oil	300	70%	✓	Nil	NA	Nil	NA	✓	✓
Transmission & Distribution Network	Power Delivery	N/A	N/A	100%	✓	NA	NA	NA	NA	✓	✓
Mainland China											
Dali Yang_er	Power Generation	Hydro	49.8	100%	✓	NA	NA	NA	NA	✓	✓
Fangchenggang I	Power Generation	Coal	1,260	70%	✓	✓	✓	✓	✓	✓	✓
Huaiji	Power Generation	Hydro	129	84.90%	✓	NA	NA	NA	NA	✓	✓
Jiangbian	Power Generation	Hydro	330	100%	✓	NA	NA	NA	NA	✓	✓
Jinchang	Power Generation	Solar	85	51%	✓	NA	NA	NA	NA	✓	✓
Laiwu I	Power Generation	Wind	49.5	100%	✓	NA	NA	NA	NA	✓	✓
Penglai I	Power Generation	Wind	48	100%	✓	NA	NA	NA	NA	✓	✓
Qian'an I and II	Power Generation	Wind	99	100%	✓	NA	NA	NA	NA	✓	✓
Xicun I	Power Generation	Solar	42	100%	Under Development		NA	NA	NA	✓	✓
India											
Jhajjar	Power Generation	Coal	1,320	100%	✓	✓	✓	✓	✓	✓	✓
Paguthan	Power Generation	Gas	655	100%	✓	✓	NA	✓	NA	✓	✓
Australia											
Cathedral Rocks	Power Generation	Wind	66	50%	✓	NA	NA	NA	NA	✓	✓
Hallett	Power Generation	Gas	203	100%	✓	Nil	NA	Nil	NA	✓	✓
Mount Piper	Power Generation	Coal	1,400	100%	✓	✓	✓	Nil	Nil	✓	✓
Tallawarra	Power Generation	Gas	420	100%	✓	✓	NA	✓	NA	✓	✓
Yallourn	Power Generation	Coal	1,480	100%	✓	✓	✓	Nil	Nil	✓	✓

#### Remarks:

- NA Not applicable to the type of operation.
- Nil Not required by operational licence
- CEMS Continuous Emission Monitoring System
- FGD Flue Gas Desulphurisation

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Subject Area	s, Aspects, General Disclosure and KPIs	Explanation / Chapter or Sub-chapter reference to the 2015 Sustainability Report
A. Environm	ental	
Aspect A1	Emissions	
General	Information on:	Sustainable Environment – Greenhouse Gas Emissions
Disclosure	(a) the policies; and	Sustainable Environment – Air Emissions
	(b) compliance with relevant laws and regulations that have a significant impact on the issuer	Sustainable Environment – Waste
	relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Appendix – Reference Guidelines
	Note: Air emissions include NO <sub>x</sub> , SO <sub>x</sub> , and other pollutants regulated under national laws and regulations.	
	Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.	
	Hazardous wastes are those defined by national regulations	
KPI A1.1	The types of emissions and respective emissions data.	Sustainable Environment – Air Emissions
		Appendix – Key Performance Indicators
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Sustainable Environment – Greenhouse Gas Emissions Appendix – Key Performance Indicators
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of	Sustainable Environment – Waste
	production volume, per facility).	Appendix – Key Performance Indicators
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of	Sustainable Environment – Waste
	production volume, per facility).	Appendix – Key Performance Indicators
KPI A1.5	Description of measures to mitigate emissions and results achieved.	Sustainable Environment – Greenhouse Gas Emissions
		Sustainable Environment – Air Emissions
		Sustainable Environment – Waste
CPI A1.6	Description of measures to mitigate emissions and results achieved.	Sustainable Environment – Waste
Aspect A2	Use of Resources	
General	Policies on the efficient use of resources including energy, water and other raw materials.	Sustainable Operations – Power Generation and Delivery
Disclosure	Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.	Sustainable Environment – Water
KPI A2.1	Direct and / or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s)	Sustainable Operations – Power Generation and Delivery
	and intensity (e.g. per unit of production volume, per facility).	Appendix – Key Performance Indicators
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Sustainable Environment – Water
		Appendix – Key Performance Indicators
KPI A2.3	Description of energy use efficiency initiatives and results achieved.	Sustainable Operations – Power Generation and Delivery
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	Sustainable Environment – Water
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	At CLP, our primary product is electricity which does not require packaging for delivery to customers. As a result, we are unable to answer this question in full.
Aspect A3	The Envrionment and Natural Resources	
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	Sustainable Environment – Biodiversity
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Sustainable Environment – Biodiversity

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Subject Area	s, Aspects, General Disclosure and KPIs	Explanation / Chapter or Sub-chapter reference to the 2015 Sustainability Report
B. Social Employmen	t and Labour Practices	
Aspect B1	Employment	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	Sustainable Relationships – Employees
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	Sustainable Relationships – Employees Appendix – Key Performance Indicators
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Sustainable Relationships – Employees Appendix – Key Performance Indicators
Aspect B2	Health and Safety	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer. relating to providing a safe working environment and protecting employees from occupational hazards.	Sustainable Operations – Health, Safety, Security and Environment
KPI B2.1	Number and rate of work-related fatalities.	Sustainable Operations – Health, Safety, Security and Environment Appendix – Key Performance Indicators
KPI B2.2	Lost days due to work injury.	Sustainable Operations – Health, Safety, Security and Environment Appendix – Key Performance Indicators
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Sustainable Operations – Health, Safety, Security and Environment
Aspect B3	Development and Training	
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.  Note: Training refers to vocational training. It may include internal and external courses paid by the employer.	Sustainable Relationships – Employees
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Sustainable Relationships – Employees
KPI B3.2	The average training hours completed per employee by gender and employee category.	Sustainable Relationships – Employees Appendix – Key Performance Indicators

