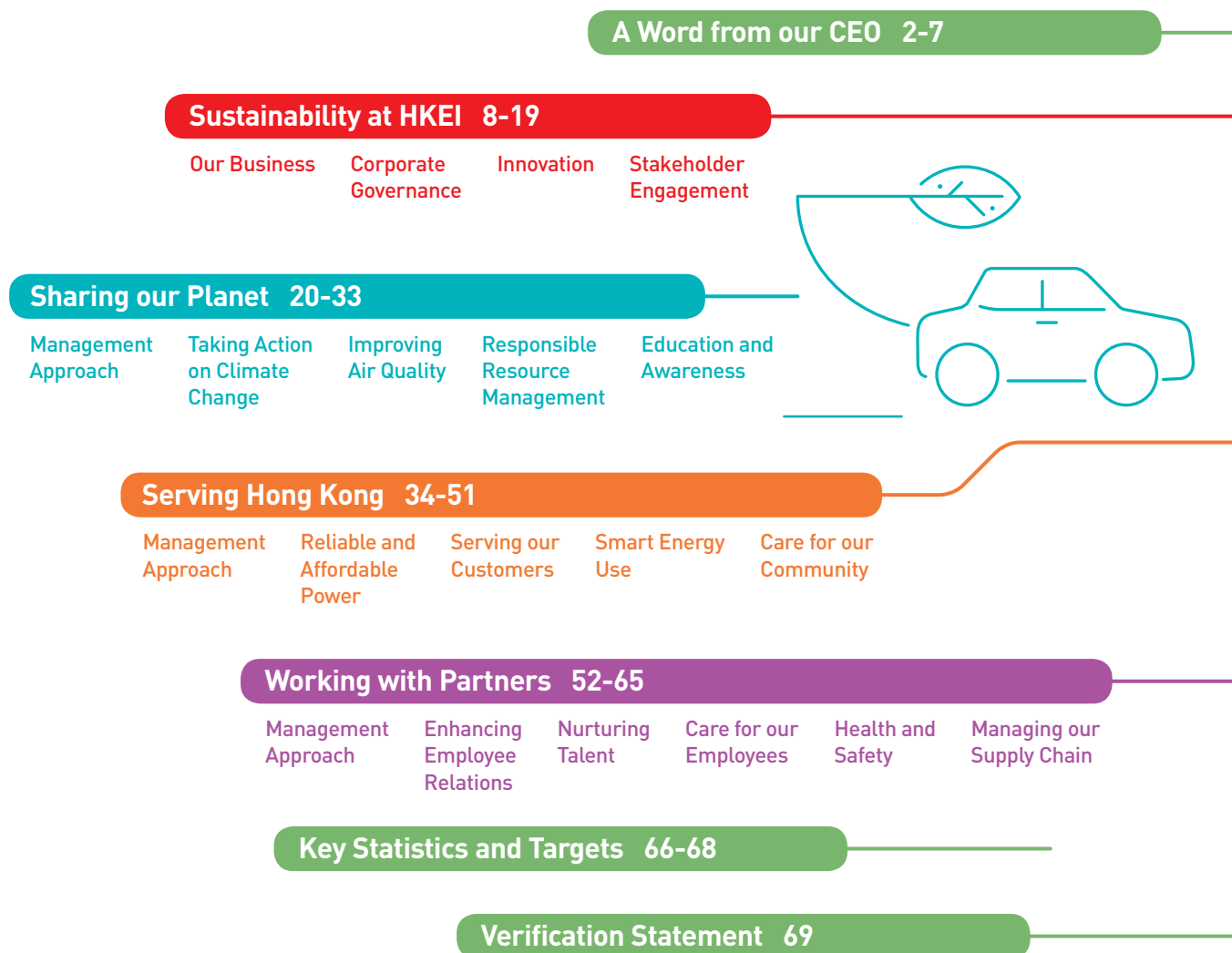




港燈電力投資
HK Electric Investments

**GREENER
POWER
GOING
FURTHER**

SUSTAINABILITY
REPORT 2018



Report Overview

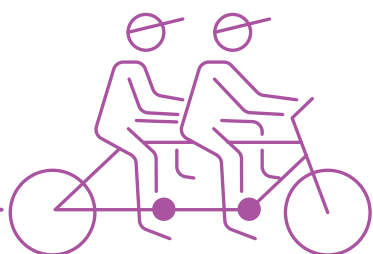
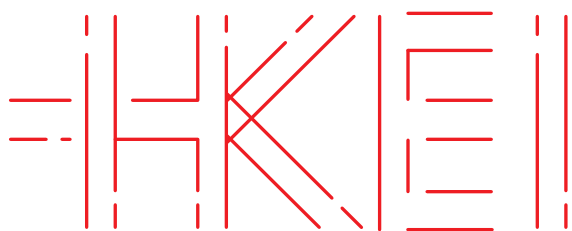
| Scope | This is the Sustainability Report of HK Electric Investments and HK Electric Investments Limited (collectively, HKEI) for 2018. The report presents our approach to meeting sustainability challenges, key performance during the year as well as plans and targets for the future. It is designed to be read in conjunction with the information from our other key reporting channels. Details about our policies and routine initiatives are available on our website www.hkei.hk, while more information about our governance practices, financial performance, and awards and recognition received is covered in our [Annual Report](#).

| Basis of Reporting | In preparing this report, we have followed the latest version of the Global Reporting Initiative's (GRI) Sustainability Reporting Standards and Electric Utilities Sector Disclosures, as well as Hong Kong Exchanges and Clearing Limited's (HKEX) Environmental, Social and Governance (ESG) Reporting Guide. This report is prepared in accordance with the Core Option of the GRI Standards and also addresses a significant number of disclosures required under the Comprehensive Option.

The on-line [HKEX ESG Content Index](#) and [GRI Content Index](#) of this report on our website provide cross reference information for readers to locate individual disclosures. For some disclosures, specific information is reported directly in the GRI Content Index.

Issues for inclusion in this report were determined through a process of materiality analysis. Details and results of the materiality assessment can be found in the GRI Content Index.

| Data Collection and Specific Definition | Our data collection and analysis are based on relevant guidelines and standards, such as ISO 14064 for greenhouse gas emissions and local government guidelines for energy and carbon audits for buildings. Due to rounding, some figures may not add up to the total.



**GREENER
POWER
GOING
FURTHER**



The suppliers referred to in this report are those with a direct commercial relationship with us including contractors. Our workforce basically comprises full-time employees with an insignificant portion of part-time and temporary employees. Personnel of our contractors, with whom we have no direct employment relationship, are not considered part of our workforce. In this report, shareholders refer to holders of our Share Stapled Units.

I Verification and Endorsement I In line with our commitment to being transparent about our sustainability impacts and to managing those impacts responsibly, we commissioned an independent third party to verify the contents of this report and assure its credibility.

This report has been endorsed by our Corporate Social Responsibility (CSR) Committee and approved by the Boards of Directors.



The cover of this report represents HKEI's determination in going further into a new era of greener power generation that will support Hong Kong's transformation into a smart, low-carbon city.



A Word from our CEO



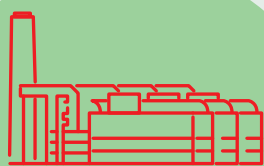


2018 was a special year for HKEI; not only did it mark the successful completion of our previous 10-year Scheme of Control Agreement (SCA) with the HKSAR Government, but we also received approval for our 2019-2023 Development Plan which maps out various pathways for us to help build a smarter and more sustainable Hong Kong.

As we embark on another chapter of our business under the new 15-year SCA, we look back on our performance over the past decade, and ahead to how we will meet the expectations of our stakeholders in the years to come. By building on our firm foundations, I am confident we will live up to the theme of this report – Greener Power | Going Further.

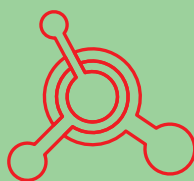
our 2019-2023 Development Plan outlines new investments totalling

HK\$ **26.6** billion



HK\$ **16.2** billion (61%)

Power Generation
System



HK\$ **9.1** billion (34%)

Transmission and
Distribution System



HK\$ **1.3** billion (5%)

Customer and
Corporate Services
Development



TAKING PRIDE IN OUR ACHIEVEMENTS

I know I speak for my colleagues here at HK Electric, our main operating company, that we are proud of the company's notable achievements in supplying Hong Kong with reliable, affordable, clean and safe electricity over the period of the previous SCA from 2009 to 2018.

In addition to maintaining our world-class supply reliability rating, we have honoured the 5-year tariff freeze pledge we made in 2013, while our operations at Lamma Power Station have also continued to evolve with the times. Over the last decade, we have adopted new technologies to utilise cleaner fuel and renewable energy (RE) for power generation and implemented a comprehensive emission control regime to help combat climate change and improve Hong Kong's air quality.

Winning the Grand Award of the Hong Kong Management Association Quality Award in 2017 was a great encouragement to us. The judging panel's positive assessment of our strong management systems, good corporate governance and operational excellence crystallised our vision to excel in the power business in Hong Kong, while inspiring us with new directions for continuous improvements.

Quality and service excellence aside, safety has always been our top priority. It is a testament to the strength of our management systems and safety culture that on 11 November 2018, we achieved a record of 465 days with zero Lost Time Injuries for our employees. Nonetheless, we will continue to strive for zero accidents as our ultimate goal.

A SNAPSHOT OF OUR PERFORMANCE IN THE PAST DECADE

Emission Reduction Performance



Electricity
Output from
Natural Gas

32% in 2018 vs.
16% in 2008



Emission
Reductions
(2018 vs. 2008)

5%
in CO₂e per Unit of
Electricity Sold



Wind &
Solar Power
Generated

Total
16.9 GWh
over 2009-2018

46-89%
in SO₂, NO_x & RSP



Power Supply Services



Supply Reliability

>99.999%
since 1997

Record high
99.9999%
in 2017



Net Tariff in 2018

16.6%
lower than 2013

11.7%
lower than 2008



Average Customer Satisfaction Rating

4.4-4.6 (on a 5-point scale)
over 2009-2018

Social Commitment



Community Investment over 2009-2018

Total **HK\$17.6 million**
of subsidies through
Smart Power Fund

>600,000 participants
in Smart Power Campaign

>7,500 elderly beneficiaries
through CAREnJOY

>50,000 employee
volunteering hours



Safety Performance in 2018

Lost Time Injuries **1**

Lost Time
Injury Frequency Rate **0.05**

Lost Time
Injury Severity Rate **0.05**

All figures are the lowest over
2009-2018

Employee Care



Annual Average Training Hours per Employee

38.9 in 2018 vs.
34.8 in 2008



GOING FURTHER TO ADDRESS CLIMATE RISKS

Global warming is having an increasingly profound impact on Hong Kong's climate. In the past two years, we have experienced two super typhoons, Hato and Mangkhut, which put HK Electric's operations to the test. Although we succeeded in maintaining reliable power supply for the vast majority of our customers, there is no room for complacency. We must continue to review and enhance the resilience of our facilities to withstand extreme weather conditions today and for decades to come.

We have aligned our business strategy with the Government's action in combating climate change by progressively increasing the use of natural gas in our fuel mix. In anticipation of the retirement of three more coal-fired units by 2023, in addition to two others in 2017 and 2018, we are building three new gas-fired units for commissioning in 2020, 2022 and 2023 respectively.

Looking forward, as natural gas will become the primary feedstock for our power generation, it is essential for the new offshore liquefied natural gas (LNG) terminal project to proceed as planned. This project will enable us to mitigate risks with fuel supply, and to have direct access to the international market for cost-competitive LNG supplies.

BUILDING OUR SMART CITY TOGETHER

In support of the Government's goal to transform Hong Kong into a Smart City, we are investing in infrastructure that promotes the widespread adoption of information and communication technologies. We plan to implement progressively by 2025 a large scale roll-out of smart meters for all our customers, facilitating demand-side energy management while improving our customer services.

Since the vast majority of Hong Kong's energy saving opportunities arise in our built environment, energy efficiency & conservation (EE&C) is fundamental to reducing both the energy and carbon intensities of our city's economy. In 2018, we launched a series of new Smart Power Services, including expanded funding schemes and free energy audit services designed to help more building owners enhance the energy efficiency of their properties. We are also expanding our public education on EE&C, RE and low-carbon lifestyle through the Happy Green Campaign for promoting Smart Living and grooming Smart People.

In response to our stakeholders' expectation of a wider application of RE in Hong Kong, our new Smart Power Services also include a Feed-in Tariff Scheme and an RE Certificates Scheme, which target to increase the uptake of RE in our service area.

KEY UPDATES FOR THE COMING YEARS



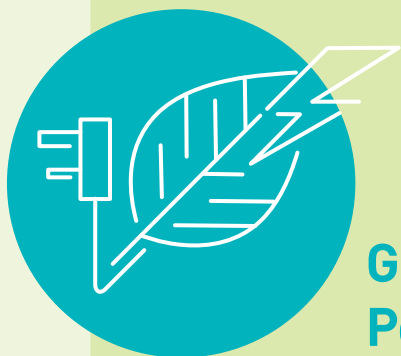
New Smart Power Services

HK\$25 million annually for
Smart Power Building Fund and
~200 free **Smart Power Energy
Audits** annually with **Smart
Power Loan Fund** available

HK\$5 million annually for **Smart
Power Education Fund**

Feed-in Tariff rates of HK\$3-5
and **RE Certificates** at HK\$0.5
premium per unit of electricity

Up to HK\$5,000 subsidy per
eligible household under **Smart
Power Care Fund** with additional
subsidies for eligible sub-divided-
unit tenants



Greener Power

Electricity Output from Natural Gas

~70% in 2023

CO₂e per Unit of Electricity Sold

≤0.6 kg/kWh in 2023

Upward Pressure

- Rising capital expenditure
- Increasing use of natural gas

Alleviating Factor

- Lowered permitted rate of return under the new SCA
- Offshore LNG terminal project for new gas supplies at reasonable prices
- Enhancing operational efficiency and productivity

Future Tariff



UPHOLDING OUR VALUES

Our path to the future should be guided by the principles that have contributed to our success in the past and present. With Pursuit of Excellence as one of HK Electric's Core Values, we will continue to strive to improve various aspects of our business operations, in particular through innovation. In 2018, we formulated a new Innovation Strategy for end-to-end innovation life-cycle management. We are now implementing an Innovation Value Chain at corporate level and managing a company-wide innovation portfolio.

Our Core Values also emphasise Integrity, Respect & Trust as well as Caring; and it is with these in mind that we must continue to give back to society. Our new Smart Power Care Fund lends a helping hand to the underprivileged in our community so that they may take their first steps towards a greener lifestyle. This caring spirit also underpins our two elderly care programmes – CAREnJOY and U3A – that focus on supporting and empowering our senior citizens.

As we strive to maintain tariff affordability, I am mindful of the upward pressure the company's future developments may place on electricity prices. In 2019, we saw a 6.8% increase in our net tariff compared with that of 2018 mainly because of the substantial reduction in two special rebates that we offered in recent years. If the impact of the special rebates was removed, the 2019 tariff would have been lower than that of 2018 by 5.9%. We will spare no effort to ensure the affordability of our services in the years ahead.

