

Sustainability  
Report 2021

# Better Together



港燈電力投資  
HK Electric Investments



Working  
Together for a  
**Sustainable  
Future**

2021 remained a challenging year for Hong Kong as the COVID-19 pandemic continued to impact our society and economy. HKEI believes that while we cannot “be together” due to social distancing, we must “hold together” to overcome and bring about a better and greener future.





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# Report Overview

## Scope and Boundary

This is the Sustainability Report 2021 of HK Electric Investments and HK Electric Investments Limited (collectively known as HKEI), covering the period from 1 January to 31 December 2021 unless otherwise specified. Our main operating company, The Hongkong Electric Company, Limited (HK Electric), is a major power utility in Hong Kong. The report covers our electricity business in Hong Kong and presents our approach to sustainability, key performance during the year, as well as plans and targets for the future. It is designed to be read in conjunction with information from our other key reporting channels. Details about our policies and routine initiatives are available on our corporate website [www.hkei.hk](http://www.hkei.hk). More information about our governance practices, financial performance and awards and recognition can be found in our [Annual Report](#).

## Basis of Reporting

This report has been prepared in accordance with the core option of 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. It also addresses a significant number of disclosures required under the comprehensive option of GRI's Sustainability Reporting Standards. A [GRI Content Index](#) and a [HKEX ESG Content Index](#) are available on our corporate website. These indexes cross reference relevant disclosures and provide specific information on individual disclosures.

We have applied the reporting principles of GRI's Sustainability Reporting Standards and HKEX's ESG Reporting Guide to define our report contents and ensure our

reporting quality, including but not limited to "materiality", "quantitative", "balance" and "consistency". We have determined which topics to include in this report through a materiality assessment as elaborated in the chapter on [Our Business and Approach to Sustainability](#). Data collection and analysis for this report is based on relevant guidelines and standards, such as ISO 14064 for greenhouse gas (GHG) emissions and local government guidelines for energy and carbon audits for buildings. We have set targets to help evaluate our impact and performance over time and we report on our progress towards these targets. Significant performance data for the latest three years is listed in the [Summary of Statistics](#) with explanatory notes for easy comparison. To provide an unbiased picture of our performance, we disclose both achievements and areas for improvement such as any missed targets and complaints received. We adopt consistent methodologies to allow for meaningful comparison of data over time and any material changes in methodologies are indicated. For example, we have started to disclose more on indirect GHG emissions (i.e. Scope 3 emissions) from the reporting year of 2021.

The suppliers mentioned in this report refer to those having a direct commercial relationship with us, including contractors. Our workforce primarily comprises full-time employees with an insignificant portion of part-time and temporary employees. Employees 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. All financial data has been presented in Hong Kong dollars unless otherwise specified. Due to rounding, some figures may not add up to the total. The online version of this report contains links to videos, some of which are only available in Chinese.

## Verification and Endorsement

In line with our commitment to being transparent about our sustainability impacts and performance and to managing those impacts responsibly, we have commissioned an independent third party to verify the contents of this report and assure its credibility. Details of the verification can be found in the [Verification Statement](#).

This report has been endorsed by our Sustainability Committee and approved by our Board of Directors (the Board). Please refer to the chapter on [Our Business and Approach to Sustainability](#) for information about how the Board oversees the Group's sustainability strategy, management, performance and reporting.





# 2021 Performance Highlights



## Customer & Community Care



> **99.9999%**  
supply reliability record

< **0.5** minute  
unplanned customer minutes lost

Launched **HK Electric App** to enhance customer service

**4.7**  
average customer satisfaction rating (on a 5-point scale)

Achieved the interim target of deploying

> **120,000**  
smart meters

Introduced **Smart Power for Construction Site** service

Approved subsidies for **108** buildings under Smart Power Building Fund

**210**  
free Smart Power Energy Audits

Supported **~400** cases of EV charging solution implementation, covering **~50,000** car-parking spaces

> **40,000**  
households subsidised under Smart Power Care Fund

**~9,000**  
elders and ambassadors received weekly care messages under CAREnJOY





### Environment & Awareness

Synchronisation of new gas-fired unit L11 in November

~50% electricity output from natural gas

26% reduction in carbon emissions compared with that in 2005

~0.71kg of CO<sub>2</sub>e per unit of electricity sold

SO<sub>2</sub>, NO<sub>x</sub> & RSP emissions below stipulated emissions caps

~5.8 GWh of green electricity from renewable energy installations of HK Electric and its Feed-in-Tariff customers