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Subject Area	s, Aspects, General Disclosure and KPIs	Explanation / Chapter or Sub-chapter reference to the 2015 Sustainability Report
B. Social Employment	t and Labour Practices	
Aspect B4	Labour Standards	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	Sustainable Operations – Procurement Sustainable Relationships – Employees
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	Sustainable Operations – Procurement Sustainable Relationships – Employees
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	Sustainable Operations – Procurement Sustainable Relationships – Employees
Operating Pr	ractices	
Aspect B5	Supply Chain Management	
General Disclosure	Policies on managing environmental and social risks of supply chain.	Sustainable Operations – Procurement
KPI B5.1	Number of suppliers by geographical region.	Sustainable Operations – Procurement
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	Sustainable Operations – Procurement
Aspect B6	Product Responsibility	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Sustainable Operations – Retail
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	At CLP, our primary product is electricity and the nature of our product is that it cannot be recalled and as a result, we are unable to answer this question in full. However we do comply with all local regulations to ensure our customers are aware of the inherent dangers of electricity and encourage them to enjoy it with care.
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Sustainable Operations – Retail
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Sustainable Operations – Retail
KPI B6.4	Description of quality assurance process and recall procedures.	Sustainable Operations – Retail
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Sustainable Operations – Retail

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Operating P	ractices	
Aspect B7	Anti-corruption	
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Governance for Sustainability – Code of Conduct
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Governance for Sustainability – Code of Conduct Appendix – Key Performance Indicators
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Governance for Sustainability – Code of Conduct
Community		
Aspect B8	Community Investment	
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Sustainable Relationships – Community
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Sustainable Relationships – Community
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Sustainable Relationships – Community