With these concluding thoughts, I would like to extend my thanks to all of our stakeholders, particularly our employees, without their support none of our accomplishments past, present or future could be possible.

As HKEI ventures into a new era of serving Hong Kong, we pledge to contribute our best, powering our city to go greener and further towards the goal as a Smart City.

Wan Chi-tin

Chief Executive Officer

March 2019

A full-page photograph of an industrial facility, likely a water treatment plant, with a worker in the foreground. The worker is wearing a white uniform with yellow reflective stripes and a white hard hat, standing on a metal walkway with a railing. In the background, there is a large body of water, industrial buildings, a tall cylindrical tower, and mountains in the distance under a clear sky.

Sustainability at HKEI





Sustainability at HKEL

Sharing
our Planet

Serving
Hong Kong

Working
with Partners



At HKEL, we are committed to operating our business in a responsible and transparent manner, and meeting the long-term energy needs of the community we serve. In an age of rapid change, we make creativity and innovation part of our corporate strategy, along with strong corporate governance.



OUR BUSINESS

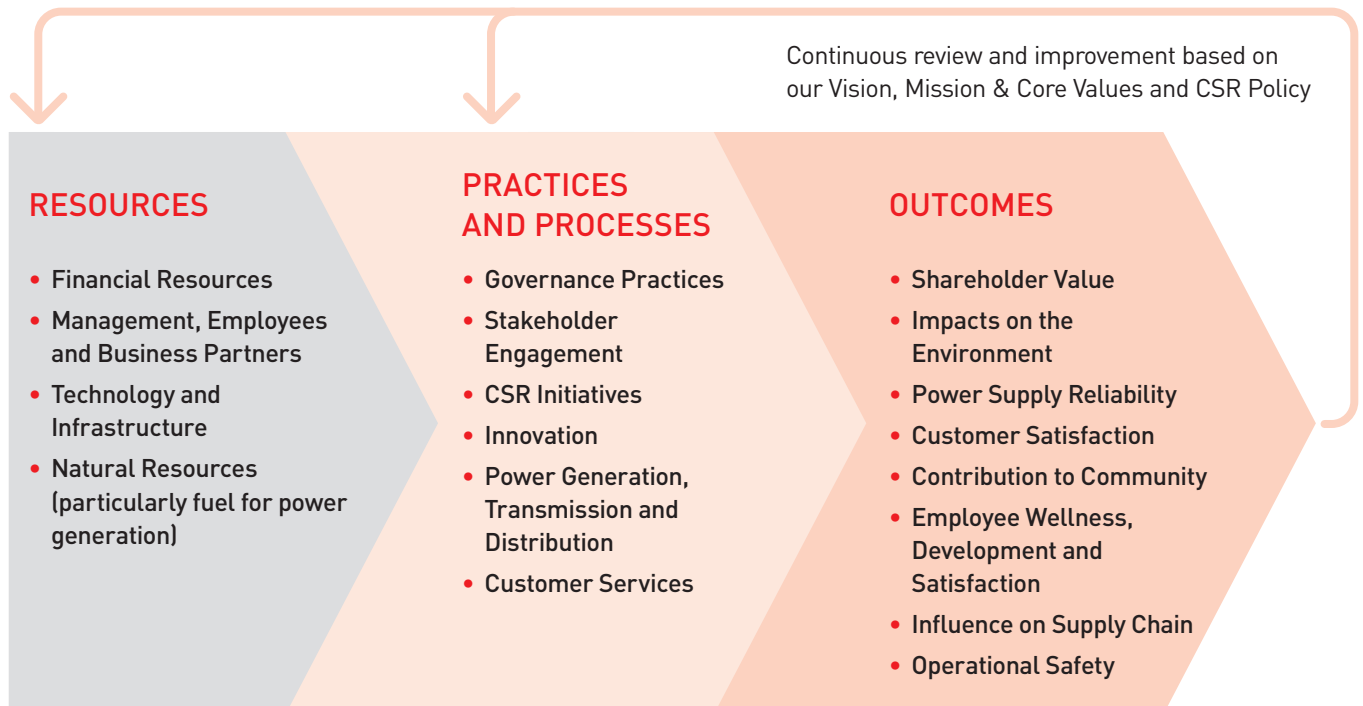
Constituted in January 2014, HK Electric Investments (the Trust) is a fixed single investment trust in Hong Kong focusing purely on the energy sector. Share Stapled Units issued by the Trust and HK Electric Investments Limited (collectively, HKEI) are listed on the Main Board of the Hong Kong Stock Exchange. The structure of the Trust enables it to focus on delivering stable distributions to investors and sustainable long-term growth of the business. HKEI is included in the Euronext Vigeo World 120 Index.

Under a Scheme of Control Agreement (SCA) with the HKSAR Government, our main operating company, The Hongkong Electric Company, Limited (HK Electric), operates a vertically integrated power utility with a power station on Lamma Island having a total installed capacity of 3,237 MW and a transmission and distribution network spanning about 6,500 km. It has a dedicated workforce of around 1,800 permanent employees and serves about 579,000 commercial and residential customers on Hong Kong and Lamma Islands.

Our corporate history dates back to 1890 and we are proud to be one of the longest-serving power utilities in the world. For over 128 years, HK Electric has had an unswerving commitment to providing its customers with safe, reliable, clean and affordable electricity – an essential ingredient for powering Hong Kong's development and success. We have been investing in appropriate technologies that are fit for the purpose and that enable us to deliver quality power supply to our customers. As a responsible corporate citizen, we engage our stakeholders and care for the community.

For more information on HKEI and HK Electric, please visit our website www.hkei.hk.

Our Value Chain





CORPORATE GOVERNANCE

Our Vision, Mission and Core Values guide us in every aspect of our operations. They are supported and upheld by our comprehensive CSR Policy and structured corporate governance practices.

VISION

To excel in the power business in Hong Kong

MISSION

- To enhance shareholder value
- To deliver excellent customer services and supply reliability
- To nurture a harmonious and engaged workforce
- To care for the community we serve
- To care for the environment in all our activities
- To drive for efficiency in our operations

CORE VALUES

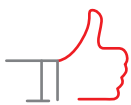
- Pursuit of Excellence
- Integrity
- Respect & Trust
- Caring

CSR POLICY

We are committed to operating our business in a responsible and transparent manner while meeting the long-term energy needs of the community we serve.

Underpinned by our Core Values, we aim to be a good corporate citizen supporting the sustainable development of the community; a world-class energy supplier providing safe, reliable, affordable and environmentally-friendly electricity supply to our customers; and an employer of choice that attracts and develops talents.

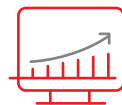
To accomplish this, we integrate CSR considerations in our operations, engage our stakeholders and will:



Strive to achieve a high standard of corporate governance;



Understand and address customer needs through our innovative and caring services;



Secure a stable return and deliver long-term values for our investors;



Treasure the environment by minimising the impact of our operations and combating climate change;



Assist staff to grow in an engaged workplace and care for them and their families;



Influence our business partners to adhere to a high standard of integrity and encourage our suppliers and contractors to follow our requirements in respect of ethical, human and labour rights, health and safety, and environmental performance; and



Nurture a caring culture in society by supporting and contributing to community investment.



Lamma Power Station and its Extension for more gas-fired generation

Challenges and Strategies

We must overcome a variety of challenges to achieving our Vision while fulfilling our role as a responsible corporate citizen.

Our Key Sustainability Challenges



Stakeholder Expectations and Regulatory Requirements

Key Challenge

- Stakeholder expectations and regulatory requirements on our business are continually increasing due to changes in our society.
- As a major public utility, we must take the lead to contribute to many aspects of economic, environmental and social sustainability.

Strategy and Approach

- We strive to understand and anticipate the concerns of our stakeholders through various communication channels in order to meet their expectations.
- We continuously monitor changes in relevant laws and regulations to ensure compliance.
- We have comprehensive management systems in place governing environmental protection, health and safety, supply reliability and service quality.



Electricity Market

Key Challenge

- Following expiry of the previous 10-year SCA with the Government on 31 December 2018, a new 15-year SCA has come into force on 1 January 2019 until 2033. The SCA puts our operations under very strict scrutiny.
- The Government's policies on air quality, climate change mitigation, fuel mix and electricity market competition are other important factors shaping the medium to long term development of our business.

Strategy and Approach

- We engage continuously with the Government and other stakeholders on the development of Hong Kong's electricity market, including related regulatory issues.



Fuel Supply

Key Challenge

- The power generating units at Lamma Power Station require uninterrupted supply of high-quality coal and natural gas.
- Any supply interruptions or shortages, including instances of sub-standard fuel quality, can significantly impact our business and undermine our ability to comply with legislated emission allowances in line with the Government's air quality objectives.
- Switching to natural gas, which is a cleaner but also more costly fuel, increases operational costs and also exposes our business to higher fuel price volatility.

Strategy and Approach

- We have a fuel supply strategy and fuel quality control systems in place to help secure a reliable and stable supply of quality fuels at reasonable prices.
- Diversification of gas supply is a key consideration as we progressively increase the proportion of natural gas in our fuel mix.



Economic Environment

Key Challenge

- Although global macro-economic growth remains moderate, various factors are contributing to uncertainty in global financial markets, including escalating trade protectionism, mixed signals on economic policy and rising geopolitical tensions.
- Hong Kong's economic growth has been adversely affected by US-China trade tensions. If a slowdown in Hong Kong leads to lower demand for electricity and related services, it could adversely affect our financial position and asset valuation.

Strategy and Approach

- We pursue prudent and pragmatic strategies for financial management and capital investment.
- We strive for efficiency and cost effectiveness in all aspects of our operations to enhance our financial performance.



Governance Practices

We are committed to high standards of corporate governance, including openness, integrity and accountability, which are essential for efficient and transparent business operations, attracting investment, enhancing shareholder value, and protecting the rights of shareholders and other stakeholders.

To this end, we uphold our corporate governance practices under a framework of processes, guidelines and policies that align with the Corporate Governance Code, as set out in the Listing Rules of the Hong Kong Stock Exchange.

Our Key Governance Practices

Risk Management

- **Enterprise Risk Management Framework** to identify, assess, mitigate and monitor key business, financial, operational and compliance risks, including top corporate risks and material emerging risks.
- **Compliance Framework** to manage compliance obligations on a company-wide basis.
- **Crisis Management Plan** to address emergencies, with each business unit also responsible for implementing their respective contingency plans to maintain business continuity.

In 2018, there were no instances of material non-compliance.

Business Ethics

- **Code of Conduct** to provide guidance for employees on ethical issues, including the reporting and treatment of unethical behaviour.
- **Fraud Prevention and Awareness Policy** to minimise exposure to fraud risk.
- **Various whistleblowing channels** for employees and external parties to report actual or potential illegal acts and violations of the Code of Conduct.
- **Monitoring mechanism** to review compliance with anti-corruption laws and the Code of Conduct, including a biannual anti-bribery and anti-corruption control assessment that evaluates the effectiveness of controls for managing bribery risks.

In 2018, there were no concluded legal cases regarding corrupt practices brought against HKEX or its employees.

Creating Value

- **Pursuing sustainable development opportunities for our business** through prudent investment in the latest innovative and environmental-friendly technologies for **delivering world-class quality power supply and service to customers**, and **helping Hong Kong transform into a smart, low-carbon city**.
- **Reducing the carbon intensity and improving the air quality of our city** by developing new gas-fired power generation facilities for replacing the retiring coal-fired units, as outlined in our 2019-2023 Development Plan.

We are implementing various initiatives to achieve our targets for sustainable development. We will review our performance and targets with particular reference to the United Nation's Sustainable Development Goals.



INNOVATION

Pursuit of Excellence is one of our Core Values. Even though we operate in a highly regulated and relatively stable business environment, we must maintain unwavering focus on innovation to achieve higher cost effectiveness, better customer service and more robust operating performance.

Promoting innovation is an integral part of our corporate strategy and management approach. We are committed to nurturing talent within our workforce and fostering their creativity. We recognise the contributions of our employees, build collaborative relationships among them, and promote respect and trust and an innovation-friendly culture.

In July 2018, we formulated our Innovation Strategy to facilitate effective end-to-end innovation life-cycle management, including oversight and execution of our Innovation Value Chain. In addition to forming an Innovation Steering Committee that will drive implementation of the strategy, we have also established a company-wide innovation portfolio that promotes innovative activities and developments across all business units. Twenty-one innovation proposals were adopted within the first three months of inception of our Innovation Strategy.

A Smart Cleaner that Never Complains

Innovative devices can help save manpower and reduce health and safety risks to our employees. In 2018, we put on trial a robotic cleaning machine with artificial intelligence features at the warehouse of Electric Tower and found that the overall cleanliness of the warehouse was enhanced in addition to the significant saving in the resources and costs compared with manual cleaning. We will extend this robot application to our other warehouses facilitating safer and more efficient operations.



Write Your Own Apps

To encourage the use of IT technology to improve our operations while optimising our IT resources, we launched an in-house "End User Computing Platform for Mobile App" in 2018 to enable our colleagues to develop mobile apps by themselves according to their business needs.

An example is our in-house developed mobile app for the ordering of energy-efficient appliances under the Smart Power Care Fund. This app not only helps the social workers of our partners smoothen the application process and save paper, but also facilitates the household visits, monitoring and planning, and data security and integrity.





“UFO” over Lamma Power Station

Case
Story 1

Law Wing-kei (left)
and
Chan Chi-hong (right)

Energy & Performance
Engineers



“If we think out of the box, some of the commonly seen equipment could be used to improve efficiency and productivity.”

Are they aliens arriving in a UFO? Or a foreign spy agency seeking to undermine our power supply? No, fortunately it's nothing to worry about but a drone helping HK Electric Energy & Performance Engineers Chan Chi-hong and Law Wing-kei perform an annual survey of our coal stock for accounting and planning.

“Before fully switching to gas-fired generation, keeping an adequate amount of coal in the coal yard is vital for our power plant operations,” says CH. “More than 10 years ago, we used traditional surveying techniques that were both labour and time intensive and took more than a week to complete.” WK adds, “Later, with technological advancement, we were able to reduce the surveying time to several days using 3D laser scanning.”

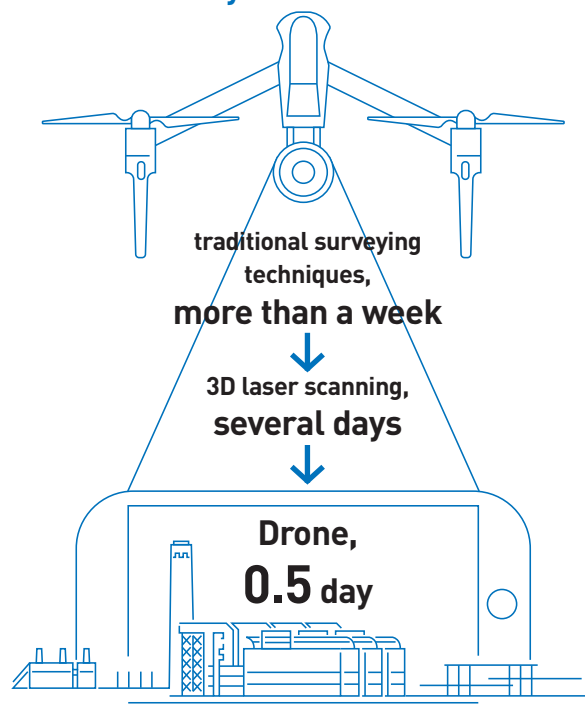
Now, with the use of drones, the survey can be completed within a single morning by capturing detailed images of every inch of the coal yard. CH says, “The idea came from a colleague who attended a seminar in 2016 where he heard about using a drone to create a terrain model of a construction site, so we decided to explore how it could help us and made a trial use of drones for survey of coal stock in end 2016.”