~300 public events to promote Smart Power Services

~80,000 participants in Happy Green Campaign

Concluded the 18-month internal education campaign on sustainability



### Safety & Employee Care



2 Lost Time Injuries

> 4,400 safety risk assessments

0.11 Lost Time Injury Frequency Rate

31 training hours per employee

10.06 Lost Time Injury Severity Rate

6% employee voluntary turnover rate

Invited by the Occupational Safety & Health Council to join its first batch of "OSH Strategic Partners"

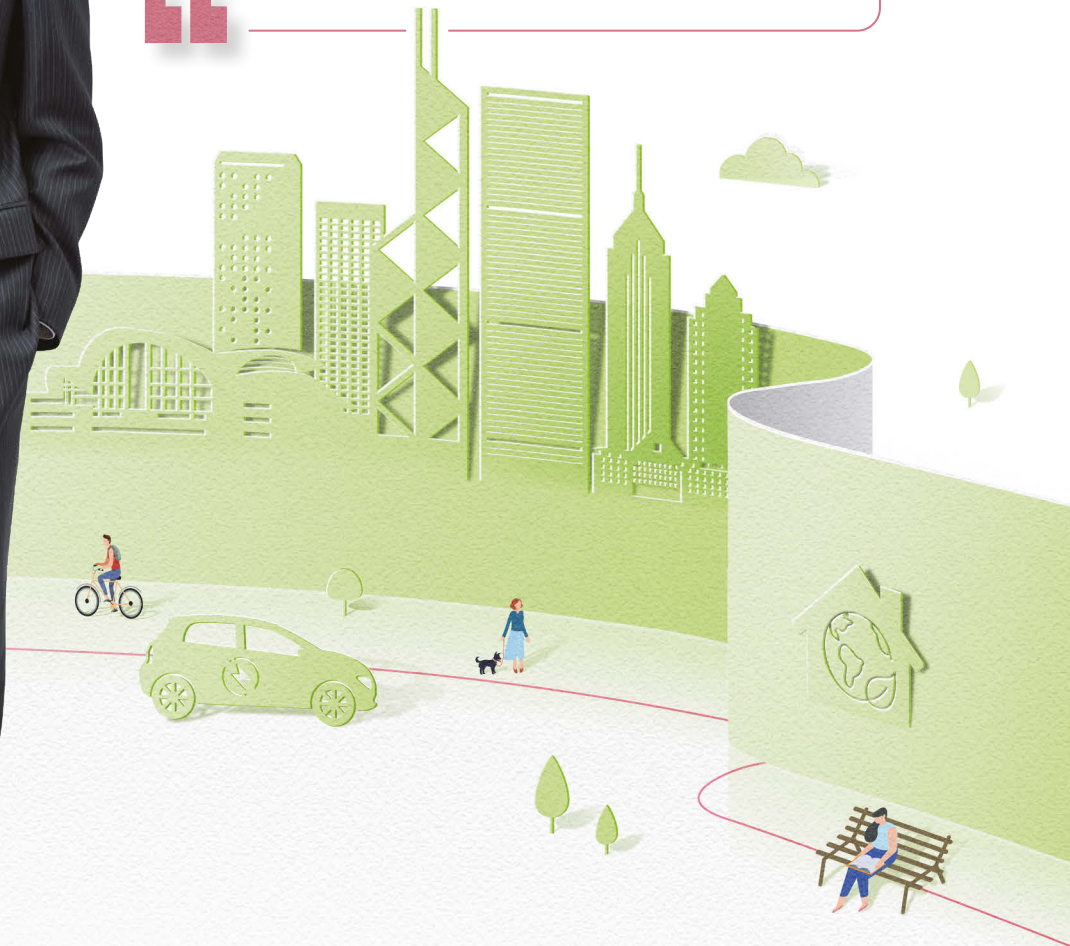




## A Word from our CEO



*The work ahead will be arduous, but combating climate change by achieving carbon neutrality is integral to Hong Kong's sustainable development. We are mapping out our plan and maintaining a close dialogue with the Government and other stakeholders to determine the most efficient and effective ways to implement it.*







At HKEI, we are striding on together towards a better future. Our main operating company, HK Electric, has contributed immeasurably to the economic and social development of Hong Kong for over 130 years. In the face of challenges arising from COVID-19 and the imminent threat of climate change, we are as committed as ever to serving our city with excellence, care, integrity, respect and trust.