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1. Strategy	and Analysis		
G4 – 1	Chairman's statement.	P.2-5, Chairman and CEO's Message	
G4 – 2	Description of key impacts, risks and opportunities.	P.33, Sustainability at CLP – Climate Vision 2050 P.54-62, Drivers of Sustainability	
2. Organisa	tional Profile		
G4 – 3	Name of the organisation.	P.23, Our Business – Our Value Chain	
G4 – 4	Primary brands, products, and services of the organisation.	P.23, Our Business – Our Value Chain	
G4 – 5	Location of the organisation's headquarters.	P.23, Our Business – Our Value Chain	
G4 – 6	Name and number of countries where the organisation operates, and names of countries where either the organisation has significant operations or that are specifically relevant to the sustainability topics covered in the report.	P.25, Our Business – Our Assets	
G4 – 7	Nature of ownership and legal form.	P.23, Our Business – Our Value Chain	
G4 – 8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	P.23, Our Business – Our Value Chain	
G4 – 9	Scale of the organisation: number of employees, number of operations, net sales, market capitalisation (breakdowns of debt and equity) and quantity of products or services provided.	P.23, Our Business – Our Value Chain P.25, Our Business – Our AssetsSustainable P.154, Sustainable Relationships – Employees P.202, Appendix – Key Performance Indicators	
G4 – 10	Number of employees broken down by region, contract type and gender. Total contractor workforce (contractor, subcontractor, independent contractor) by employment type, employment contract and regulatory regime.	P.155, Sustainable Relationships – Employees	Decent Work and Economic Growth –     Employment
G4 – 11	Percentage of employees covered by collective bargaining agreements.  Percentage of contractor employees (contractor, subcontractor, independent contractor) working for the reporting organisation covered by collective bargaining agreements by country or regulatory regime.	P.152, Sustainable Relationships – Employees	
G4 – 12	Description of the organisation's supply chain.	P.24, Our Business – Our Value Chain P.113, Sustainable Operations – Procurement	
G4 – 13	Significant changes during the reporting period regarding the organisation's size, structure, ownership or the supply chain of the organisation.	P.26-27, Our Business – 2015 Portfolio Changes P.96-97, Sustainable Operations – Power Generation and Delivery P.113, Sustainable Operations – Procurement	
G4 – 14	Information on whether and how the organisation addresses the precautionary principle introduced in "The Rio Declaration on Environment and Development".	P.125, Sustainable Environment – Policies, Systems and Standards	
G4 – 15	List of external economic, environmental and social charters, principles or other initiatives to which the organisation subscribes or which it endorses.	P.182, Sustainable Relationships – Industry and Professional Organisations	
G4 – 16	List of associations and national or international advocacy organisations to which the organisation involves.	P.182-188, Sustainable Relationships – Industry and Professional Organisations	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
	TANDARD DISCLOSURES	Location of Disclosure	SDG Mapping Linkage to Disclosure
	tional Profile		
EU1	Installed capacity, broken down by primary energy source and by regulatory regime.	P.214, Appendix – Facilities Tables	7. Affordable and Clean Energy – Renewable Energy
EU2	Net energy output, broken down by primary energy source and by regulatory regime.	P.214, Appendix – Facilities Tables	7. Affordable and Clean Energy – Renewable Energy
EU3	Number of residential, industrial, institutional and commercial customer accounts.	P.101, Sustainable Operations – Retail	
EU4	Length of above and underground transmission and distribution lines by regulatory regime.	P.99, Sustainable Operations – Power Generation and Delivery	
EU5	Allocation CO2 emissions allowances or equivalent, broken down by carbon trading framework.	P.131, Sustainable Environment – Regulations and Compliance	
3. Identified	d Material Aspects and Boundaries		
G4 – 17	List of entities included in the organisation's consolidated financial statements and other equivalent documents and whether any of these entities are not covered by the report.	P.198-199, Appendix – Reporting Scope	
G4 – 18	Explanation of the process for defining the report content and the Aspect Boundaries and how the Reporting Principles for Defining Report Content have been applied by the organisation.	P.45-47, Our Stakeholders and Materiality – Materality Assessment	
G4 – 19	List of the material Aspects identified during the process of defining report contents.	P.47-48, Our Stakeholders and Materiality – Materality Assessment	
G4 – 20	Aspect Boundary of each material Aspect within the organisation.	P.49, Our Stakeholders and Materiality – Materality Assessment P.198-199, Appendix – Reporting Scope	
G4 – 21	Aspect Boundary of each material Aspect outside the organisation.	P.49, Our Stakeholders and Materiality – Materality Assessment	
G4 – 22	Effect of any restatements of information provided in previous reports and the explanation.	P.198, Appendix – Reporting Scope	
G4 – 23	Significant changes in the Scope and the Aspect Boundaries with regard to previous reports.	P.198, Appendix – Reporting Scope	
4. Stakehol	der Engagement		
G4 – 24	List of stakeholders engaged by the organisation.	P.37, Our Stakeholders and Materiality – Stakeholder Engagement	
G4 – 25	Criteria for identifying and selecting the stakeholders engaged.	P.37, Our Stakeholders and Materiality – Stakeholder Engagement	
G4 – 26	Approaches taken for stakeholder engagement, including the frequency of engagement by type and by stakeholder group, and indication of whether any specific engagement was undertaken for the report.	P.35, 37, Our Stakeholders and Materiality – Stakeholder Engagement	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
GENERAL S	TANDARD DISCLOSURES		
G4 – 27	Key topics and concerns which have arisen through stakeholder engagement by stakeholder groups and describe the organisation's responses to these matters.	P.38, Our Stakeholders and Materiality – 2015 Key Stakeholder Concerns or Interests (Provide Capital) P.39, Our Stakeholders and Materiality – 2015 Key Stakeholder Concerns or Interests (Grant Licence to Operate) P.40, Our Stakeholders and Materiality – 2015 Key Stakeholder Concerns or Interests (Provide Fuel, Materials, Equipment & Services) P.40, Our Stakeholders and Materiality – 2015 Key Stakeholder Concerns or Interests (Operate Our Business) P.41-42, Our Stakeholders and Materiality – 2015 Key Stakeholder Concerns or Interests (Purchase Our Products / Services) P.42-44, Our Stakeholders and Materiality – 2015 Key Stakeholder Concerns or Interests (Purchase Our Products / Services) P.42-44, Our Stakeholder Concerns or Interests (Share Knowledge & Build Trust)	
5. Report Pr	rofile		
G4 – 28	Reporting period for the information provided.	Welcome	
G4 – 29	Date of latest report (if applicable).	Welcome	
G4 – 30	Reporting cycle.	Welcome	
G4 – 31	Contact point for resolving questions regarding the report or its contents.	P.236, Contact Us	
G4 – 32	"In accordance" option the organisation has chosen, GRI Index of the chosen option and reference to the external assurance report.	Wecome	
G4 – 33	Policy and current practices of the organisation with regard to seeking external assurance for the report.	Welcome	
6. Governa	nce		
G4 – 34	Governance structure of organisation.	P.67-68, Governance for Sustainability – Corporate Governance	
G4 – 35	Description of process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees.	P.65, Governance for Sustainability – Sustainability Governance P.204-209, Appendix – Sustainability Committee Report	
G4 – 36	Appointment of executive-level position(s) or with responsibility for economic, environmental and social topics, and whether the person(s) report directly to the highest governance body.	P.65, Governance for Sustainability – Sustainability Governance P.204-209, Appendix – Sustainability Committee Report	
G4 – 37	Consultation processes between stakeholders and the higher governance body for economic, environmental and social topics.	P.180, Sustainable Relationships – Shareholders	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
GENERAL S	TANDARD DISCLOSURES		
6. Governa	nce		
G4 – 38	Composition of the highest governance body and of its committees.	P.69-70, Governance for Sustainability – Corporate Governance	
G4 – 39	Information on whether the Chair of the highest governance body is also an executive officer.	P.67-68, Governance for Sustainability – Corporate Governance	
G4 – 40	Nomination and selection processes for the highest governance body, and the criteria used for nominating and selecting the members of the body.	P.71, Governance for Sustainability – Corporate Governance	
G4 – 41	Process whereby the highest governance body prevents and manages possible conflicts of interest.	P.70, Governance for Sustainability – Corporate Governance	
G4 – 42	Roles of the highest governance body and senior executives in the development, approval and updating of the purpose, values and the mission statements, the strategies, policies and goals related to economic, environmental and social impacts of the organisation.	P.65, Governance for Sustainability – Sustainability Governance P.204-209, Appendix – Sustainability Committee Report	
G4 – 43	Measures adopted to develop and enhance the highest governance body's collective knowledge of in relation to economic, environmental and social topics.	P.73-74, Governance for Sustainability – Corporate Governance	Quality Education – Education for Sustainable Development
G4 – 44	Processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics.	P.73, Governance for Sustainability – Corporate Governance	
G4 – 45	Role of the highest governance body in identifying and managing economic, environmental and social impacts, risks, and opportunities.	P.65, Governance for Sustainability – Sustainability Governance P.204-209, Appendix – Sustainability Committee Report	
G4 – 46	Role of the highest governance body in reviewing the effectiveness of the organisation's risk management processes for economic, environmental and social topics.	P.65, Governance for Sustainability – Sustainability Governance P.204-209, Appendix – Sustainability Committee Report	
G4 – 47	Frequency of the highest governance body's review of economic, environmental and social impacts, risks and opportunities.	P.65, Governance for Sustainability – Sustainability Governance	
		P.204-209, Appendix – Sustainability Committee Report	
G4 – 48	The highest committee or position that formally reviews and approves the organisation's sustainability report and ensures that all the material Aspects are included.	P.65, Governance for Sustainability – Sustainability Governance P.204-209, Appendix – Sustainability Committee Report	
G4 – 49	Process for communicating important concerns to the highest governance body.	P.180, Sustainable Relationships – Shareholders	
G4 – 50	Nature and number of important concerns communicated to the highest governance body and the mechanisms used to address and resolve them.	P.76-77, Governance for Sustainability – Addressing Shareholder Concerns	
G4 – 51	Remuneration policies for the highest governance body and senior executives.	P.75, Governance for Sustainability – Corporate Governance	
64 – 52	Process for determining remuneration.	P.157, Sustainable Relationships – Employees	
G4 – 53	How stakeholders' views are sought and taken into account regarding remuneration, and include the results of the votes on policies and proposals if applicable.	P.75, Governance for Sustainability – Corporate Governance P.157, Sustainable Relationships – Employees	