Following the formal use of drones for survey of coal stock in the last two years, this innovative method has proved to save time and cost, and achieved a better result.

Needless to say, there were several challenges to overcome along the way; such as finding a qualified expert to provide training and



Survey of Coal Stock



obtaining necessary permits. In addition to avoiding interference caused by the high-voltage cables at the power station, our drone operators have also learned to take account of limited battery life, which means the survey cannot be undertaken in one fly and several attempts are required to create a complete picture.

Even though drones themselves are not uncommon, this story illustrates how our culture of innovation is encouraging our employees to “think out of the box” by exploring ways to adopt new technology and improve productivity in different areas of our business.



The Use of Drones

The use of drones for inspection is in fact not limited to survey of coal stock. We also started using drones for structural inspections of our 200-meter-tall chimneys in 2017 and the inspection time has been significantly shortened from one month to a week. It also helps significantly reduce the inspection costs by 90% and mitigate the safety risks associated with working at height.



STAKEHOLDER ENGAGEMENT

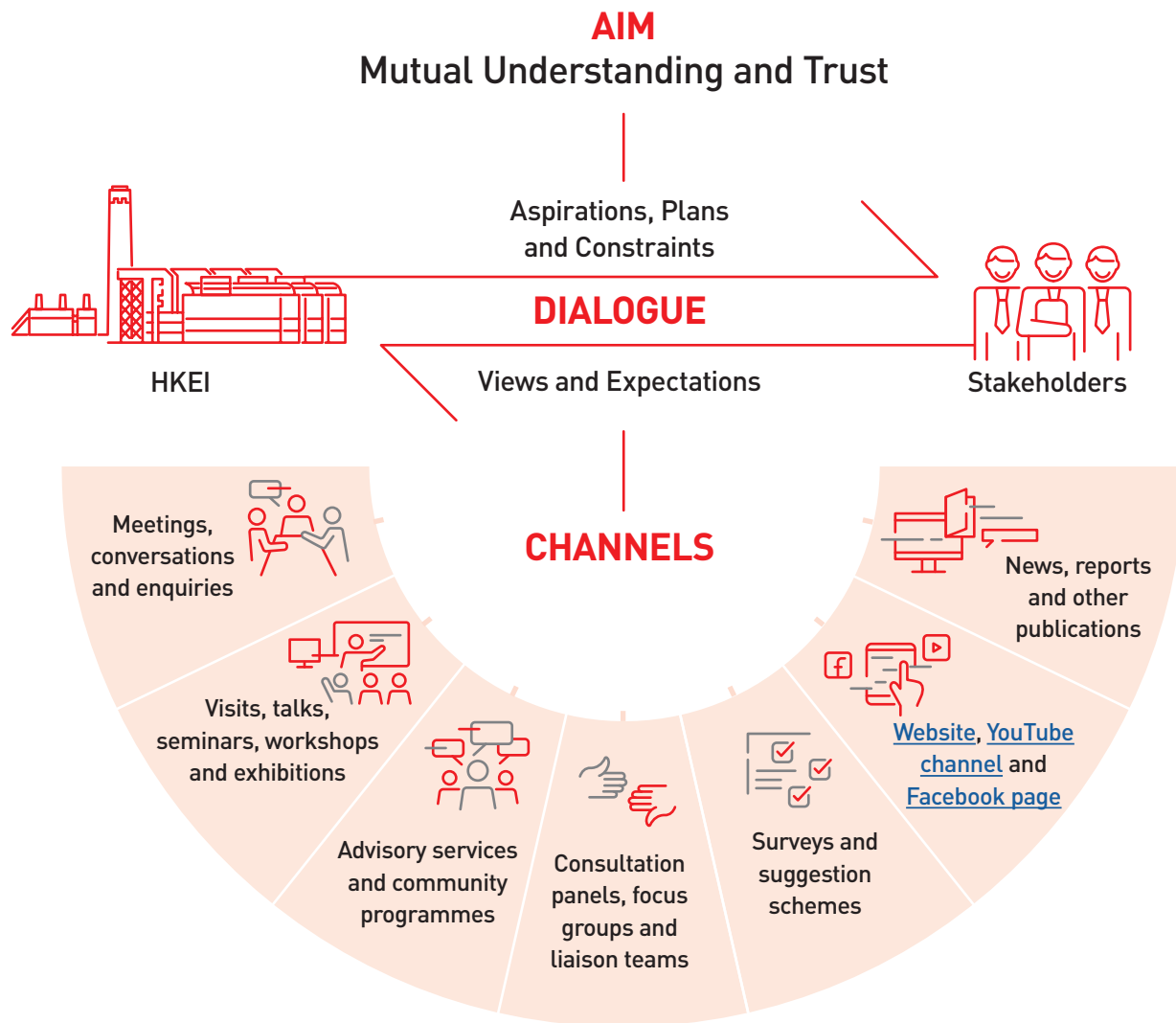
Our operations have significant impacts on our customers and community, among other stakeholders. We believe in open and effective communication with all stakeholders so that through dialogue, their views and expectations will continue to help shape the growth and development of our business for the future.

In 2018, we established a Stakeholder Satisfaction Steering Committee to oversee complaints management and revamped the relevant procedures to further improve customer satisfaction. We also set up a corporate [Facebook page](#) to enhance communication with stakeholders through social media as well as a CSR Corner on our intranet portal to promote CSR messages to our employees.





Stakeholder Engagement





Sharing our Planet



Sustainability
at HKEI

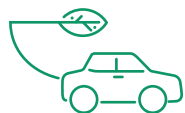
Sharing
our Planet

Serving
Hong Kong

Working
with Partners

Everyone has a responsibility to safeguard the environment. At HK Electric, we invest continuously in new technologies and initiatives to minimise the impact of our operations and enhance the public's environmental awareness.





Management Approach

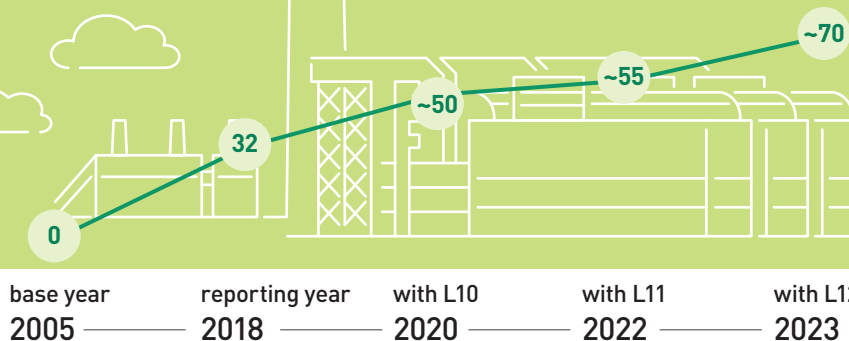
HK Electric's commitment to safeguarding the environment is articulated in our Environmental Policy, which we updated in 2018 to place renewed emphasis on low-carbon power generation at Lamma Power Station and support for wider application of renewable energy (RE) in the community.

Under the leadership of our Environment Committee, environmental considerations are fully integrated across all areas of our business in compliance with comprehensive environmental and energy management systems certified to international standards ISO 14001 and ISO 50001. We strive for continuous improvement and continually monitor our performance with reference to specific and measurable targets.

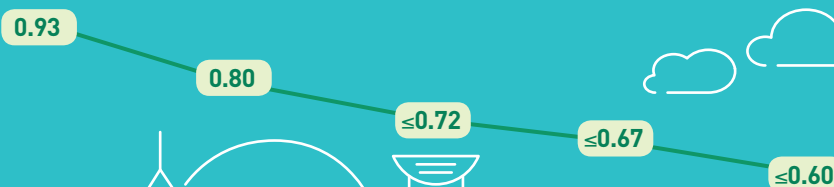
In recognition of the fact that we cannot achieve our environmental objectives in isolation, we work closely with our stakeholders. We are also committed to promoting broader environmental awareness through our public education programmes.

New Era of Gas-Fired Power

Proportion
of gas-fired
generation (%)



Carbon emissions
per unit of
electricity sold
(kg CO₂e/kWh)





TAKING ACTION ON CLIMATE CHANGE

To help combat climate change, HK Electric is taking a proactive approach to reducing greenhouse gas emissions. Our corporate management strategy is also focused on adaptation to climate change to help bolster our city's resilience in the face of more extreme weather conditions.

Transitioning to Low-Carbon Power Generation

Switching to natural gas is a clean and effective way to produce fewer carbon emissions than coal-fired power generation. This is essential for supporting the Government to achieve Hong Kong's 2030 carbon intensity reduction target under the Climate Action Plan 2030+. We aim to increase the proportion of natural gas in our fuel mix for power generation at Lamma Power Station to about 70% by 2023 and continue to phase down our remaining coal plants in the next decade.

As part of this switch, in 2018, we made progress in the construction of two new gas-fired units, L10 and L11, while initiating work on a newly-approved gas-fired unit, L12. These units, which feature advanced efficiency-enhancing technology, are progressively replacing five coal-fired units and one aging gas-fired unit by 2023. Two coal-fired units already retired in 2017 and 2018 respectively upon reaching the end of their asset lives.

To ensure the commercial and operational viability of our strategy, we are working with CLP Power to develop an offshore liquefied natural gas (LNG) terminal using Floating Storage and Regasification Unit (FSRU) technology, which will diversify Hong Kong's natural gas supply sources. A second gas source will be added for our Lamma Power Station, increasing our access to competitively-priced gas in the global LNG market and mitigating potential gas supply risks. The Government granted an Environmental Permit for the new LNG terminal in 2018 and we plan to commence construction of this facility in 2020 with the goal of putting it into operation in 2022.

Building Climate Resilience

Our strategy to adapt to climate change is to assess potential risks to our business, adopt resilient designs and conduct regular operational reviews in order to implement timely enhancement measures. We have contingency plans and emergency procedures in place throughout our operations, and conduct regular practice drills and reviews.




In 2018, we initiated a pilot study on strategic use of CCTV to monitor the degree of storm surge at our distribution substations. We also conducted a review of the anti-flooding design of new distribution substations. During the year, we installed tide gauges and anemometers on Lamma Island as part of a joint study we are undertaking with the Hong Kong Observatory on tides and storm surge. These would help us understand and prepare for extreme weather events.



Drum-lifting for L10 on 7 August 2018 marks the completion of the installation phase for all major components of this new gas-fired unit.



Adapting to Climate Change

Possible extreme weather events		Our precautions
	Rising sea levels and more erratic rainfall	<ul style="list-style-type: none"> • Anti-flooding systems at Lamma Power Station • Flooding alarms, bund walls, sump pumps and switchgear stands at substations subject to flooding risk • Advising management offices of buildings with flooding risk to install anti-flooding systems at their switch rooms
	Longer periods of higher ambient temperature	<ul style="list-style-type: none"> • Converting 11-kV open-ring distribution feeders to 22-kV closed-ring feeders to enhance supply reliability and increase cable capacity
	Stronger typhoons and more powerful thunderstorms	<ul style="list-style-type: none"> • Underground and submarine cables • Standby typhoon emergency teams

Promoting Renewable Energy

HK Electric operates a commercial-scale solar power system and a commercial-scale wind power station – Lamma Winds, which generated a total of 1,786 MWh of green electricity in 2018.

Looking to the future, we are committed to supporting the Government's policy of promoting development of RE in Hong Kong. In 2018, we launched a range of new Smart Power Services to encourage public participation in RE generation, including through Feed-in tariffs and RE certificates. Please refer to the Serving Hong Kong chapter of this report for more information.

IMPROVING AIR QUALITY

Air pollution in the Pearl River Delta region has long been one of the most important issues impacting the health and well-being of our community. Air emissions produced locally in Hong Kong come significantly from coal-fired power plants and traffic.

Emissions at Lamma Power Station

HK Electric has been progressively reducing emissions in line with Hong Kong's Air Quality Objectives. As summarised in the table that follows, we employ a range of emission control facilities at Lamma Power Station to limit the quantities of specified emissions, namely sulphur dioxide (SO₂), nitrogen oxides (NO_x) and respirable suspended particulates (RSP).

In 2018, we continued to meet the emission allowances for SO₂, NO_x and RSP specified by the Government and started a review with the Government on formulating new emission allowances for 2024 and onward.

Our strategy of switching to gas-fired generation which has a higher efficiency and less NO_x emissions than coal-fired generation, and nearly zero SO₂ and RSP emissions will also contribute to better air quality in Hong Kong. Moreover, the heat recovery steam generators of the new gas-fired units L10, L11 and L12 will feature Selective Catalytic Reduction systems to further reduce NO_x emissions.



Emission Reduction Performance

Year End	2005 (Base year)	2008 (Before the start of the previous SCA)	2018 (End of the previous SCA)	2023 (Forecast)
Total number of coal-fired units	8	8	6	3
Number of coal-fired units with:				
Flue gas desulphurisation plant	3	3	6	3
Low-nitrogen-oxides combustion system	3	3	5	3
Electrostatic precipitator	8	8	6	3
Total number of gas-fired units	0	1	2	4
Number of gas-fired units with:				
Selective catalytic reduction system	Not applicable	0	0	3
Proportion of gas-fired generation (%)	0	16	32	~70
Air Emissions				
SO ₂ (kT)	31.0	26.2	2.87	≤2.21
NO _x (kT)	18.5	14.4	7.79	≤4.91
RSP (kT) [#]	1.5	0.59	0.20	≤0.12

[#]The figure for 2005 refers to Particulates.

Automatic and Open Monitoring

HK Electric has installed a total of six air quality monitoring stations in the south of Hong Kong Island and in Cheung Chau to monitor, round the clock, the impact of Lamma Power Station on the ambient air quality. These stations are fully automatic with broadband connection for data communication and remote control, minimising resources and carbon footprint for site maintenance. The monitoring results are submitted to the Authority and are published on our website.



Drive EVs • Charge Easy

HK Electric supports the widespread adoption of Electric Vehicles (EVs) in Hong Kong because they produce zero emissions on the road and could play an important role in helping improve roadside air quality.

At the end of 2018, 17 EV chargers were available for public-use at our 12 charging stations situated in every district on Hong Kong Island. Subject to traffic conditions, EV drivers can access one of our charging stations within 15 minutes' driving distance of any location on Hong Kong Island, and they will continue to enjoy free EV charging services until the end of 2019.