The global pandemic continues to cause severe disruption to daily life and the economy here in Hong Kong as elsewhere. During these difficult times, we are focused on doing our best for the community. In 2021, HK Electric demonstrated extraordinary resilience by achieving a supply reliability rating in excess of 99.9999% for the second year in a row. This is another record for our business and an outstanding performance in the international arena of our industry.

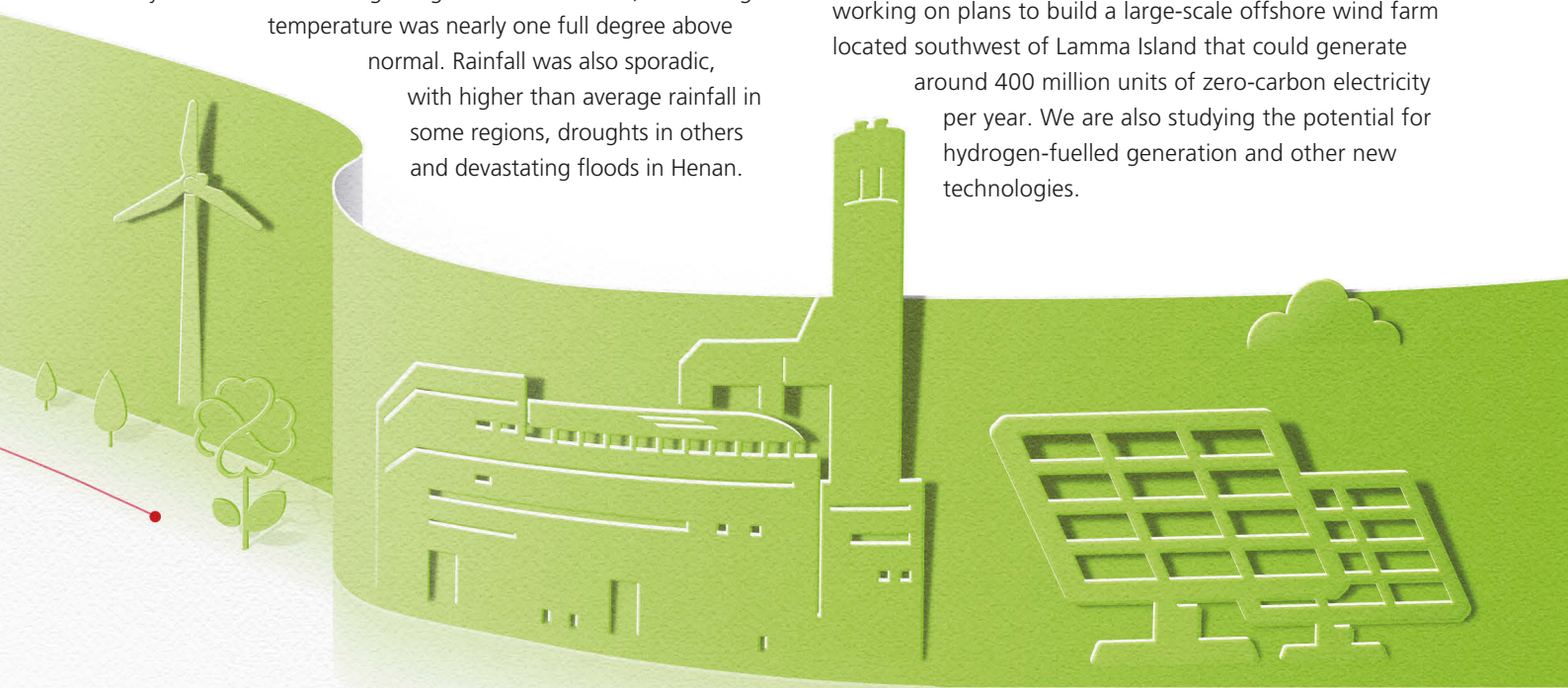
Over the past year, the world has continued to experience the harmful effects of climate change. 2021 was the warmest year on record in Hong Kong. Across the nation, the average temperature was nearly one full degree above normal. Rainfall was also sporadic, with higher than average rainfall in some regions, droughts in others and devastating floods in Henan.

To help accelerate action towards the goals of the Paris Agreement, the HKSAR Government published Hong Kong's Climate Action Plan 2050. This brings together our city's overall strategies, targets and actions to achieve carbon neutrality.