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SPECIFIC ST	ANDARD DISCLOSURES		
7. Ethics an	d Integrity		
G4 – 56	The organisation's values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics.	P.78, Governance for Sustainability – Code of Conduct	
G4 – 57	Internal and external mechanisms for seeking advice on ethical and lawful behaviour, and matters related to the organisation's integrity, such as helplines or advice lines.	P.66, Governance for Sustainability – Corporate Governance	
G4 – 58	Internal and external mechanisms for reporting concerns about unethical or unlawful behaviour, and matters related to the organisation's integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	P.78, Governance for Sustainability – Code of Conduct	
SPECIFIC ST	ANDARD DISCLOSURES		
ECONOMIC			
Aspect: Eco	nomic Performance		
G4 – DMA	Disclosures on management approach.	P.84-89, Sustainable Economics – Market Regulation and Planning	
G4 – EC1	Direct economic value generated and distributed.	P.83, Sustainable Economics – Economic Value Generated and Distributed P.200, Appendix – Key Performance Indicators	9. Industry, Innovation and Infrastructure – Infrastructure Investments
G4 – EC2	Financial implications and other risks and opportunities for the organisation's activities arising from climate change.	P.51, Drivers of Sustainability – Megatrends and Impacts P.60-62, Drivers of Sustainability – Capturing Opportunities	13. Climate Action – Risks and Opportunities due to Climate Change
G4 – EC3	Coverage of the organisation's obligations arising from its benefit plan.	P.157, Sustainable Relationships – Employees	
G4 – EC4	Financial assistance received from governments.	P.84, Sustainable Economics – Market Regulation and Planning	
Aspect: Ma	rket Presence		
G4 – DMA	Disclosures on management approach.	P.151, Sustainable Relationships – Employees	
G4 – EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operations.	P.151, Sustainable Relationships – Employees	
G4 – EC6	Proportion of senior management hired from the local community at significant locations of operation.	P.151, 164, Sustainable Relationships – Employees	
Aspect: Indi	rect Economic Impacts		
G4 – DMA	Disclosures on management approach.	P.170, Sustainable Relationships – Community	
G4 – EC7	Development and impact of infrastructure investments and services supported.	P.168-170, Sustainable Relationships – Community	Zero Hunger – Infrastructure Investments
			11. Sustainable Cities and Communities – Infrastructure Investments
G4 – EC8	Significant indirect economic impacts, including the extent of impacts.	P.170, Sustainable Relationships – Community	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure		
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Aspect: Prod	curement Practices				
G4 – DMA	Disclosures on management approach.	P.112, Sustainable Operations – Procurement			
G4 – EC9	Proportion of spending on local suppliers at significant locations of operation.	P.113, Sustainable Operations – Procurement	12. Responsible Consumption and Production – Procurement Practices		
Sector Specific Aspect: Availability and Reliability					
G4 – DMA	Management approach to ensure short and long-term electricity availability and reliability.	P.95, Sustainable Operations – Power Generation and Delivery			
EU10	Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime.	P.85-86, 88-89, Sustainable Economics – Market Regulation and Planning			
Sector Speci	ific Aspect: Demand-Side Management				
G4 – DMA	Demand-side management programs including residential, commercial, institutional and industrial programs.	P.193-194, Innovation – Intellectual Capital			
Sector Speci	ific Aspect: Plant Decommissioning				
G4 – DMA	Provisions for decommissioning of nuclear power sites.	P.121, Sustainable Operations – Health, Safety, Security and Environment			
Sector Speci	ific Aspect: Research and Development				
G4 – DMA	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development.	P.191, Innovation – Research and Development			
Sector speci	ific Aspect: System Efficiency				
EU11	Average generation efficiency of thermal plants by energy source and by regulatory regime.	P.214, Appendix – Facilities Tables			
EU12	Transmission and distribution losses as a percentage of total energy.	P.100, Sustainable Operations – Power Generation and Delivery			
ENVIRONMI	ENTAL				
Aspect: Mat	terials				
G4 – DMA	Disclosures on management approach. Long-term strategy for managing and phasing out high level and low level in-service PCBs.	P.96-97, Sustainable Operations – Power Generation and Delivery			
G4 – EN1	Materials by weight or volume. Report in-use inventory of solid and liquid high level and low level PCBs contained in equipment.	P.96, Sustainable Operations – Power Generation and Delivery			
G4 – EN2	Percentage of materials used that are recycled input materials.	P.145, Sustainable Environment – Waste			
Aspect: Ene	rgy				
G4 – DMA	Disclosures on management approach.	P.96-97, Sustainable Operations – Power Generation and Delivery			