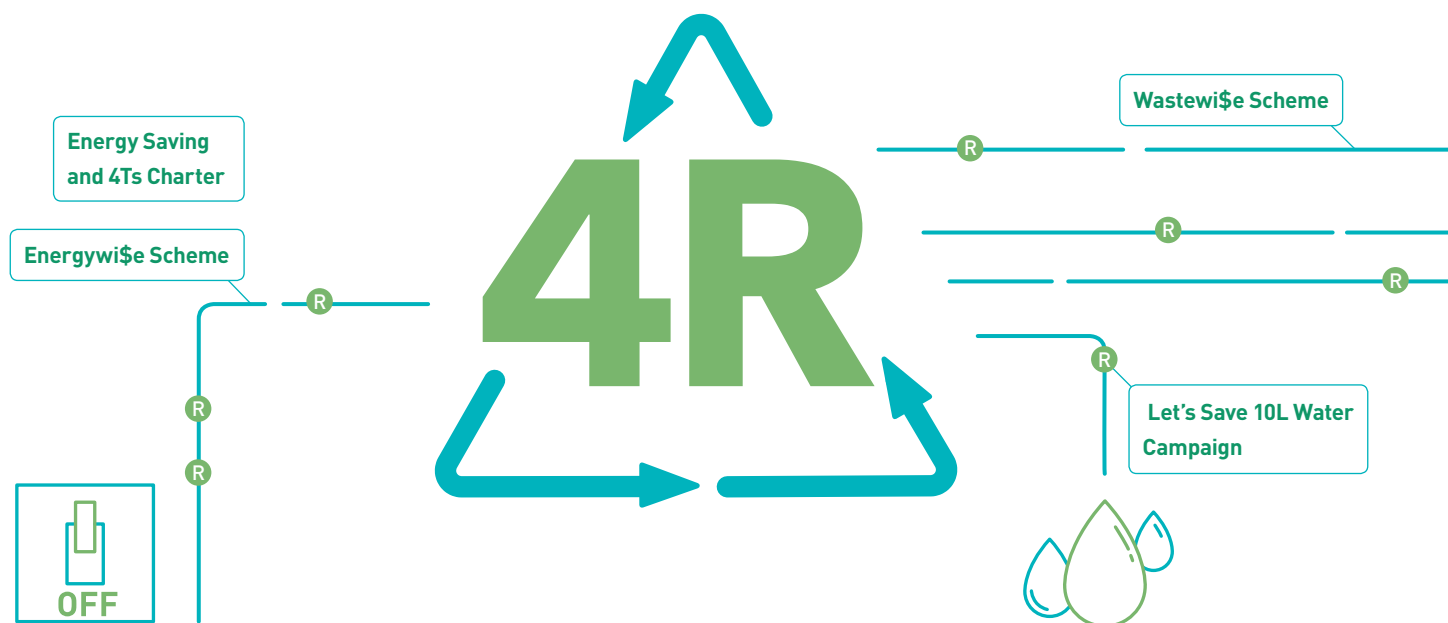
During the year, we handled 329 enquiries from customers and received 319 applications for installation of new EV risers and EV chargers in residential and commercial buildings.

We also owned and operated 132 EVs at the end of 2018 representing more than 43% of our vehicle fleet. Year-on-year comparison of fuel consumption declined by 6.5% in 2018.



RESPONSIBLE RESOURCE MANAGEMENT

In line with our Environmental Policy, HK Electric strives to reduce the environmental impacts of our business by optimising consumption of resources, including energy, and reducing waste. We regularly engage our employees on environmental issues and cultivate a culture of 4R – Reduce, Reuse, Recover and Recycle – throughout our organisation.



Energy Savings

The vast majority of Hong Kong's energy-saving opportunities arise in our built environment. At HK Electric, we have established energy-saving targets for our main buildings to minimise our carbon footprint and we conduct regular carbon and energy audits to evaluate opportunities for further energy savings. As recommended in previous audits, we installed additional energy meters in our main buildings in 2018 to enhance monitoring of energy consumption patterns for fine-tuning our energy-saving plans.

During the year, we removed unnecessary lights in office areas, corridors and stairwells where excessive illumination was identified, and retrofitted LED lamps in our buildings. We also completed upgrading of air-conditioning units in Lamma Power Station and the aged chillers of our Head Office, replacing them with more energy-efficient models.

In 2018, we also reduced distribution losses in our power system by optimising the arrangement of normal open points in our distribution networks.

Water Resources

A water collection system is in operation at Lamma Power Station to collect rainwater and plant processing water for reuse. In 2018, more than 122,000 m³ of water was collected and reused, thereby reducing our consumption of fresh water and discharge of wastewater.

In order to avoid significant impact on natural water bodies, wastewater from Lamma Power Station is properly treated, by removing oil, grease, suspended solids and heavy metals, before subsequently being discharged.

We also pay attention to water saving in the ongoing development of the new L10 and L11 gas-fired plants. Wastewater storage and treatment facilities have been installed to recycle and reuse wastewater produced during bore piling.



Waste Management



Our business produces different forms of waste, all of which we manage and dispose of responsibly according to the requirements in relevant laws and regulations.

Ash and gypsum, two by-products from coal-fired power generation, are the main types of non-hazardous waste generated by our operations at Lamma Power Station. These materials are supplied to third parties as inputs for industrial use. We also generate hazardous wastes in our operations, such as waste oil, which is recycled or disposed of by licensed contractors under a trip-ticket system.

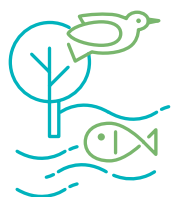
In order to go beyond regulatory compliance in our waste management practices, we work with the Government and NGOs on various recycling initiatives. In particular, we strive to reduce food and plastic wastes from our staff canteens.



Food Wise Charter



Food Waste



Biodiversity

We are strongly committed to conserving the ecological habitat of Lamma Power Station and the surrounding environment. In addition to controlling the impacts of air and noise emissions, excessive illumination and human disturbance on plants and animals, we also have a planting programme in place to promote biodiversity through the cultivation of native tree and shrub species.

Greening
Partner Charter

In the course of developing new projects, we pay close attention to safeguarding biodiversity. In 2018, for example, we completed marine ecological and fisheries baseline reviews to facilitate the conservation of marine ecology in the vicinity of Lamma Power Station Navigation Channel which we will have some improvement works. We will also avoid underwater percussive piling during the peak occurrence season of finless porpoise to minimise impact on them during construction of the forthcoming offshore LNG terminal project.



Red-whiskered Bulbul



March 2018
near New Control Building

In a survey of bird life at Lamma Power Station from December 2017 to June 2018, 16 out of the top 20 most common bird species found in Hong Kong are identified.



Food Wise Culture

Case
Story 2

A typical day at our staff canteen



① **HK\$1 discount for
advance meal booking**



→ ② **Meal preparation
according to demand**



→ ③ **Flexible serving size of the main meal**

Rose Chow, Manager (Administration Services) of HK Electric, is responsible for overseeing the administration in our Head Office, including the staff canteen. Each day, the canteen needs to prepare over 300 meals for our colleagues, and minimising food waste is one of the company's environmental objectives. Let's take a look at how Rose ensures this objective is achieved over the course of a typical day.

Every morning, the canteen operator makes an estimate of the ingredients needed for the preparation of the day's meals. "We have a meal booking system that encourages our colleagues to order their lunches one day in advance, with an HK\$1 discount, and it enables the canteen operator to have a more accurate estimate of ingredients", Rose says.

Lunch is served on a staggered basis starting at noon. Our colleagues serve themselves rice and soup so they can take only the amount they need, and at the service counter, we encourage them to indicate the size of serving they want for the main meal. After finishing the meal, everyone is expected to separate out their leftovers to facilitate food-waste processing.

As Rose explains, "Through this, our colleagues came to realise the amount of food they are discarding, and they may think about taking less next time."

In the afternoon, it's time to clean up. All surplus food in the kitchen is neatly packed for donation to Food Angel, a local NGO who redistributes excess food to people in need.



Rose Chow

Manager
(Administration Services)

“We hope that through our food wise initiatives, we can influence our colleagues to implement the reduction-at-source principle and understand its importance.”



→ ④ Separating out leftovers for further treatment



→ ⑤ Donating surplus food to Food Angel



Meanwhile, the canteen operator weighs the amount of food waste that has been collected with a view to monitoring, better controlling and reducing food waste. “After installing a new model of food-waste decomposer in April 2018,” Rose says, “we can turn the food waste into fertiliser even more efficiently .”

HK Electric signed the Food Wise Charter in 2013 and keeps promoting food-wise culture among employees. In fact, even though the number of daily meals prepared has remained about the same, the amount of daily food waste generated by our staff canteen in 2018 has decreased by more than 70% since 2013.



Food Wise Recipe Sharing



There is a Food Wise Recipe Sharing section on the company's intranet portal where recipes specially designed to make good use of food trimmings are shared. We have received enquiries from colleagues, saying that their wives wish to know more about this cooking style. And we have received very creative food-wise recipes from employees too.



Outstanding Happy Green Ambassadors job-shadow an EV technician to learn more about EV operations.



Green Energy Dreams Come True competition lets student realise their STEAM dreams.



EDUCATION AND AWARENESS

We believe that greater public education, awareness and participation are essential for Hong Kong to achieve its environmental objectives.

Smart Power Campaign

For many years, we have promoted energy efficiency & conservation (EE&C), RE and low-carbon lifestyle choices to the general public, particularly young people, under the banner of our Smart Power Campaign (renamed Happy Green Campaign in 2019).

In 2018, the focus of the campaign was to groom and inspire young people to become green Key Opinion Leaders (KOLs); namely, identifying and supporting young leaders to advocate green lifestyle choices to their peers by sharing ideas and experiences. We recruited more than 60 secondary school students to become green KOLs under our Happy Green Ambassador programme.

During the year, our Happy Green Schools network continued to expand, with more than 420 schools participating in various Other Learning Experience (OLE) activities such as visits to HK Electric's facilities, eco-tours, school talks and training on operating green campus TV programmes.

We also continued to implement our Green Energy Dreams Come True programme, which is an annual competition for teams from local secondary schools. The 2018 competition focused on Science, Technology, Engineering, Arts and Mathematics (STEAM). Thirteen team proposals were shortlisted covering topics such as RE, EE&C and sustainability. The teams received seed money of up to HK\$50,000 each to implement their projects along with technical mentorship from HK Electric engineers.

Promoting Eco-Heritage

2018 marked the 13th year of Green Hong Kong Green (GHKG), a programme co-organised by HK Electric and a local green group Conservancy Association that features guided tours on Hong Kong and Lamma islands. The programme aims to foster public awareness of and appreciation for Hong Kong's eco-heritage resources, such as flora and fauna in our country parks and along our coastlines, as well as rural and urban landmarks that have environmental, cultural or historical value for our community and future generations.



Our In-house Campaign to Support United Nations' World Environment Day 2018



Low-carbon Pledges

Employees and their families pledged to "go green" around the four basic necessities of life: apparel, diet, living and transport



Energy Efficiency Competition

Our major office premises competed to implement the most effective energy-saving measures over the summer



Low-carbon Recipe Design Contest

Employees submitted and voted on recipes for their favourite healthy, less-meat meals



Sharing & Caring

Employees donated used clothes and books to charity

During the year, 1,160 participants took part in 92 eco-tours. Particularly well received were new thematic tours conducted by guest speakers. These included two Family Tours to Aberdeen Country Park, a Digital Photography Tour to Lung Fu Shan Country Park and the Waterworks Heritage Tour to Tai Tam Country Park, which help revitalise the existing routes with new angles and points of interest.

Support for Environmental Campaigns

HK Electric supports a range of environmental campaigns organised by green groups and the Government. We strive to raise environmental awareness among our employees and encourage them to support green initiatives.



Thematic tours on digital photography allow participants to learn ecology and photography in one go.



HK Electric's exhibit featuring virtual reality games to promote energy saving and RE applications at Eco Expo 2018.



Never too old

Case
Story 3

to be “Smart”

“At my age, I may not benefit much from better environmental protection myself, but I am sure we can help the next and future generations by making our planet more sustainable.”



Paul Tsoi

Smart Power
Ambassador

Age is never a hurdle for learning new skills and giving back to society. With this belief in mind, 54 elder students from the U3A Network, co-founded by HK Electric and the Hong Kong Council of Social Services to promote lifelong learning, completed their training and examinations in 2018 to become Smart Power Ambassadors, sharing what they learned in saving the planet with those around them.

Paul Tsoi is a local retiree in his 60's and an active member of the Tung Wah Group Hospitals Wilson T.S. Wang District Elderly Community Centre in Sha Tin. “Before I joined the Smart Power Ambassadors Training Programme,” he says, “I only knew little about environmental protection. But now I feel the urgency for everyone to help save the planet.”

Low-carbon lifestyle tips from Paul:

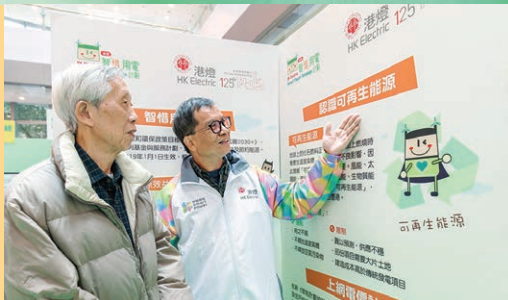


Adjusting the
angle of our
electric fans



Riding more
public transport





Through a combination of workshops and on-site learning, Paul and the other Ambassadors have gained valuable knowledge in global warming, energy efficiency and low-carbon living, as well as promotion and presentation skills for community outreach. "I was most impressed by the visit to the Zero Carbon Building," says Paul "where I learned that small changes like adjusting the angle of our electric fans can help conserve energy. If everyone paid attention to small things like this in their daily lives, then together we could make a big impact on protecting the environment."

Since becoming a Smart Power Ambassador, Paul has taken his first steps towards a low-carbon lifestyle by driving his car less and riding more public transport. He is also inspiring others to do the same, such as volunteering to spread green messages at our Smart Power roving exhibition in Shau Kei Wan. He also took proactive moves to interview and learn from building owners who had implemented an energy saving project under HK Electric's Smart Power Fund.

Paul is looking forward to leading more community outreach activities through his elderly centre and taking part in further training to become a green docent at the new Smart Power Gallery.



Smart Power Ambassador Training Programme

Building on the success of an initiative to train secondary school students, the Smart Power Ambassadors Training Programme was launched in 2018, targeting mature students from the U3A network. Training covered a range of topics from climate change, energy efficiency and renewable energy to waste reduction, recycling and trees conservation.

A photograph of a modern glass skyscraper with two children running on a green lawn in front of it. The building has a distinctive cantilevered upper section. A large, leafy tree is on the left, and a row of young trees is planted along the base of the building. Two children, a girl and a boy, are running across the grass towards the right. The girl is wearing a pink jacket over a white shirt with 'HEI' on it, and the boy is wearing a blue and white striped hoodie and blue pants. The text 'Serving Hong Kong' is overlaid in white on the lower left.

Serving
Hong Kong



Sustainability
at HKEI

Sharing
our Planet

Serving
Hong Kong

Working
with Partners

We take pride in providing a safe, reliable, clean and affordable electricity supply for our city. As a major public utility, our continued success is based on mutual support and trust between us and our community.