## Working Together for a Sustainable Future

HKEI welcomes the Government's decision to pursue net-zero carbon emissions from electricity generation before 2050, including its medium-term target to transition away from coal-fired power by 2035. In November, we took another major step towards decarbonising our own operations following the synchronisation of L11 — the second new gas-fired unit to be completed under our 2019-2023 Development Plan. Meanwhile, the offshore liquefied natural gas terminal that we are developing with CLP Power is scheduled for completion in 2022 and another gas-fired unit — L12 — is due to be commissioned in 2023. This means we are on track to further increase the total power output from natural gas in 2023, targeting to reduce the carbon intensity of Lamma Power Station to not higher than 0.6 kg CO<sub>2</sub>e per kWh of electricity sold.

Moving forward, we will strive to achieve the Government's sustainability agenda and will coordinate closely with policy makers, technology providers, investors, customers and the public at large. For our part, HK Electric is already working on plans to build a large-scale offshore wind farm located southwest of Lamma Island that could generate around 400 million units of zero-carbon electricity per year. We are also studying the potential for hydrogen-fuelled generation and other new technologies.





## Keeping Each Other Safe and Well

At HK Electric, people's safety and wellbeing always comes first. We adopt a holistic management approach founded on proactive stakeholder engagement. In recognition of our commitment to best practices and achievements, we have been invited by the Occupational Safety and Health (OSH) Council alongside nine other outstanding OSH enterprises to form its first group of "OSH Strategic Partners".

We conduct regular company-wide Safety Climate Index surveys to evaluate our safety culture. The results in 2021 indicate overall improvement in employee perceptions of OSH despite challenges posed by the COVID-19 pandemic. Since February 2020, our response to the public health situation has remained at Emergency-level. In 2021, we introduced a range of measures to encourage our employees to receive COVID-19 vaccinations, including group bookings at community vaccination centres, an outreach programme at Lamma Power Station, vaccination leave and gift coupons. All of our employees have been vaccinated against COVID-19 except those who are medically exempt or those with special reasons, such as pregnancy.

## Investing and Innovating for Better Outcomes

We ensure the robustness of our power system through strategic investments that maintain, upgrade and improve our equipment, technologies and processes. We are also committed to helping transform Hong Kong into a world-class Smart City by rolling out Advanced Metering Infrastructure. During the year, we achieved our interim target of deploying more than 120,000 smart meters on our customers' premises and introduced new digital services, including the HK Electric App, to help our customers optimise their energy use and to enhance customer experience.

Innovation is essential for sustainable development of our business in a rapidly changing world. In 2021, we launched the HK Electric Innovation Award to recognise colleagues who help us achieve our business objectives more quickly and cost-effectively, giving rise to better quality outcomes. We know that our culture of innovation depends upon the knowledge, experience, hard work and professionalism of our team. As part of our strategy to attract and retain the highest quality talent, we are inspiring young people to pursue careers in Science, Technology, Engineering and Maths (STEM).

## Making Greener and Better Choices Together

HK Electric has received several accolades for the success of our Smart Power Services in promoting local renewable energy and energy efficiency and conservation initiatives, including the Gold Award and Outstanding Impact Award at the SDG Achievement Awards Hong Kong 2021 organised by the Green Council. Each year, we allocate \$5 million to educate the public about green technologies and sustainable lifestyle choices through our Smart Power Education Fund. In 2021, the Happy Green Campaign adopted a new theme entitled "Decarbonisation: Our New Mission". The goal is to inspire young people to help Hong Kong fulfil its pledge of carbon neutrality by 2050.

We have updated our Environmental Policy to provide more detailed guidance on working with external stakeholders to promote environmental stewardship. One good example of this policy in action is what we have done to introduce new technologies and techniques for reducing carbon emissions



on construction sites, including our own sites at Lamma Power Station Extension. During the year, we launched a new “Smart Power for Construction Site” service to assist customers with all electricity-related matters throughout the life cycle of their construction projects, including advice on renewable energy, energy efficiency and electric vehicle charging solutions.

### Looking Out for Those in Need

HK Electric is mindful of the difficulties experienced by people who are most at risk in our society. In 2021, we expanded the scope of our relief measures to help alleviate the impact of economic downturn and reduced availability of social services during the pandemic. Together with the distribution of dining coupons, these measures have directly benefited more than 300 small and medium businesses and 40,000 underprivileged families. In November, we announced that an upsurge in global fuel prices will result in a higher Fuel Clause Charge for 2022, leading to a 7% increase in our Net Tariff. We understand this will create additional hardship for people who are already suffering, so we have set aside \$63 million from three existing funds to provide support and promote energy efficiency.