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
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ENVIRONM	ENTAL		
G4 – EN3	Internal energy consumption.	P.96, Sustainable Operations – Power Generation and Delivery P.201, Appendix – Key Performance Indicators	
G4 – EN4	External energy consumption.	P.96, Sustainable Operations – Power Generation and Delivery	
G4 – EN5	Energy intensity.	P.214, Appendix – Facilities Tables	
G4 – EN6	Reduction in energy consumption.	P.98, Sustainable Operations – Power Generation and Delivery	
G4 – EN7	Reductions in energy requirements for products and services.	P.98, Sustainable Operations – Power Generation and Delivery	
Aspect: Wa	ter		
G4 – DMA	Disclosures on management approach. Collaborative approaches to manage watersheds and reservoirs and long-term planning for securing water resources.	P.140, Sustainable Environment – Water	
G4 – EN8	Total water withdrawal by source. Overall water usage for processing, cooling and consumption in thermal and nuclear power plants, including use of water in ash handling and coal cleaning.	P.140, Sustainable Environment – Water P.201, Appendix – Key Performance Indicators	
G4 – EN9	Water sources significantly affected by water withdrawal.	P.141, Sustainable Environment – Water	
G4 – EN10	Percent and total volume of water recycled and reused.	P.140, Sustainable Environment – Water	
Aspect: Bio	diversity		
G4 – DMA	Disclosures on management approach. Approaches for pest and vegetation management along transmission and distribution corridors.	P.146, Sustainable Environment – Biodiversity	
G4 – EN11	The organisation's owned, leased, managed operating sites located in or adjacent to protected areas and areas of high biodiversity value outside protected areas.	P.146, Sustainable Environment – Biodiversity	14. Life below Water – Marine Biodiversity 15. Life on Land – Mountain Ecosystems
G4 – EN12	Description of the most significant impacts of activities, products and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. Nature of significant direct and indirect impacts on biodiversity regarding maintenance of transmission line corridors, fragmentation and isolation, as well as impacts of thermal discharge.	P.146, Sustainable Environment – Biodiversity	14. Life below Water – Marine Biodiversity 15. Life on Land – Mountain Ecosystems
G4 – EN13	Habitats protected or restored.	P.147, Sustainable Environment – Biodiversity	14. Life below Water – Marine Biodiversity 15. Life on Land – Mountain Ecosystems
EU13	Biodiversity of offset habitats compared to the biodiversity of the affected areas.	P.146, Sustainable Environment – Biodiversity	
Aspect: Emi	ssions		
G4 – DMA	Disclosures on management approach.	P.132, Sustainable Environment – Greenhouse Gas Emissions	
		P.136, Environment – Air Emissions	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
	ANDARD DISCLOSURES		
ENVIRONM	ENTAL	_	_
G4 – EN15	Direct greenhouse gas emissions (Scope 1). CO2e per MWh, breakdown by regulatory regime, for net generation from generating capacity, fossil fuel generation and estimated net delivery to end users including emissions from own generation.	P.134, Sustainable Environment – Greenhouse Gas Emissions P.201, Appendix – Key Performance Indicators P.210, Appendix – Reference Guidelines	
G4 – EN16	Indirect greenhouse gas emissions resulting from the generation of energy purchased or acquired for own consumption by the organisation (Scope 2). CO2e per MWh, breakdown by regulatory regime, for estimated net delivery to end users including emissions from own generation.	P.134, Sustainable Environment – Greenhouse Gas Emissions P.201, Appendix – Key Performance Indicators P.210, Appendix – Reference Guidelines	
G4 – EN18	Intensity of greenhouse gas emissions.	P.132-133, 135, Sustainable Environment – Greenhouse Gas Emissions P.201, Appendix – Key Performance Indicators	13. Climate Action – GHG Emissions
G4 – EN19	Reduction of greenhouse gas emissions.	P.132, Sustainable Environment – Greenhouse Gas Emissions	
G4 – EN21	NOx, SOx and other significant air emissions. NOx, SOx and other significant air emissions per MWh for net generation from generating capacity and combustion power plants.	P.136-137, Sustainable Environment – Air Emissions P.201, Appendix – Key Performance Indicators	<ol> <li>Good Health and Well-being – Air Quality</li> </ol>
Aspect: Effl	uents and Waste		
G4 – DMA	Disclosures on management approach. Management strategy and storage methods for different types of radioactive nuclear waste.	P.140, Sustainable Environment – Water P.142, 145, Sustainable Environment – Waste	
G4 – EN22	Total water discharge, according to quality and destination. Thermal discharges as part of the total volume of planned and unplanned water discharges.	P.140, Sustainable Environment – Water P.201, Appendix – Key Performance Indicators	Clean Water and Sanitation – Water Quality     Life below Water – Water Discharge to Oceans
G4 – EN23	Total weight of waste by type and disposal method. PCB waste as part of the total weight of hazardous and non-hazardous waste.	P.142-143, Sustainable Environment – Waste P.201, Appendix – Key Performance Indicators	6. Clean Water and Sanitation – Waste
G4 – EN24	Total number and volume of significant spills.	P.127-128, Sustainable Environment – Regulations and Compliance	
G4 – EN26	Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the discharges of water and runoff of the organisation.	P.141, Sustainable Environment – Water	
Aspect: Pro	ducts and Services		
G4 – DMA	Disclosures on management approach.	P.98, Sustainable Operations – Power Generation and Delivery	
G4 – EN27	Extent of mitigation of environmental impacts of products and services.	P.98, Sustainable Operations – Power Generation and Delivery	

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SPECIFIC STA	ANDARD DISCLOSURES		
Aspect: Con	npliance		
G4 – DMA	Disclosures on management approach.	P.127, Sustainable Environment – Regulations and Compliance	
G4 – EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	P.127-128, Sustainable Environment – Regulations and Compliance P.201, Appendix – Key Performance Indicators	
Aspect: Tran	nsport		
G4 – DMA	Disclosures on management approach.	P.96, Sustainable Operations – Power Generation and Delivery	
G4 – EN30	Significant environmental impacts of transporting products and other goods and materials used for the organisation's activities, and transporting employees.	P.96, Sustainable Operations – Power Generation and Delivery	
Aspect: Ove	erall		
G4 – DMA	Disclosures on management approach.	P.125, Sustainable Environment – Policies, Systems and Standards	
G4 – EN31	Total environmental protection expenditures and investments by type.	P.125, Sustainable Environment – Policies, Systems and Standards	
Aspect: Sup	plier Environmental Assessment		
G4 – DMA	Disclosures on management approach.	P.114, Sustainable Operations – Procurement	
G4 – EN32	Percentage of new suppliers that were screened using environmental criteria.	P.114, Sustainable Operations – Procurement	
G4 – EN33	Significant, actual and potential, negative environmental impacts in the supply chain and action taken.	P.114, Sustainable Operations – Procurement	
Aspect: Env	ironmental Grievance Mechanisms		
G4 – DMA	Disclosures on management approach.	P.127, Sustainable Environment – Regulations and Compliance	
G4 – EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms.	P.127, Sustainable Environment – Regulations and Compliance	
SOCIAL: Lab	oour Practices and Decent Work		
Aspect: Emp	ployment		
G4 – DMA	Disclosures on management approach.	P.116, Sustainable Operations – Health,	
	Programs and processes to ensure the availability of a skilled workforce. Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors.	Safety, Security and Environment P.156, 162, Sustainable Relationships – Employees	