Management Approach

We build customer trust on our unswerving commitment to excellent supply reliability and total customer satisfaction. Our Quality Policy, Customer Services Policy and Corporate Security Policy provide guidance to our employees on continually improving our services. Our Customer Services Steering Committee oversees the performance of the company against specific and measurable targets, including a set of pledged Service Standards. We implement quality, asset management and information management systems certified to ISO standards 9001, 55001 and 27001 respectively to enhance service quality and efficiency.

The new SCA inaugurates a new era of getting smart about the use of electricity, as HK Electric launched a number of services branded under Smart Power Services to support different sectors of our community in pursuing energy efficiency and conservation (EE&C), and the use of renewable energy (RE).

Ultimately, our purpose is to give back to the community we serve. Our community investment strategy reflects our deeply-held belief that lasting impacts are created through partnerships. The main focus of our support is on two key social priorities for Hong Kong, namely promoting environmental protection through public education and caring for Hong Kong's ageing population.

RELIABLE AND AFFORDABLE POWER

Reliable and affordable power is essential for life and business in our vertical city of skyscrapers where millions of commuters ride electrically-powered public transport every day. An efficient and uninterrupted supply of power also underpins Hong Kong's status as an international centre for trade and finance, as well as its ongoing transformation into a Smart City of advanced information technologies.

Risk-based Approaches to Maintain our Electricity Network

	Monitoring Approach	Typical Application	Risk Avoided
	Condition monitoring and advanced diagnostic techniques for network components	Advanced on-line partial discharge detection system for switchgears	Early detection of incipient faults to avoid potential component failure
		Very low frequency monitored withstand test for 11-kV distribution cables	Early detection of water ingress in cable insulation layer to avoid potential cable faults
	"Health Indices" register for network components	Formulation of critical indices for primary and secondary assets such as switchgears, transformers, relays and remote terminal units	Timely refurbishment or replacement to avoid equipment failure



> 99.999%

supply reliability
rating for the 22nd
consecutive year



HK Electric's 24-hour
System Control Centre

<1 minute

average duration of unplanned
supply interruptions per customer
annually since 2009



Robust Power System

At HK Electric, we implement a regime of proactive and preventative investment to ensure the robustness of our power supply system. In addition to building new gas-fired power plants to replace our retiring units at Lamma Power Station, we are also enhancing the capacity and reliability of our transmission and distribution network.

Our "Strategic Asset Management and Operational Support Applications" which comprises of a set of new IT systems to optimise and standardise our end-to-end asset management processes within and across all business units, went live in January 2019.

System Control and Security

HK Electric's 24-hour System Control Centre operates sophisticated real-time computer systems with specially-developed smart grid features to control and monitor power generation, transmission and distribution. It plays a central role in facilitating the safe, reliable and efficient supply of electricity to our customers, while reducing emissions and minimising our carbon footprint.

In case of faults that interrupt supply, our remote control facilities allow us to restore the supply as quickly and efficiently as possible. In 2018 we formed a working group to further improve our average grid supply restoration time.

We also successfully commissioned a new Energy Management System and a new Distribution Management System to further enhance the automation and control capabilities of our operations.

We have management systems in place to protect our facilities, technologies and information assets from both physical and cyber-security threats, but we are facing increasing challenges to secure our network from more frequent, sophisticated and evolving cyber-attacks. In March 2018, we conducted a drill to test our contingency response capability to a serious cyber-hacking incident.



Come rain or shine,

Case
Story 4

we are committed to Excellence



(from left to right)

Tony Yeung

Head of Construction &
Maintenance

Francis Cheng

Operations Director

Ip Sung-tai

General Manager
(Transmission & Distribution)

To ensure a reliable electricity supply for our customers, it is imperative to plan ahead and take precautions. In mid-September 2018, the arrival of Mangkhut – one of the most intense typhoons impacting Hong Kong since records began in 1946 – put HK Electric operations to the test. Due to the preparedness, hard work and dedication of our highly experienced team, service disruption to our customers was minimal.

As the super typhoon approached Hong Kong, our Operations Director, Francis Cheng, felt the full weight of responsibility for seeing to the safe and smooth operations across our network.

“We have a well-established mechanism to prepare for different levels of typhoon,” says Francis, “but foreseeing the power of this super typhoon, we conducted additional checking, particularly at substations near the shoreline, and deployed extra manpower in the typhoon period to ensure our operations would not be at even the smallest risk.”

We asked our stand-by teams to drive home company vehicles equipped with special protection on the day before the typhoon hit Hong Kong to enable prompt support to sites in case of emergency. “This allowed us to deploy manpower more efficiently whenever there is



“ Commitment

Our employees never say no to taking up duty in severe weather conditions and even volunteer to come back to support their colleagues. ”



a service alarm,” says General Manager (Transmission & Distribution), Ip Sung-tai, who was in the “war room” with his team during the typhoon period to monitor the situation closely and to take timely remedial actions.

In the afternoon of 16 September, high sea waves caused serious flooding at Heng Fa Chuen, resulting in power outage in eight blocks and service disruption to residents living there. “Under the adverse weather conditions, the recovery could not be immediate,” says Tony Yeung, Head of Construction & Maintenance who oversaw the works at substations. “But we have to trust the professional judgment of our on-site engineers who need to balance the safety risks and power recovery.” Despite the challenging circumstance, we were able to resume all services in about 13 hours while we continued to give advice to the local management office for repairing their own facilities.

“There is always something we can do better,” says Francis. “Foreseeing the extreme weather to be more common, we have conducted comprehensive reviews from frontline to back-end and proactively work with stakeholders such as building management offices on improving their resilience to extreme weather and how HK Electric could facilitate to speed up service recovery.”

“ Empowerment

We trust and empower our employees to make good decisions on site that balance safety considerations with our service commitment. ”

“ Improvement

We continuously review and improve our performance, and treat all experiences as valuable lessons for a better future. ”

Hours under
Hurricane Signal
No. 10 hoisted

10

Distribution
substations
affected

10

Emergency
service calls

95

Employee
injuries

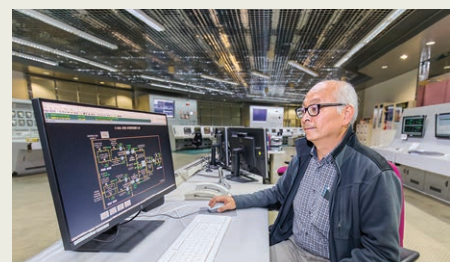
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On-site teams
for resumption of
power services

8

Employees
on stand-by

250



More Heroes Behind

Kum Wai-keung, Chief Operations Engineer, volunteered to remain on duty for more than 30 hours at Lamma Power Station to support his colleagues on typhoon shift. “While I did worry about my family when I learned that my home at Heng Fa Chuen was experiencing power outage, I knew it was equally important for me to stay and support my teammates under such a high-pressure situation. I also trusted my colleagues working hard to resume service for Heng Fa Chuen and finally they did not let us down.” Teamwork and commitment proved to be the key success factors.



Affordable Energy

Reinforcing our commitment to stable and reasonable prices, we are proud to have honoured our pledge not to raise our electricity tariff above its 2013 level for a 5-year period. Indeed, despite incurring a modest rebound compared with 2017's figures, our net tariff per unit of electricity in 2018 was still 16.6% lower than that in 2013.

Due to the substantial reduction in two special rebates that we offered in the previous two years, there is a rebound of 6.8% in our net tariff for 2019 compared with that of 2018. If the effect of the two special rebates was taken out, the net tariff for 2019 would have been lower than that of 2018 by 5.9%, mainly because of a decrease in our permitted rate of return from 9.99% to 8% under the new SCA.

We are mindful that in the coming years various factors will apply additional upward pressure on our tariff, such as rising capital expenditure and operating costs associated with more consumption of natural gas, and we will strive to minimise such impact.

Meanwhile, the Government has been granting an electricity charges relief of HK\$50 per month to each eligible residential account every month from 1 January 2019 until 31 December 2023 or whenever an account is closed. Tenants of sub-divided units (SDU) who are on the Government's Comprehensive Social Security Assistance Scheme are also eligible for a subsidy of HK\$500 per year provided by HK Electric.



Concessionary Tariff Schemes

for the elderly, the disabled,
single-parent families and
the unemployed



Super Saver Discount

for residential customers
consuming less than 100 units
a month to encourage energy
conservation

SERVING OUR CUSTOMERS

We strive to surpass our customers' expectations through continuous improvement in our services, and recognise the importance of engaging with them to understand their needs.

Service Standards

In 2018, we met or surpassed all 18 of our pledged Customer Service Standards covering areas of electricity supply, connection of supply, electricity accounts and meters, customer enquiries and emergency services.

During the year, the number of positive commendations reported by customers reached a record 1,947, which reflects a high level of customer satisfaction. On the other hand, we received no service-related complaint but one complaint concerning the quality of our electricity supply. We followed up the complaint immediately to resolve the issue and prevent re-occurrence.

To support Hong Kong's transformation into a Smart City, we are preparing for a large-scale roll-out of smart meters under the approved 2019-2023 Development Plan, which will improve our customer services and grid operations and facilitate customers' demand-side energy management. Our pilot project on deploying advanced metering infrastructure technology, currently in progress, will help shape our longer-term strategy.



New Bill Design

In October 2018, we launched newly-designed electricity bill statements providing customers with more information on accounts and new services. A QR code is also available on the new bills for making payment using Faster Payment System.



Star Brand Award
(Enterprise) 2018

Care for our Customers



Greater
Convenience

Customer Emergency Services Centre

- To provide 24-hour hotlines for emergency support

Account-On-Line Service

- To provide round-the-clock interactive access to electricity account via our website and app

E-billing and E-payment Services; Group Billing Service; Bill of Small Outstanding Amount

- To provide green and convenient options for billing and payment

One-stop Services for SMEs and Data Centres

- To provide tailored electricity and tariff advisory services in particular to expedite business start-up

Customer Relationship Management Programme

- To make ambassador visits to corporate customers and provide them with one-stop service on technical and account matters



Supporting for
Special Needs

Ethnic Minorities

Forms and pamphlets in eight minority languages

Hearing-impaired

Videos supported with sign language; SMS enquiry service; Teleloop system at service counter

Visually-impaired

Voice-assisted e-bill service; Braille bills

Elderly

"Web for the Elderly"; Express counter with magnifying glasses

Disabled

Dedicated wheelchair-friendly counter; Automatic doors at customer service centre



HK Electric Customer
Liaison Group Meeting cum
Annual Luncheon 2018



Customer Satisfaction

In 2018, the findings of our after-service satisfaction surveys indicated that the average customer satisfaction index was 4.6 on a 5-point scale.

Customer Communication

We meet regularly with our Customer Liaison Group (CLG) comprising members from our customers and stakeholders from District Councils, community organisations and NGOs from Hong Kong and Lamma Islands. This is a critical platform to help us gauge public opinion about our services.

In 2018, we invited more community representatives to join the CLG so that we could engage with them on a range of new topics such as our new Smart Power Services. As of end 2018, there were about 50 members in our CLG.

We strive to keep all customers up-to-date on our news and developments through our quarterly news bulletin, HK Electric On-line, and our annual Customer Services Standards brochure containing an overview of our customer services and new service initiatives.

We also strongly encourage our customers to share their opinions through our Customer Services Hotline and Customer Suggestion & Feedback Form. In addition to hosting "We Meet on Friday" sessions on a monthly basis, we also conduct regular "Give-Me-5" customer surveys to collect feedback on specific service areas.

Customer Privacy

We safeguard customer privacy in compliance with the Personal Data (Privacy) Ordinance and other relevant codes of practice, guided by our Group Personal Data Privacy Policy. Our commitment to personal data privacy is set out in our Privacy Policy Statement.

In addition to issuing guidelines for our employees on the handling of customer data, we have also implemented a system of controls to prevent them from making unauthorised use of confidential and sensitive information. To raise our employees' awareness about the protection of personal data, we organise briefing sessions on Data Privacy twice a year. In September 2018, we also organised an in-house seminar entitled Personal Data Compliance: Collection of Identity Card Number or Copies of Identity Card.

We have various cybersecurity protection measures in place to safeguard the company's information assets against unauthorised access and malicious attacks. We also publish The Cybersecurity Corner, a quarterly newsletter for our employees providing updates, news and tips. In May 2018 we held several cyber-security workshops for our employees.



SMART ENERGY USE

In Hong Kong, the vast majority of our energy saving opportunities is in our built environment. Consequently, EE&C is key to reducing both the energy and carbon intensity of our city. HK Electric promotes the smart use of energy by assisting customers to enhance the energy efficiency of their buildings and through educational programmes for the public. We also support wider community participation in the supply of RE.

Building Energy Efficiency

In 2018, through our Smart Power Fund, we provided subsidies on a 50/50 matching basis to owners of residential buildings when they improved the energy efficiency of existing building-services installations such as lighting, lift-driving and air-conditioning systems. Projects implemented under this scheme not only satisfy the requirements of Hong Kong's Buildings Energy Efficiency Ordinance but also benefit building residents through improved services.

During the year, we approved 23 Smart Power Fund applications amounting to HK\$6.8 million worth of subsidies. Since the inception of the Smart Power Fund in June 2014, more than 70 applications have been approved.

In 2018 we also carried out more than 50 free energy audits for non-residential customers, such as offices, schools and community centres. Eligible applicants can then apply for

interest-subsidised loans from collaborating banks through the Energy Efficiency Loan Scheme to implement the energy saving measures identified through the audits.

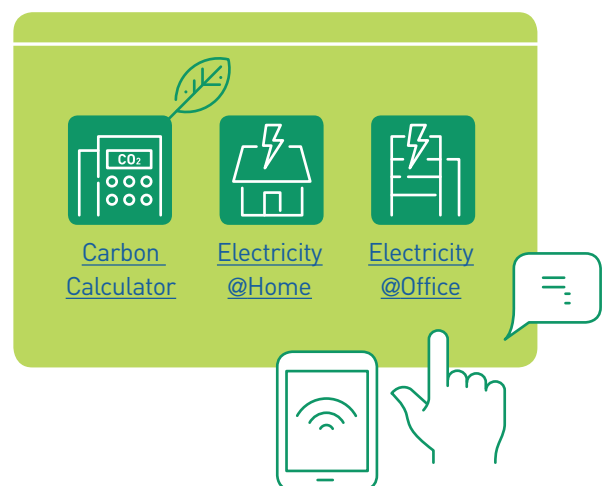
Informed Choices

We want to help our customers make smart energy choices by providing them with useful information in their electricity bills. These include data on monthly per capita electricity consumption for residential customers and carbon emissions per unit of electricity consumed.

A load profile enquiry service is available for SMEs to make better use of energy as part of their overall business strategy. On-line tools on energy management are also available on our corporate website.



Free Energy Audit





New Smart Power Services

In January 2019, we introduced a suite of new and upgraded funding and service schemes – collectively known as Smart Power Services – to foster EE&C and promote RE and low-carbon lifestyle in the community. These initiatives help fulfil our obligations under the new SCA while making a meaningful contribution to Hong Kong's transformation into a Smart City.