The HK Electric Volunteers team continues to reach out to the community. Following stringent social distancing measures, we have deployed our energy and creativity into enhancing digital-based services for elders-in-need. We have extended our reach via social media and expanded our “CAREnJOY Non-stop” initiative, which provides useful tips about energy saving, good health and dementia prevention via mobile phone.



### Soldiering on to Build a Better Future for our City

In March 2021, HK Electric and the Conservancy Association launched a new eco-heritage route called “The Eastern Sparkle” under our joint project known as “Green Hong Kong Green”. The new walking route captures unique cultural, historical and ecological features of North Point on the eastern side of Hong Kong Island. This area was once a hub of entertainment and leisure, and home to the former North Point Power Station that was owned and operated by HK Electric in the mid-20<sup>th</sup> century.

“The Eastern Sparkle” is special because it is not only rich in our city’s unique history and culture, but also showcases our wonderfully resilient natural resources, like the swallows nesting under the eaves on Chun Yeung Street and egrets foraging in the shelter of stonewall trees at North Point Pier. If we pay attention, walking along this route will remind us how urbanisation and ecology can be in harmony. For me, this is a symbolic image of the hope and appreciation I wish to convey about our city as I conclude this message.

Let’s soldier on together to build a better future. Thank you for your continued support.

**Wan Chi-tin**  
Chief Executive Officer  
March 2022



# Our Business and Approach to Sustainability



## HKEI in Brief

Constituted in January 2014, HK Electric Investments is a fixed single investment trust in Hong Kong focusing purely on the energy sector. Our Share Stapled Units issued by the trust and HK Electric Investments Limited (collectively known as HKEI) are listed on the Main Board of the Hong Kong Stock Exchange. Our trust is structured to enable us to maintain a single-minded focus on delivering stable distributions to holders of our Share Stapled Units, while ensuring we have the potential for sustainable long-term growth.

Our main operating company, HK Electric, is one of the longest established utility companies in the world, commencing operations in 1890. HK Electric supplies electricity to about 584,000 customers on Hong Kong Island and Lamma Island through a vertically integrated power-utility operation, including our Lamma Power Station (LPS) on Lamma Island, under a Scheme of Control Agreement (SCA) with the HKSAR Government. For over 130 years, HK Electric has contributed immeasurably to the economic and social development of Hong Kong by providing a safe, reliable, clean and affordable electricity supply.

For more information about HKEI and HK Electric, please visit our corporate website [www.hkei.hk](http://www.hkei.hk).