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Indicator	Description	Location of Disclosure	SDG	6 Mapping Linkage to Disclosure
SPECIFIC ST	ANDARD DISCLOSURES			
SOCIAL: Lak	oour Practices and Decent Work			
G4 – LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region. Average length of tenure of employees leaving employment during the reporting period, breakdown by gender and age group.	P.157, 160-161 Sustainable Relationships – Employees P.202, Appendix – Key Performance Indicators		
G4 – LA2	Benefits provided to full-time employees that are not offered to temporary or part-time employees, by significant locations of operation.	P.151, Sustainable Relationships – Employees		
EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region.	P.161, Sustainable Relationships – Employees P.202, Appendix – Key Performance Indicators		Decent Work and Economic Growth – Availability of a Skilled Workforce
EU17	Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities.	P.119 Sustainable Operations – Health, Safety, Security and Environment		
EU18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.	P.118, Sustainable Operations – Health, Safety, Security and Environment		
Aspect: Lab	our / Management Relations			
G4 – DMA	Disclosures on management approach.	P.152, Sustainable Relationships – Employees		
G4 – LA4	Minimum notice periods of operational changes and possible inclusion of these in collective agreements.	P.152, Sustainable Relationships – Employees		
Aspect: Occ	upational Health and Safety			
G4 – DMA	Disclosures on management approach.	P.116, Sustainable Operations – Health, Safety, Security and Environment		
G4 – LA5	Percentage of total workforce that are represented in formal health and safety committees for management and employees, established to help monitor and advise on occupational health and safety programmes.	P.118, Sustainable Operations – Health, Safety, Security and Environment		
G4 – LA6	Types and rates of work-related injury, fatalities, occupational diseases, lost days, absenteeism and fatalities, by region and gender. Health and safety performance of contractors and subcontractors working onsite or on behalf of the organisation off-site.	P.119, Sustainable Operations – Health, Safety, Security and Environment P.200, Appendix – Key Performance Indicators	8.	Good Health and Well-being – Occupational Health and Safety Decent Work and Economic Growth – Occupational Health and Safety
G4 – LA7	Workers who have high incidence or risk of disease related to their occupation.	P.121, Sustainable Operations – Health, Safety, Security and Environment		
Aspect: Trai	ning and Education			
G4 – DMA	Disclosures on management approach.	P.158, Sustainable Relationships – Employees		
G4 - LA9	Average hours of training per year per employee, by gender and employee category.	P.159, Sustainable Relationships – Employees	4	Quality Education – Employee Training
G, LA		P.202, Appendix – Key Performance Indicators		and Education
				Gender Equality – Gender Equality
				Decent Work and Economic Growth – Employee Training and Education

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
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SOCIAL: Lab	our Practices and Decent Work		
G4 – LA10	Skills management and lifelong learning programmes that support continued employability of employees and help them manage the end of their careers.	P.158, Sustainable Relationships – Employees	8. Decent Work and Economic Growth – Employee Training and Education
G4 – LA11	Percentage of employees receiving regular performance and career development reviews, by gender and employee category.	P.158-159, Sustainable Relationships – Employees	8. Decent Work and Economic Growth – Employee Training and Education
Aspect: Dive	ersity and Equal Opportunity		
G4 – DMA	Disclosures on management approach.	P.163, Sustainable Relationships – Employees	
G4 – LA12	Composition of governance bodies and breakdown of employees by employee category by gender, age, minority group membership and other indicators of diversity.	P.71-72, Governance for Sustainability – Corporate Governance P.164, Sustainable Relationships – Employees	
Aspect: Equ	al Remuneration for Women and Men		
G4 – DMA	Disclosures on management approach.	P.151, Sustainable Relationships – Employees	
G4 – LA13	Ratio of basic salary and remuneration of women to men for each employee category, by significant locations of operation.	P.151, Sustainable Relationships – Employees	10. Reduce Inequalities – Equal Remuneration for Women and Men
Aspect: Sup	plier Assessment for Labour Practices		
G4 – DMA	Disclosures on management approach.	P.114, Sustainable Operations – Procurement	
G4 – LA14	Percentage of new suppliers that were screened using criteria related to labour practices.	P.114, Sustainable Operations – Procurement	
G4 – LA15	Significant, actual and potential, negative impacts for labour practices in the supply chain, and measures taken.	P.114, Sustainable Operations – Procurement	
Aspect: Lab	our Practices Grievance Mechanism		
G4 – DMA	Disclosures on management approach.	P.165, Sustainable Relationships – Employees	
G4 – LA16	Number of grievances about labour practices filed, addressed, and resolved through formal grievance mechanisms.	P.165, Sustainable Relationships – Employees	
SOCIAL: Hui	man Rights		
Aspect: Inve	estment		
G4 – DMA	Disclosures on management approach.	P.26, Our Business – 2015 Portfolio Changes	
G4 – HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening.	P.26, Our Business – 2015 Portfolio Changes	
Aspect: Non	n-discrimination		
G4 – DMA	Disclosures on management approach.	P.165, Sustainable Relationships – Employees	
G4 – HR3	Total number of incidents of discrimination and corrective actions taken.	P.165, Sustainable Relationships – Employees	8. Decent Work and Economic Growth - Non-discrimination