The Smart Power Services comprise four funding and three service schemes catering to the needs of different sectors including residential, commercial and industrial customers, as well as education and welfare organisations. Our priority is to help the most vulnerable members of our society, while also supporting building owners who lack financial resources and technical expertise.

We engage with our stakeholders about Smart Power Services through a range of channels including a dedicated webpage on our corporate website, our low-carbon app, info-graphic videos, a phone hotline and email enquiry service as well as posters and leaflets. We also completed in end 2018 a Smart Power Gallery in Sheung Wan with educational exhibits on climate change, RE and Hong Kong's future development to become a Smart City.



Customers may apply for the Smart Power Building Fund for retrofitting energy-efficient building services installations.



A rap performance to launch HK Electric's Smart Power Services



Smart Power Care Fund subsidises the need to replace old home appliances with energy-efficient ones.



Ocean Park is among the first to support the Feed-in Tariff Scheme.

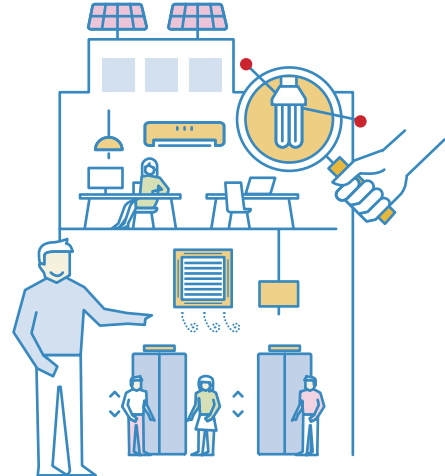


Building Energy Efficiency

Smart Power Building Fund subsidises building owners to enhance energy efficiency of communal building services installations.

Smart Power Energy Audit provides free energy audit services for non-residential customers to identify energy saving opportunities.

Recipients of the above may also apply for **Smart Power Loan Fund** to finance energy saving projects.



Renewable Energy

To support the local development of RE, HK Electric will purchase all the electricity generated from customers' RE power systems at **Feed-in Tariff** rates and provide **RE Certificates** for interested customers to purchase.

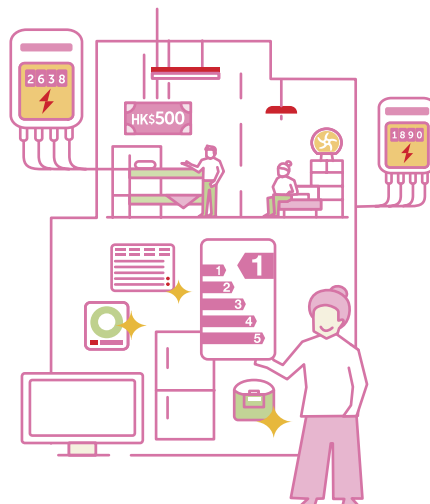
Green Education

Smart Power Education Fund supports Happy Green Campaign which promotes energy efficiency and low-carbon lifestyle among the public, in particular the younger generations through a wide array of activities.



Supporting the Needy

Smart Power Care Fund operates three programmes: Energy-efficient Appliances Subsidy, SDU Rewiring Subsidy and SDU Electricity Charges Relief to provide energy-efficient appliances, improve electrical safety and offer tariff relief for people in need.





CARE FOR OUR COMMUNITY

Care is one of our Core Values. We are proud to put our skills, resources and technical expertise to good use by lending a helping hand to those in need. Our strategy is to work closely with leading NGOs and local organisations on important social issues to deliver even greater impact.

Caring for the Elderly

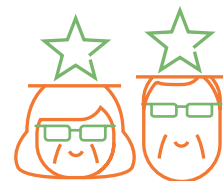
Our "CAREnJOY for the Elderly" programme, founded under a different name in 2008, works closely with all four District Councils on Hong Kong Island, the Rural Committees of Lamma North and Lamma South, as well as nine NGOs to care for the elderly who have limited or no access to community support.

In 2018, HK Electric volunteers and CAREnJOY Ambassadors joined District Council members to participate in home visits, helping deliver heavy and bulky daily necessities and carry out simple electrical safety inspections. We also hosted district-based electrical safety talks to share tips on safe and efficient use of electricity. During the year, we extended care to 2,118 single elders.

A Decade of Care and Joy

Reached out to

7,500+ single elders
on Hong Kong and Lamma
Islands through home visits,
carnivals, electrical safety
talks and gatherings



Recruited and trained
800+ elderly volunteers
to become CAREnJOY Ambassadors



~2,200 single elders gained access
to local support networks by joining
neighbourhood community centres as
encouraged by our Ambassadors



Electrical safety talks and gatherings plus home visits are the key elements of our CAREnJOY initiative.



The elderly drum up the joyous atmosphere celebrating the 10th anniversary of the CAREnJOY programme in 2018.

Golden Third Age

The University of 3rd Age (U3A) was co-founded by HK Electric and the Hong Kong Council of Social Services (HKCSS) in 2006 to promote lifelong learning and volunteerism among retirees in Hong Kong. The core principles of this programme are self-initiation, self-learning, self-teaching and self-administration.

In 2018, the U3A Network, comprising 51 self-learning centres throughout Hong Kong, conducted 978 courses and provided 16,289 learning opportunities. We also introduced a new Smart Power Ambassadors Training Programme, which is designed to inspire and empower U3A students to become advocates for environmental protection and energy efficiency in the community.



U3A leaders participate in a woodcraft workshop.



Our volunteers teach senior citizens to do finger exercise to prevent dementia.

Volunteering Services

The HK Electric Volunteers Team has been serving the Hong Kong community for 14 years since its revamp in 2004. While environmental protection and elderly care remain the key focuses of our services, we have also been diversifying our support into new areas such as visiting inmates of correctional institutions and supporting fund-raising for animal care.

In 2018, 1,255 HK Electric volunteers contributed 5,105 service hours to 99 activities. These included some long-established programmes such as monthly electrical inspections for single elderly in public housing and helping to remove Mikania – a weed known as “the plant killer” – from Hong Kong’s hillsides, as well as 13 newly introduced services such as the fund-raising cycling event initiated by Pok Oi Hospital and a dragon boat race organised by Southern District Council.

To ensure that our volunteers are best equipped with appropriate skills and knowledge to perform their duties, in 2018 they received training from the Society of Rehabilitation and Crime Prevention on how to interact with inmates, and on the causes and symptoms of dementia from the Aberdeen Kai Fong Association.

Number of Volunteers and Service Hours in 2018

Total

1,255 participants **5,105** hours



Elder Services

430 participants **1,476** hours



Green Services

121 participants **416** hours



Team Building & Training

69 participants **158** hours



Other Activities

635 participants **3,055** hours



Providing logistics support for the fund-raising Dogathon 2018 is one of the new services of HK Electric volunteers.



Volunteers collect unsold vegetables at the market for giving to the needy.

A Company that Gives

In 2018, HK Electric supported numerous charitable causes through sponsorships and donations. Our Centenary Trust financed 51 centres under the U3A programme and provided 70 scholarships for secondary school students with financial needs.

During the year, we worked with the Society for Community Organisation to reduce living costs and encourage energy conservation among tenants of the HKCSS Community Housing Movement by subsidising the purchase of 143 electrical appliances. We also donated 629 electrical appliances, including computer, equipment to underprivileged households through other donation programmes.

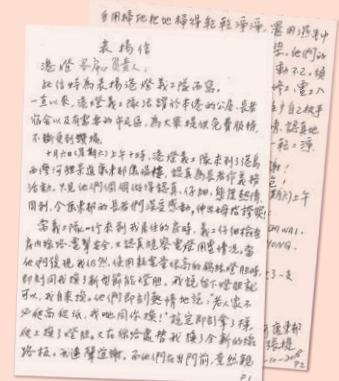


Cheung Tai
Beneficiary of our
electrical inspections
service

“Your care means more to me than I can say...”

Case
Story **5**

“They are like a
warrior team showing
professionalism,
dedication, focus and
most of all great care
for the needs of elderly
people like me.”



For any single elder living alone, it is always a delight to receive visitors, especially when they are volunteers giving a helping hand. Yet for Cheung Tai, the care and support provided by an HK Electric volunteer team far exceeded her expectations, and she in return also took extra mileage to show her appreciation.

Working with the Housing Authority, the HK Electric Volunteers Team conducts monthly electrical inspections to help ensure electrical safety at home for single elders. On a Saturday morning in October 2018, our volunteers visited Ms. Cheung's home at Sai Wan Ho. “After politely introducing themselves, the volunteers carefully inspected every electrical socket, electrical appliance and even my lamps to ensure they are safe for use. They then shared with me some safety tips, and explained how I could save money by switching to more efficient light bulbs. To my surprise, not only did they give me a new light bulb, they also made an effort to climb up a ladder and change it at once! I was so touched by their kindness and their passion to take an extra step.”

The volunteers' friendliness, care and professional attitude made such an unforgettable impression on Ms. Cheung that the next day she wrote a letter to the management of HK Electric:

“What impresses me the most, is the way the team brought their own equipment to tidy up after their work, leaving my place in a neat and tidy condition...”

...I really see how HK Electric Volunteers make a great contribution to our community, especially the elderly... your care means more to me than I can say...

...I would like to invite HK Electric's management team to recognise the wonderful work of these volunteers by calling out their names at your next recognition event for everyone's applause...”



Upon learning about this appreciation letter, the volunteers shared their reactions to Ms. Cheung's kind words:



Choi Kin-chung: "This kind of encouragement definitely prompts us to do more volunteer work in future."

Kwok Kwai-sum: "Ms. Cheung's letter is so touching, I have to show a copy to my Mum!"



Lee Chi-keung: "It is an extra bonus to receive such deep appreciation from the people we serve. It makes me feel so proud to use my professional knowledge to help those in need."

Wong Man-kin:
"To me, the recognition is a source of motivation."



HK Electric Volunteers Team

Since 2004, HK Electric Volunteers Team has partnered with the Housing Authority and Housing Society to offer free electrical inspections and simple rewiring services for elderly residents living in public housing. Under the arrangement, colleagues with the technical know-how are joined by other colleagues, volunteering several hours of their time once a month to extend care and ensure home safety for up to 70 elder households a year.

Other than utilising their professional skills to provide electrical inspections services, our employees contribute to a variety of other voluntary services ranging from elderly care and environmental protection to organisation of major sport and cultural events as well as mentoring of young people in order to care for different sectors of the society.

Working with Partners





Sustainability
at HKEI

Sharing
our Planet

Serving
Hong Kong

Working
with Partners

Respect & Trust and Caring are among our Core Values. We look out for the well-being of our employees and encourage our suppliers to be good corporate citizens.



Management Approach

At HK Electric we work closely with our key partners, employees and suppliers alike, and make best endeavour to serve our community in a sustainable and responsible manner.

We take pride in being an employer that enables our people to fully develop their potential. Our human resources strategy “SHINE”, that stands for Synergy, Holistic development, Ideal workplace, Nurture future leaders and Excellence, is overseen by our Human Resources Steering Committee.

We are committed to achieving an accident-free operation for our employees, contractors, customers and the public. Our Health & Safety Policy is overseen by our Health and Safety Board. Through safety management systems that comply with international standards, we strive for continuous improvement in our safety performance.

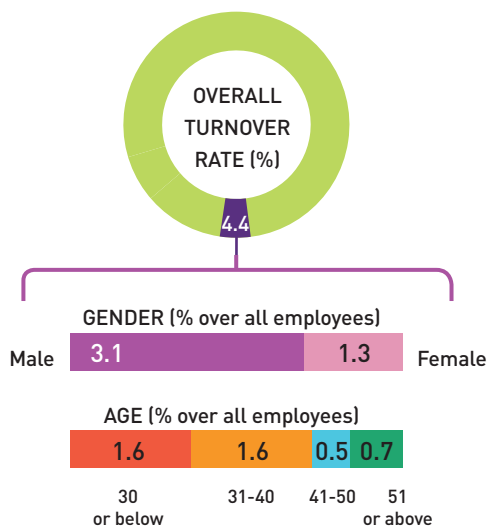
HK Electric suppliers are also expected to share the CSR values of the company. Our Code of Practice for Suppliers outlines high standards for business ethics, human and labour rights, health and safety, and environmental protection.

ENHANCING EMPLOYEE RELATIONS

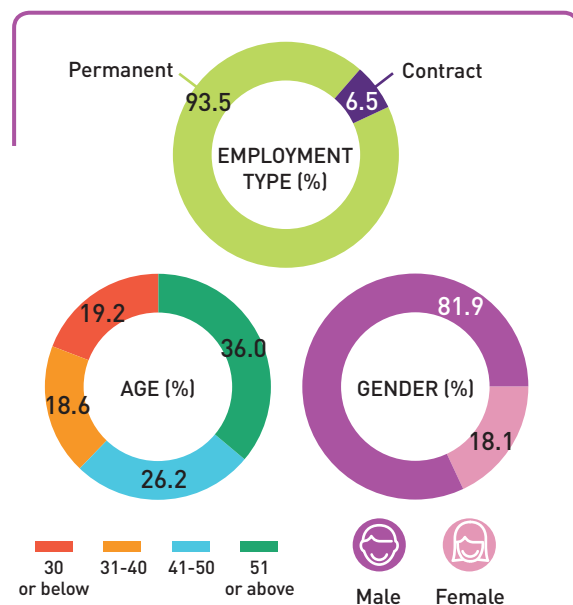
HK Electric is proud to be an employer of choice. We treat our people fairly, respond to their needs, and reward their performance. Consequently, many of our employees enjoy long and fulfilling careers with us, resulting in a consistently low voluntary turnover rate.

During the year HK Electric signed the Good Employer Charter and was ranked sixth among Hong Kong's Top 10 Most Attractive Employers in Randstad's latest employer brand research findings.

2018 Turnover Rate



2018 Employee Profile





Joint Consultation (JC) Committee

In 2018, six JC panels comprising more than 70 directly-elected representatives from various employee groups met 20 times to discuss a wide range of topics related to work operations and employee welfare.

Fair and Equal Treatment

HK Electric is an equal opportunity employer committed to fair and equal treatment in all aspects of human resource management, from recruitment and training to promotion, compensation, benefits and termination. We do not tolerate discrimination, harassment, vilification or victimisation of our employees under any circumstances.

Since 2016, orientation sessions for new hires have incorporated training on equal opportunity issues and the Anti-Discrimination Ordinance. In 2018, more than 20% of all employees attended regular briefing sessions to enhance their awareness and understanding of the Anti-Discrimination Ordinance.

We appraise our employees and reward them for their capabilities and contributions to our business in accordance with our Pay-for-Performance policy. Our remuneration packages are reviewed annually with reference to comparable organisations in related industries to ensure that our employees receive fair and competitive remuneration.

Since the introduction of our E-buddy programme in 2015, we have experienced a significant decline in the turnover rate of new employees. To help our new hires assimilate quickly and easily into our corporate culture, each new recruit is partnered with an experienced colleague known as an E-buddy. The E-buddies have received training on communication skills and promoting positive dynamics at workplace.



Regular communication sessions between senior management and employees

Dialogue and Consultation

We are committed to hearing and respecting the opinions of all our employees. For more than 40 years, our Joint Consultation (JC) Committee has facilitated open communication between employees and management.

The deep commitment of our senior management team to engaging directly with colleagues at all levels is integral to our corporate culture. In 2018, we held two communication sessions hosted by our Managing Director to facilitate a company-wide exchange of views. These included open discussions on the 2019-2023 Development Plan under the new Scheme of Control Agreement as well as upcoming business strategies, notably around innovation.

During the year, we also held thematic talks to share best practices and enhance our employees' understanding of the latest development of the company such as our new Smart Power Services.

We Listen • We Respond

In 2018, in response to a constructive suggestion from a JC Representative, we implemented enhancements to our e-Transport System to encourage carpooling. Now, when booking a company car, colleagues may use the system to indicate their availability to share a ride with other colleagues going to the same destination. This not only adds convenience to colleagues but also benefits the environment.





NURTURING TALENT

To overcome labour-supply challenges that are common for our industry, we invest continuously in the personal and professional development of our people. In our hiring practices we aim not only to attract experienced candidates, but also to inspire young people to embark on new careers in the power sector.

One of our key objectives is to ensure that our employees continue to provide the skills and expertise we need to excel in all core areas of our business. To achieve this, we facilitate long-term career planning for talented employees to nurture their growth within the company.

Trainee Recruitment

We raise awareness among young people about career opportunities with HK Electric by promoting our trainee programmes through career fairs and expos, participating in talks organised by universities and the Vocational Training Council, and arranging visits to our operations and facilities for both secondary school and university students.

University students may also qualify to take up internship and placement opportunities through our Industrial Placement and Vacation Trainee Programmes, in order to gain relevant on-the-job experience.

In 2018, we recruited 10 Graduate Trainees, one Management Trainee, seven Trainee Technicians and six Trainee Technicians (II). We are in the process of revamping our Graduate Trainee Programme to ensure that it addresses the latest requirements of Competence-based Professional Assessment that will be introduced in 2019 by The Hong Kong Institution of Engineers.

Learning and Development

Talent development is a key challenge for our business. In order to bolster the productivity and commitment of our workforce, we offer a range of learning opportunities to help our employees strengthen their competencies and soft power.

To facilitate more targeted development for our future business leaders, selected employees receive tailored project exposure, job rotations, mentorship and classroom training on leadership and management skills. These leadership learning and development programmes have been designed with reference to a 4-level Competency-based Leadership Framework, incorporating e-learning and multi-media approaches for self-initiated and interactive learning.



HK Electric supports the Belt and Road Advanced Professional Development Programme in Power and Energy to nurture the skills and expertise of professionals in the power and energy sector from across the Belt and Road regions.



Team building session



Talent Development



Development Programme

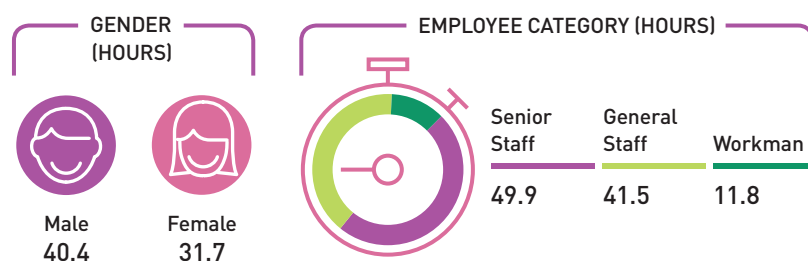
Trainee Programme	To ensure our new intakes build a strong foundation for becoming technical experts and future leaders	Programmes include familiarisation visits, environmental seminars, graduation camps, sharing sessions, mentorship programmes and workshops on topics such as career development, team building and inter-generation communication.
Young Talent Development Programme	To accelerate the advancement of talented young individuals, developing them into successful first-line leaders	Participants undergo competency assessments and formulate a personal development plan before undertaking various learning and development activities. Senior managers are invited to become mentors of individual trainees.
Leadership Development Programme	To inspire and prepare mid-level leaders to succeed critical leadership roles	Participants undergo a two-year intensive development, starting from development centre to map out individuals' development focuses and actions, followed by one-on-one mentorship by senior executives and a variety of learning activities such as book review, self-directed learning on leadership, topical learning workshops, visits to other organisations and learning from their CEOs, as well as action-learning projects.



Knowledge Sharing

HK Electric Institute	To enable the smooth transfer of knowledge and expertise to younger workforce	Courses on power engineering are delivered by the veterans, both current and retired employees.
Seminars and Workshops on Specific Topics	To further a learning culture throughout our organisation	The topics covered in 2018 included artificial intelligence, deep learning, media and community relations, and desktop applications.
Knowledge Inventory	To codify the critical knowledge items and enable systematic planning for knowledge succession	Individual business units update their knowledge inventories annually to define their critical knowledge items, identify respective knowledge owners and knowledge successors, assess their proficiency level, and map out individuals' learning plans and targeted proficiency levels.

Average Training Hours per Employee in 2018



Percentage of Employees Trained in 2018

100%



CARE FOR OUR EMPLOYEES

HK Electric is a signatory to the “Joyful@Healthy Workplace Charter” organised by the Department of Health and the Occupational Safety and Health Council.

We offer a wide range of activities and services to support the holistic well-being of our employees. In 2018, the theme of our Employee Wellness Programme was “Drive your Own Purpose” with the objective of motivating our employees to establish and pursue goals for improving their physical and emotional health and maintaining good work-life balance.

Drive your Own Purpose



Physical and intellectual well-being

- Interest activity groups and classes
- Runners club
- E-sports tournament
- Health talks, fitness courses and recreational facilities
- Distribution of free fruits
- Free flu vaccinations
- Biennial medical check-up for eligible employees
- Self-service health booths located on our office premises to allow employees to take regular self-measurements of body weight and blood pressure



Emotional and social well- being, including good family relationships

- Outings and eco-heritage tours
- Volunteering activities
- Employee Recreational Subsidy
- Lactation rooms for breastfeeding mothers
- Medical check-up plans and flu vaccinations for employees' family members at preferential rates
- 24-hour Employee Counselling Hotline Service manned by professional counsellors
- Good Neighbours' Club – a continuous learning and resource platform for employee volunteers to provide emotional support to their peers. The “Depicting My Heart with My Hand” workshop held in 2018 allowed employee volunteers to explore their own emotions, personality and expectations through drawing.





HEALTH AND SAFETY

We take a proactive approach to mitigating safety risks. These risks arise, primarily, from accidents in our workplaces involving both employees and contractors, incidents of power equipment affecting neighbouring communities, power supply interruptions affecting critical community facilities and special customers, and the unsafe use of electricity on customer premises.

Managing and Promoting Safety

We have safety management systems (SMS) in place covering the operations of Lamma Power Station, the operations of our electricity network and the development of power infrastructure. All these SMS conform to international standard OHSAS 18001.

In April 2018, we received certification for the SMS covering our electricity network in accordance with ISO 45001:2018, which is a new, more stringent standard released by

the International Standards Organisation in March 2018. HK Electric is the first local utility to acquire ISO 45001:2018. We plan to obtain certification for other SMS under this standard in the near future.

We are also committed to promoting health and safety awareness throughout our organisation by fostering a safety culture and offering a wide range of incentives that motivate our workforce to strive towards incident-free operations.

2018 Safety Performance

Lost Time
Injury Severity
Rate*

18.20

Number of Lost
Time Injuries

5

Lost Time Injury
Frequency Rate*

0.25

* Per 200,000
employee-hours

2015

2016

2017

2018

5

4

8.77

4

1.75

0.20

3

0.16

1

0.05

0.05

Training on the use
of fire extinguishers



On 11 November 2018, HK Electric's employees achieved

**465 days with
Zero Lost Time Injuries**

In 2018, HK Electric recorded a remarkable improvement in safety performance that is attributable to the outstanding commitment of its employees. The number, frequency rate and severity rate of Lost Time Injuries were the lowest over the last decade.

Other Health & Safety Performance Indicators

283

Work Safe
Behaviour
observations

2,460

safety
inspections

9.9 (average)

safety training hours
per employee



Key Elements of HK Electric's Management Approach to Health and Safety



Rules, Procedures and Practices

- Comprehensive safety rules, procedures and instructions to ensure operations conducted in a safe and responsible manner
- Company-wide system for appointing and registering competent and authorised persons to ensure that only personnel with the necessary skills and experience can perform work on or near our facilities
- Regular risk assessments and preventive or mitigation measures to eliminate or minimise risks
- Ad-hoc and regular safety audits and inspections to identify improvement opportunities
- Systematic reporting and follow-up on every workplace incident to prevent recurrence
- Work Safe Behaviour programme to eliminate risky behaviour in a operational range of areas
- 5S Good Housekeeping programme to enhance workplace efficiency, occupational health and safety, space utilisation and cleanliness
- Workplace hygiene inspections and participation in indoor air quality certification scheme to ensure a healthy working environment
- Oil-free distribution substations and zone substations to reduce potential fire hazards



Training and Awareness

- Comprehensive safety training for frontline staff
- Various promotional campaigns for employees and contractors (Events held in 2018: Health & Safety Forum; Environmental, Health & Safety Quiz; Safety & Innovation Exhibition; Health & Safety & Innovation Week; Safety, Health & Environment Day; and health & safety talks)
- Corporate-wide Safety Climate Index (SCI) survey once every three years (Higher overall SCI score in 2018 compared with 2015 signified improvement in health & safety awareness; follow-up actions are being implemented to further enhance safety culture)
- Relevant safety information on our website for third-party contractors who need to carry out works near our power supply lines
- Promoting safe use of electricity to our customers through group tours of our Power Quality Centre and electrical safety talks at community centres, elderly centres and housing estates



Encouragement

- Various incentive schemes to reward employees for zero-accidents
- Incentive scheme for reporting of near-miss incidents with mobile app as one of the reporting channels
- Member of the "Charter on Preferential Appointment of OSH Star Enterprise" – the company has pledged to give preference to contractors with effective safety management systems in place for Repair, Maintenance, Alternation and Addition works



HK Electric receives two Gold Awards, one Silver Award, one Bronze Award and one Safety Performance Award at the 17th Hong Kong Occupational Safety & Health Awards event.



Chemical spillage drill
at Lamma Power Station

Contingency Preparedness

Interruptions to the electricity supply pose threats to community facilities such as road traffic control systems, hospitals and lifts of buildings. We make every effort to deliver a reliable source of power and provide 24-hour emergency support to our customers. (See Serving Hong Kong chapter of this report on supply reliability and customer service for more details.)

We take extra care of the special power supply needs of customers operating life-support equipment. We encourage these customers to register with us so that we can provide them with advance notification of planned interruptions of power supply. We also have contingency plans for power supply in place for hospitals.

To ensure that we are well-prepared for emergency situations, we identify potential health and safety risks for our employees, contractors, customers and the public arising from various scenarios including fire, oil and chemical spills, typhoons and flooding. We strive to mitigate these risks by developing and implementing appropriate procedures. We also conduct regular drills to enhance our response capabilities to these situations and others including emergency evacuations, confined-space rescues, managing heat stroke, and delivering first-aid assistance.

Award-winning CSR Performance of our Contractors

We are pleased to acknowledge the award-winning performance of our contractors in 2018 including:



The Hong Kong Construction Association Construction Safety Award 2017

One contractor received the "HKCA Proactive Safety Contractor Award". This contractor's employees received the "HKCA Safe Person-in-Charge Award" and "HKCA Safe Supervisor Award".

The 24th Considerate Contractors Site Award Scheme

One contractor received the "Non-Public Works – New Works – Group A – Silver Award" and "Outstanding Environmental Management and Performance Award – Merit".



MANAGING OUR SUPPLY CHAIN

We depend on a variety of suppliers, contractors and consultants to help us construct, operate and maintain our power facilities and support our daily operations.

All of our suppliers must abide by our Code of Practice for Suppliers, which outlines high standards for business ethics, human and labour rights, health and safety, and environmental protection. We encourage our suppliers to report publicly on their Corporate Social Responsibility performance, and, as far as practicable, to influence business partners in their own supply chains to follow our Code.

Responsible Procurement

Every tender or quotation that we receive is processed according to established commercial procedures. In addition to assessing and screening our major suppliers before accepting them onto our Recognised Tenderers Register (RTR), we periodically review the RTR and request major suppliers to submit an update on their CSR performance. In 2018, we evaluated the CSR performance of 148 suppliers under the RTR system.

The engagement of fuel and limestone suppliers is on a case-by-case basis with due regard to their CSR performance. These suppliers accounted for about 1.2% of all our suppliers in 2018.

When making procurement decisions, we consider impact on the environment together with quality, price and punctuality, in accordance with our Green Purchasing

Policy and Green Purchasing Guidelines. We have also joined the Sustainable Procurement Charter initiated by the Green Council in Hong Kong.

Influencing Our Suppliers

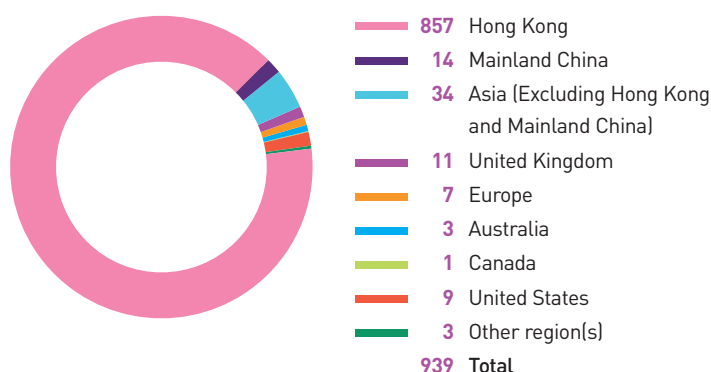
Our suppliers are valued business partners and we engage with them regularly to pursue shared goals for sustainable development. HK Electric was named "HSBC Living Business Sustainable Supply Chain Leader" under the HSBC Living Business Awards 2018.

During the year, we visited a coal supplier in Indonesia to conduct audits on their environmental, social and health and safety performance. We also implemented an e-tendering system to help suppliers and ourselves save paper.

HSBC Living Business Awards 2018

One contractor received the "HSBC Living Business ESG Award – Merit", while another contractor received the "HSBC Living Business SDG Award – Merit".

Number of Suppliers by Geographical Region in 2018





Safety is my business

Case
Story 6

“Thanks to the concerted efforts of our management, colleagues and contractors, the company has maintained a low accident rate for the Lamma Power Station Extension project compared with the construction industry's average. Despite the challenges of the project, we will continue to strive for zero accidents and hope everyone working here will recognise that ‘safety is my business’.”

Kathy Cheng
Assistant Manager
(Safety)

Angus Lo
Manager (Safety)



We depend on the contributions of hundreds of workers – employees and contractors alike – to deliver our Lamma Power Station Extension (LMX) project that helps take Hong Kong into a low-carbon future. Kathy Cheng, Assistant Manager (Safety) works closely with her supervisor, Manager (Safety), Angus Lo, to oversee the safety performance of the project. This 22-hectare strip of reclaimed land adjacent to our original power station is the location of our gas-fired combined cycle generating unit, L9, and another three new gas-fired units, L10 – L12, to be commissioned between 2020 and 2023.