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
SPECIFIC STA	ANDARD DISCLOSURES		
SOCIAL: Hu	man Rights		
Aspect: Free	dom of Association and Collective Bargaining		
G4 – DMA	Disclosures on management approach. Management mechanisms to address the right to organise, bargain and strike.	P.115, Sustainable Operations – Procurement Sustainable Relationships – Employees	
G4 – HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or threatened, and measures taken to defend these rights.	P.115, Sustainable Operations – Procurement P.152, Sustainable Relationships – Employees	
Aspect: Chile	d Labour		
G4 – DMA	Disclosures on management approach.	P.115, Sustainable Operations – Procurement P.152, Sustainable Relationships – Employees	
G4 – HR5	Operations and suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour.	P.114, Sustainable Operations – Procurement P.152, Sustainable Relationships – Employees	
Aspect: Force	ed or Compulsory Labour		
G4 – DMA	Disclosures on management approach.	P.115, Sustainable Operations – Procurement P.152, Sustainable Relationships – Employees	
G4 – HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of forced or compulsory labour.	P.114, Sustainable Operations – Procurement P.152, Sustainable Relationships – Employees	
Aspect: Secu	urity Practices		
G4 – DMA	Disclosures on management approach.	P.122, Sustainable Operations – Health, Safety, Security and Environment	
G4 – HR7	Percentage of security personnel trained in the organisation's human rights policies or procedures that are relevant to operations.	P.122, Sustainable Operations – Health, Safety, Security and Environment	
Aspect: Indi	genous Rights		
G4 – DMA	Disclosures on management approach.	P.179, Sustainable Relationships – Community	
G4 – HR8	Total number of incidents of violations involving rights of indigenous peoples and measures taken.	P.179, Sustainable Relationships – Community	
Aspect: Asse	essment		
G4 – DMA	Disclosures on management approach.	P.152, Sustainable Relationships – Employees	
G4 – HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments.	P.152, Sustainable Relationships – Employees P.179, Sustainable Relationships – Community	
Aspect: Sup	plier Human Rights Assessment		
G4 – DMA	Disclosures on management approach.	P.114, Sustainable Operations – Procurement	
G4 – HR10	Percentage of new suppliers that were examined according to criteria related to human rights.	P.114, Sustainable Operations – Procurement	
G4 – HR11	Significant, actual and potential, negative impacts on human rights in the supply chain, and measures taken.	P.114, Sustainable Operations – Procurement	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
	ANDARD DISCLOSURES		
SOCIAL: Hun	nan Rights Grievance Mechanisms		
G4 – DMA		D1CE Custoinable Belationshine Franksises	
G4 – HR12	Disclosures on management approach.	P.165, Sustainable Relationships – Employees	
G4 - HK12	Number of human rights complaints that have been filed, addressed and resolved through formal grievance mechanisms.	P.165, Sustainable Relationships – Employees	
SOCIAL: Soc	iety		
Aspect: Loca	al Communities		
G4 – DMA	Disclosures on management approach.  Stakeholder participation in the decision making process related to energy planning and infrastructure development. Approach to managing the impacts of displacement. Explanation of whether the organisation's programmes for managing community impacts have been effective in mitigating negative impacts and maximising positive impacts.	P.45, Our Stakeholders and Materiality – Stakeholder Engagement P.85-86, Sustainable Economics – Market Regulation and Planning P.166-167, 179, Sustainable Relationships – Community	
G4 – SO1	Percentage of operations that have implemented local community engagement, impact assessments and development programmes.	P.171, Sustainable Relationships – Community	
G4 – SO2	Operations with significant, potential or actual, negative impacts on local communities.	P.179, Sustainable Relationships – Community	
EU22	Number of people physically or economically displaced and compensation, broken down by type of project.	P.179, Sustainable Relationships – Community	
Aspect: Anti	i-corruption		
G4 – DMA	Disclosures on management approach.	P.78, Governance for Sustainability – Code of Conduct	
G4 – SO3	Total number and percentage of operations assessed for risks related to corruption, and the significant risks identified.	P.78, Governance for Sustainability – Code of Conduct	16. Peace, Justice and Strong Institutions – Anti-corruption
G4 – SO4	Communication and training on anti-corruption policies and procedures.	P.78, Governance for Sustainability – Code of Conduct	
G4 – SO5	Confirmed cases of corruption and measures taken.	P.78, Governance for Sustainability – Code of Conduct P.200, Appendix – Key Performance Indicators	16. Peace, Justice and Strong Institutions – Anti-corruption
Aspect: Pub	lic Policy		
G4 – DMA	Disclosures on management approach.	P.84, Sustainable Economics – Market Regulation and Planning	
G4 – SO6	Total value of political contributions by country and recipient / beneficiary.	P.84, Sustainable Economics – Market Regulation and Planning	
Aspect: Anti	-competitive Behaviour		
G4 – DMA	Disclosures on management approach.	P.79, Governance for Sustainability – Code of Conduct	
G4 – SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	P.79, Governance for Sustainability – Code of Conduct	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
SPECIFIC STA	ANDARD DISCLOSURES		
SOCIAL: Soc	ciety		
Aspect: Con	npliance		
G4 – DMA	Disclosures on management approach.	P.80, Governance for Sustainability – Legal Compliance	
G4 – SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	P.80, Governance for Sustainability – Legal Compliance P.179, Sustainable Relationships – Community	16. Peace, Justice and Strong Institutions – Compliance with Laws and Regulations
Aspect: Sup	pplier Assessment for Impacts on Society		
G4 – DMA	Disclosures on management approach.	P.114, Sustainable Operations – Procurement	
G4 – SO9	Percentage of new suppliers that were screened using criteria related to impacts on society.	P.114, Sustainable Operations – Procurement	
G4 – SO10	Significant, potential negative impacts for society in the supply chain and measures taken.	P.114, Sustainable Operations – Procurement	
Aspect: Grie	evance Mechanisms for Impacts on Society		
G4 – DMA	Disclosures on management approach.	P.179, Sustainable Relationships – Community	
G4 – SO11	Number of complaints about impacts on society that have been filed, addressed and resolved through formal grievance mechanisms.	P.179, Sustainable Relationships – Community	
Sector Spec	ific Aspect: Disaster / Emergency Planning and Response		
G4 – DMA	Contingency planning measures, disaster / emergency management plan and training programs, and recovery / restoration plans.	P.110-111, Sustainable Operations – Emergency Management	<ol> <li>No Poverty – Disaster / Emergency Planning and Response</li> </ol>
SOCIAL: Pro	duct Responsibility		
Aspect: Cus	tomer Health and Safety		
G4 – DMA	Disclosures on management approach. Assessment of resource planning, generation, transmission, distribution and use and processes for assessing community health risks and risks identified.	P.99, Sustainable Operations – Power Generation and Delivery	
G4 – PR1	Percentage of significant product and services categories whose health and safety impacts are assessed for improvement.	P.99, Sustainable Operations – Power Generation and Delivery	
G4 – PR2	Total number of incidents of non-compliance with regulations or voluntary codes concerning the health and safety imapcts of products and services during their life cycle, by type of result of these incidents.	P.109, Sustainable Operations – Retail	
EU25	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases.	P.179, Sustainable Relationships – Community	
Aspect: Pro	duct and Service Labelling		
G4 – DMA	Disclosures on management approach.	P.109, Sustainable Operations – Retail	
G4 – PR3	Type of product and service information required by organisational procedures for product and service information and labelling, and percentage of significant products and services subject to such requirements.	P.104, Sustainable Operations – Retail	