“In addition to carrying out safety inspections and providing safety training, my most important role is to cultivate a strong safety culture that is essential for protecting the life and well-being of our people,” Angus says.

In accordance with HK Electric’s SHE (Safety, Health and Environment) Circle established for the LMX project, relevant safety personnel, engineers and management team members from the company and our contractors participate in regular site inspections, meetings, reviews and promotional events to reinforce the health and safety

standard. Under our incentive SHE Bonus Scheme, we provide monetary incentives for contractors to improve SHE performance and promote awareness of SHE topics among their frontline workers.

As Kathy explains, all contractors of the LMX project are required to assign one additional registered safety officer above the legislative requirement. The leaders of their frontline workers’ groups serve as safety wardens, and in 2018, we provided site safety supervision training to all of the 119 safety wardens.

Although it takes time to bring about cultural change, we are glad to see that we are having some positive influence on our contractors. For example, they have started a Safety Climate Index Survey to gauge their safety culture and identify improvement opportunities in a similar way to HK Electric. Some of our contractors have also become keener on spreading safety messages as evidenced by the industry awards they have received in recognition of their efforts in safety promotion.

**In 2018, we recorded
an accident rate of**

**0.38 / 1,000 workers
on the LMX project**

**This compares with an accident rate of
32.9 / 1,000 workers for the Hong Kong
construction industry in 2017, which is
the latest yearly statistical figure
available from the Labour Department.**



Safety Innovation



In line with the Core Values of our organisation, we are embracing innovation using new technologies such as drones and QR codes for safety inspections, and building information modelling (BIM) to achieve safety-by-design. In August 2018, we also organised our first Safety and Innovation Exhibition to share innovative safety practices with our contractors and other industry peers.



Key Statistics and Targets

Status of Targets Set at 2018

Environment	Status
Collect and reuse at least 100,000 m ³ of plant effluent and rain water at Lamma Power Station in 2018.	Achieved
Plant diverse species of native trees or shrubs at Lamma Power Station in 2018 to support biodiversity.	Achieved
Reduce food waste at the canteen of Lamma Power Station by 2% in 2018 as compared to 2017.	Achieved
Reduce vehicle fleet's fuel usage in 2018 as compared to 2017.	Achieved
Increase EV mileage in 2018 as compared to 2017.	Achieved
Conduct at least 50 energy audits for non-residential customers in 2018 to help them identify energy saving opportunities.	Achieved
Obtain at least one Wastewi\$e Certificate and one Energywi\$e Certificate under the Hong Kong Green Organisation Certification Scheme in 2018.	Achieved
Commission two new gas-fired generating units, L10 and L11, at Lamma Power Station by 2020 and 2022 respectively.	In progress
Reduce CO ₂ e per electricity unit sold to not higher than 0.67 kg/kWh in 2022 from 0.93 kg/kWh in 2005 (just before natural gas was introduced at Lamma Power Station).	In progress
Reduce total electricity consumption of seven main buildings at Lamma Power Station by 10% in 2025 as compared to the baseline figure in 2013.	In progress

Health & Safety	Status
Achieve a reduction in the Lost Time Injury Frequency Rate (LTIFR) in 2018 as compared to the average over the previous three years.	Achieved
Achieve a reduction in the Lost Time Injury Severity Rate (LTISR) in 2018 as compared to the average over the previous three years.	Achieved
Obtain at least three Excellent Class Indoor Air Quality (IAQ) Certificates under the Government's IAQ Certification Scheme in 2018.	Achieved
Organise a series of health talks and interest classes for employees in 2018.	Achieved

Partners & Community	Status
Fulfil all our customer service pledges, embracing supply reliability, speediness of provision of supply and other customer services, including emergency services, in 2018.	Achieved
Launch a promotion programme on electronic billing and autopay in 2018 to encourage more customers to switch to electronic services.	Achieved
Further expand the Plant Ownership Programme at Lamma Power Station by adding three new projects in 2018 to enhance plant reliability and availability, and to facilitate development of young engineers.	Achieved
Organise more than 210 corporate visits for various stakeholders in 2018.	Achieved
Extend care to more than 2,100 elders under our "CAREnJOY for the Elderly" programme in 2018.	Achieved
Enhance the necessary electricity infrastructure for MTR lines in 2018 to support economic and social development of local communities.	Achieved
Develop a fraud risk assessment framework and facilitate divisions/departments to perform fraud risk assessments in 2018/2019 to identify assets or areas that are prone to fraud risks and enhance employee awareness of fraud risks.	In progress
Soft launch the Smart Power Gallery in 2019 to educate the general public on the smart use of electricity.	Achieved



Summary of Statistics

Environment

2018 2017 2016

Fuel Consumed (TJ) ^[1]

Gas	30,011	30,914	31,983
Coal & oil ^[2]	80,405	79,258	80,012

Licence Compliance

Percentage of Compliance (%)	100	100	100
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Air Emissions

SO ₂ (kT) ^[1]	2.87	2.21	2.75
NO _x (kT) ^[1]	7.79	8.14	8.68
RSP (kT) ^[1]	0.20	0.20	0.21
CO ₂ (million T) ^[1]	8.37	8.36	8.50
CO ₂ e (million T) ^[3]	8.41	8.41	8.54
CO ₂ e per electricity unit sold (kg/kWh) ^[3]	0.80	0.79	0.79

Material Non-Hazardous Wastes (kT) ^[1, 4]

Ash produced	235	229	237
Ash collected for industrial uses	237	235	238
Gypsum produced/collected for industrial uses	69	61	66

Material Hazardous Wastes ^[5]

Waste oil collected for recycle (litre)	3,000	18,400	42,600
Waste oil collected for disposal (litre)	88,687	79,160	38,000
Other material hazardous wastes measured by volume in trip tickets for recycle (litre)	0	0	–
Other material hazardous wastes measured by volume in trip tickets for disposal (litre)	3,400	11,240	–
Other material hazardous wastes measured by weight in trip tickets for recycle (kg)	850	22,212	–
Other material hazardous wastes measured by weight in trip tickets for disposal (kg)	17,459	25,853	–

Water Consumption/Discharge ^[1]

Marine water withdrawal & discharge (million m ³)	2,031	1,926	2,160
Town water consumption (thousand m ³) ^[6]	2,187	2,375	2,397
Wastewater discharge (thousand m ³)	148	160	138

Noise Abatement Notice

Number of notices received	0	0	0
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Certificate Accreditation

Number of ISO 14001 certificates	3	3	3
Number of ISO 50001 certificates	1	1	1

Notes:

[1] For power generation only.

[2] Fuel oil is mainly used for starting and flame stabilisation of coal-fired units and hence, specific breakdown for fuel oil is not given.

[3] The methodology used for calculation is drawn from Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, taking into account greenhouse gas emissions generated from the processes of power generation, transmission and distribution.

Operations

2018 2017 2016

Customer Service

Number of customers (thousands)	579	577	575
Average rating of customer satisfaction level (maximum mark for each index is 5.0)	4.6	4.6	4.5
Number of pledged service standards	18	18	18
Percentage achieved (%)	100	100	100

Installed Capacity (MW) ^[1]

Gas	680	680	680
Coal & oil ^[2]	2,555	2,805	3,055
Renewable energy	1.8	1.8	1.8

Performance

Electricity sold (millions of kWh)	10,537	10,615	10,792
Plant availability (%)	90.7	87.1	85.6
Thermal efficiency (%)	35.6	35.9	35.9
Transmission and distribution losses (%)	3.4	3.3	3.3

Electricity Supply Reliability

Supply reliability rating (%)	>99.999	>99.999	>99.999
Unplanned customer minutes lost (minutes)	0.6	0.5	0.7

Certificate Accreditation

Number of ISO 9001 certificates	8	9	9
Number of ISO 55001 certificates	2	2	2

Health & Safety

2018 2017 2016

Number of fatalities	0	0	0
Number of lost time injuries	1	3	4
Lost Time Injury Frequency Rate (LTIFR) (per 200,000 employee-hours)	0.05	0.16	0.20
Number of days lost/charged (no. of employee-days)	1	168	35
Lost Time Injury Severity Rate (LTISR) (per 200,000 employee-hours)	0.05	8.77	1.75
Longest period without a lost time injury (no. of days)	315	150	117
Number of reported traffic accidents (no. of cases)	7	9	11
Traffic Accident Frequency Rate (TAFR) (no. of cases per million km travelled)	3.8	4.8	5.7
Number of ISO 45001/OHSAS 18001 certificates	3	3	3

[4] HK Electric's material non-hazardous wastes are ash and gypsum.

[5] HK Electric's material hazardous wastes are those wastes required to be managed under the mandatory trip ticket systems. These wastes were collected and treated by licensed waste collectors and facilities.

[6] Town water is provided by the Water Supplies Department of the HKSAR Government.

[7] For economic/financial data, please refer to our [Annual Report](#).



Looking Ahead

We understand that, as a power utility in Hong Kong, we play a crucial role in supporting the city's economic and social developments. As a responsible business, we have a duty of care towards the environment, the community, our employees and other stakeholders. To realise these commitments, we regularly review our performance and set specific goals for the future. Outlined below are the targets we set in the areas of Environment, Health and Safety, and Partners and Community for 2019 and beyond.

Environment

- Collect and reuse at least 100,000 m³ of plant effluent and rain water at Lamma Power Station in 2019.
- Plant diverse species of native trees or shrubs at Lamma Power Station in 2019 to support biodiversity.
- Reduce food waste at the canteen of Lamma Power Station by 1% in 2019 as compared to 2018.
- Reduce vehicle fleet's fuel usage in 2019 as compared to 2018
- Increase EV mileage in 2019 as compared to 2018.
- Obtain at least one Wastewi\$e Certificate and one Energywi\$e Certificate under the Hong Kong Green Organisation Certification Scheme in 2019.
- Commission three new gas-fired generating units, L10, L11 and L12, at Lamma Power Station by 2020, 2022 and 2023 respectively.
- Reduce CO₂e per electricity unit sold to not higher than 0.6 kg/kWh in 2023 from 0.93 kg/kWh in 2005 (just before natural gas was introduced at Lamma Power Station).
- Reduce total electricity consumption of seven main buildings at Lamma Power Station by 10% in 2025 as compared to the baseline figure in 2013.

Health & Safety

- Achieve a reduction in the Lost Time Injury Frequency Rate (LTIFR) in 2019 as compared to the average over the previous three years.
- Achieve a reduction in the Lost Time Injury Severity Rate (LTISR) in 2019 as compared to the average over the previous three years.
- Obtain at least three Excellent Class Indoor Air Quality (IAQ) Certificates under the Government's IAQ Certification Scheme in 2019.
- Organise a series of health talks, physical exercises and interest classes to enable our employees to maintain a healthy and balanced lifestyle in 2019.

Partners & Community

- Fulfil all our customer service pledges, embracing supply reliability, speediness of provision of supply and other customer services, including emergency services, in 2019.
- Complete 200 audits for Smart Power Energy Audit in 2019, particularly for NGOs, schools, SMEs.
- Approve 100 buildings for Smart Power Building Fund in 2019, including those from residential buildings, NGO premises and schools.
- Launch a promotion programme on electronic billing/ autopay in 2019 to encourage more customers to go green.
- Further expand the Plant Ownership Programme at Lamma Power Station by adding at least one new project in 2019 to enhance plant reliability and availability, and to facilitate development of young engineers.
- Organise more than 300 corporate visits for various stakeholders in 2019.
- Reach out to 100,000 participants under the Happy Green Campaign in 2019.
- Enhance the necessary electricity infrastructure for the MTR Shatin to Central Link (North South line (Hong Kong Section)) by 2020 to support economic and social development of local communities.

- Develop a fraud risk assessment framework and facilitate divisions/departments to perform fraud risk assessments in 2019 to identify assets or areas that are prone to fraud risks and enhance employee awareness of fraud risks.



VERIFICATION STATEMENT

Scope of Verification

Hong Kong Quality Assurance Agency ("HKQAA") has been engaged by HK Electric Investments and HK Electric Investments Limited (collectively known as "HKEI") to undertake an independent verification for its Sustainability Report 2018 (refer to as "the Report"). The scope of HKQAA's verification covers the data and information associating to HKEI's sustainability performance for the period from 1st January 2018 to 31st December 2018. This is the 6th annual Sustainability Report of HKEI to communicate its commitments, efforts and progress of performance towards sustainability.

Level of Assurance and Methodology

The process applied in this verification was based on international standards. Our evidence gathering process was designed to obtain a reasonable level of assurance as set out in the standards for the purpose of devising the verification conclusion, and the extent of the verification process undertaken was based on the latest version of the Global Reporting Initiative Sustainability Reporting Standards ("GRI Standards") and the Electric Utilities Sector Disclosures, as well as HKEX's Environmental, Social and Governance ("ESG") Reporting Guide.

In order to understand the process that HKEI adopted to ascertain the key sustainability issues and impacts, the report compilation process including stakeholder engagement and materiality assessment processes was discussed. System and process for collecting, collating and reporting sustainability performance data were also verified. Our verification procedure performed covered reviewing of relevant documentation, interviewing responsible personnel with accountability for preparing the reporting contents and verifying the selected representative sample of data and information. Raw data and supporting evidence of the selected samples were also thoroughly examined during the verification process.

Independence

HKEI is responsible for the collection and preparation of the information presented. HKQAA does not involve in calculating, compiling, or development of the Report. Our verification activities are independent from HKEI.

Conclusion

On the basis of our verification results and in accordance with the verification procedures, it is the opinion of the HKQAA's verification team that:

- The Report illustrates HKEI's sustainability performance on the significant aspects in a balance, comparable, clear and timely manner;
- The data and information stated in the Report are reliable and complete;
- The Report has been prepared in accordance with the "Core Option" of the latest version of the GRI Standards and the Electric Utilities Sector Disclosures as well as the HKEX's ESG Reporting Guide, and also addressed a significant number of material disclosures required under the "Comprehensive Option" of the GRI Standards.

HKEI has been engaging with its stakeholders continuously and being very responsive to their feedbacks as well as improving its disclosure regarding the material issues that are of importance to HKEI and the high level of interest of its stakeholders. The Report reflects appropriately HKEI's sustainability context and materiality.

Signed on behalf of Hong Kong Quality Assurance Agency



Jorine Tam
Assistant Director, Strategic Business
March 2019



HK Electric Investments (港燈電力投資)

(as constituted pursuant to a deed of trust on 1 January 2014 under the laws of Hong Kong,
the trustee of which is HK Electric Investments Manager Limited (港燈電力投資管理人有限公司))

and

HK Electric Investments Limited (港燈電力投資有限公司)

(a company incorporated in the Cayman Islands with limited liability)

(Stock Code: 2638)



**Share Your Views
with Us!**

We value your views on this report and our sustainability performance, as your feedback will help us realise our vision for a sustainable future. Please share your comments by completing the [on-line feedback form](#) on our website or by contacting us at:

Environmental Affairs Department
Corporate Development Division
The Hongkong Electric Co., Ltd.

44 Kennedy Road, Hong Kong

Fax: (852) 2810 0506

Email: sr@hkei.hk

www.hkei.hk