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Indicator	Description	Location of Disclosure	SDG Mapping Linkage to Disclosure
SPECIFIC STA	ANDARD DISCLOSURES		
SOCIAL: Pro	duct Responsibility		
G4 – PR4	Total number of breaches of regulations and voluntary codes concerning product and service information and labelling, by type of results.	P.109, Sustainable Operations – Retail	
G4 – PR5	Results of surveys measuring customer satisfaction.	P.102, Sustainable Operations – Retail	
Aspect: Mai	keting Communications		
G4 – DMA	Disclosures on management approach.	P.109, Sustainable Operations – Retail	
G4 – PR6	Sale of banned or disputed products.	P.109, Sustainable Operations – Retail	
G4 – PR7	Total number of breaches of regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of results.	P.109, Sustainable Operations – Retail	
Aspect: Cus	tomer Privacy		
G4 – DMA	Disclosures on management approach.	P.108, Sustainable Operations – Retail	
G4 – PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	P.108, Sustainable Operations – Retail	
Aspect: Con	npliance		
G4 – DMA	Disclosures on management approach.	P.109, Sustainable Operations – Retail	
G4 – PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	P.109, Sustainable Operations – Retail	
Sector Spec	ific aspect - Access		
G4 – DMA	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services.	P.107, Sustainable Operations – Retail	
EU26	Percentage of population unserved in licensed distribution or service areas	P.99, Sustainable Operations – Power Generation and Delivery	
EU27	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime.	P.107, Sustainable Operations – Retail	
EU28	Power outage frequency.	P.100, Sustainable Operations – Power Generation and Delivery	<ol> <li>No Poverty – Electricity Access</li> <li>Affordable and Clean Energy – Electricity Access</li> </ol>
EU29	Average power outage duration.	P.100, Sustainable Operations – Power Generation and Delivery	<ol> <li>No Poverty – Electricity Access</li> <li>Affordable and Clean Energy – Electricity Access</li> </ol>
EU30	Average plant availability factor by energy source and by regulatory regime.	P.214, Appendix – Facilities Tables	No Poverty – Electricity Access     Affordable and Clean Energy –     Electricity Access
Sector Spec	ific aspect - Provision of Information		
G4 – DMA	Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services.	P.104, 107, Sustainable Operations – Retail	

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**Contact Us** 

We encourage you to share your feedback with us. To demonstrate our unwavering commitment to the communities we serve, we make use of the opportunity to support charitable organisations by donating HK\$60 for each feedback that we receive on our <u>Annual Report</u>, our <u>Sustainability Report</u>, and <u>our Annual Report snapshot online</u>. The maximum donation amount is set at HK\$350,000.This year's donations will be made to the two organisations below:

## **2015 BENEFICIARIES**

<u>Changing Young Lives Foundation</u> is an NGO dedicated helping new immigrant families and families with difficulties through its protection, education, development and participation programmes.

The Hong Kong Society for Rehabilitation (HKSR) is a charitable organisation which provides responsive and quality rehabilitation services for people with disability, chronic illness or problems from ageing.



香港復康會
The Hong Kong Society
for Republication

## **2014 BENEFICIARIES**

Your participation in 2014 enabled us to support The Hub Hong Kong, and Families of Spinal Muscular Atrophy (SMA) Charitable Trust. The Hub Hong Kong launched nine training programmes for 190 children and youngsters from 50 low-income families using CLP's funds. Families of SMA Charitable Trust published in the second half of 2015, a series of stories online featuring SMA. In 2016, the origanisation plans to publish 20 more such stories.

We welcome your feedback on our performance and on ways we can improve our sustainability reporting.



Please send us your feedback on this Sustainability Report through any of the following ways:

## **Submit the Feedback Form**

## Write to us

CLP Holdings Limited, 8 Laguna Verde Avenue, Kowloon, Hong Kong

## Fax us

(852) 2678 8453

## **Email us**

SRfeedback@clp.com.hk