### 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

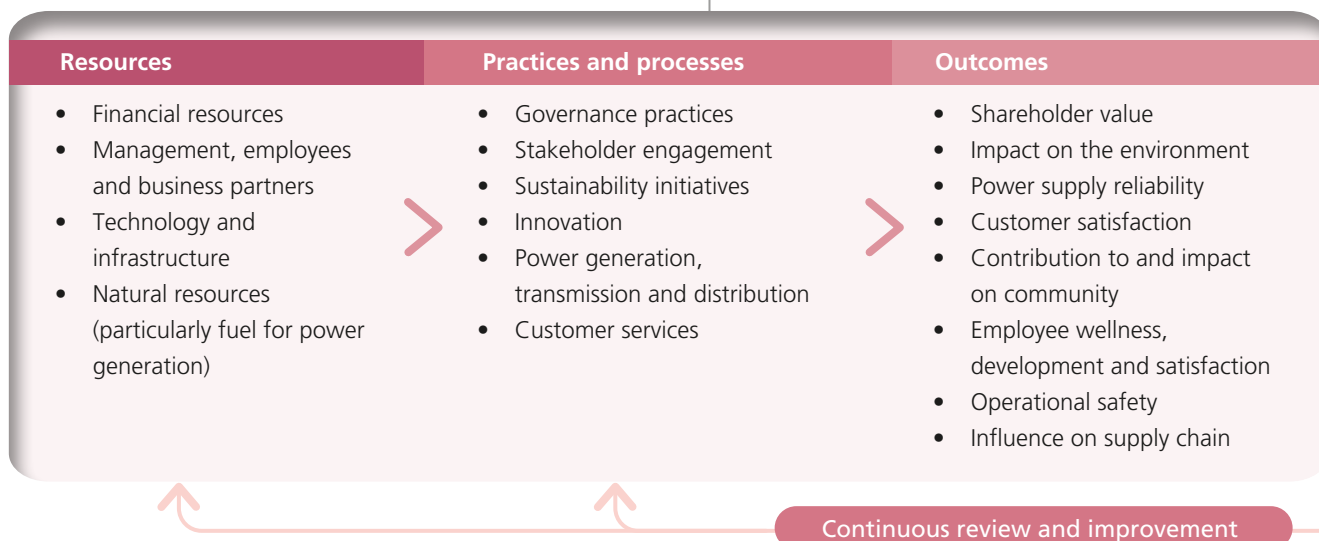


### Core Values

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



## Our Value Chain



## Business Profile (as at the end of 2021)

<b>Service territories</b>	Hong Kong Island and Lamma Island	
<b>Installed generating capacity</b>	6 coal-fired units: <b>2,000 MW</b> 5 oil-fired gas turbine units: <b>555 MW</b> 3 gas-fired combined-cycle units: <b>1,060 MW</b> 1 solar power system: <b>1.1 MW<sup>#</sup></b> 1 wind turbine unit (Lamma Winds): <b>0.8 MW</b>	<b>Total:</b> <b>3,617 MW*</b>
<b>Transmission and distribution network</b>	High-voltage circuit length: <b>445 km</b> Medium-voltage circuit length: <b>4,081 km</b> Low-voltage circuit length: <b>2,209 km</b>	<b>Total:</b> <b>6,734 km</b>
<b>Operations</b>	Number of customers: <b>~584,000</b> Electricity sold: <b>10,361 millions of kWh</b>	
<b>Workforce</b>	Number of permanent employees: <b>1,699</b> Number of contract employees: <b>133</b>	
<b>Economic contribution</b>	Total capital expenditure: <b>\$6,001 million</b> Distributable income: <b>\$2,830 million</b>	

# The capacity of the solar power system has gradually increased from 1 MW to 1.1 MW due to replacement of aged panels with those of larger capacity.

\* To achieve Hong Kong's fuel mix target of around 50% gas generation from 2020, HK Electric not only had to build a new gas-fired unit L10, but also defer the retirement of an old gas-fired unit GT57. Instead of the original schedule of 2020, GT57 will now retire in 2022 when another new gas-fired unit L11 comes into operation. This is an interim measure to achieve the above government objective. The installed capacity in 2021 without GT57 would otherwise be 3,272 MW.



# Sustainability Governance

HKEI is committed to running a sustainable business in a responsible and transparent manner. Our approach to sustainability is built on a robust foundation of corporate governance and high ethical standards based on the principles of openness, integrity and accountability.

We have a Sustainability Framework in place to ensure that sustainability considerations are integrated into every aspect of our corporate culture and business operations. It is guided by our Vision, Mission and Core Values and aligned with our Sustainability Policy and other key corporate policies, and demonstrates clear interlinkages with the United Nations' Sustainable Development Goals. Built on four strategic pillars incorporating 14 material focus-areas, the Framework helps us translate our values and commitments into measurable targets and actions, and enables us to better communicate our impact with stakeholders.

Our commitment to sustainability cascades from the top of our organisation. Accountability for the Group's overall sustainability strategy, management, performance and reporting resides with the Board of Directors (the Board), which is supported in this important aspect by a Board-level Sustainability Committee.

The objectives of the Sustainability Committee are to oversee management and advise the Board on development and implementation of sustainability initiatives across the Group, including reviewing related policies and practices, and assessing and making recommendations on sustainability risks and opportunities. It also reviews and advises the Board on public communications and disclosures concerning the Group's sustainability performance and impact on stakeholders and the environment, including the Sustainability Report. For more information about how the Sustainability Committee assists the Board in overseeing management of material sustainability issues and related goals and targets, please refer to its [Terms of Reference](#) on our corporate website and the ensuing sections of this chapter.

At management level, the Sustainability Management Committee, chaired by the CEO, supports the Sustainability Committee in fulfilling its responsibilities by driving and coordinating the Group's sustainability efforts and promoting understanding of sustainability within the Group. It meets four times a year to review progress.



## Sustainability Governance Structure



As part of our commitment to continuous improvement, we participate in local and global benchmarking initiatives such as Hang Seng Corporate Sustainability Indexes, MSCI ESG Rating, S&P ESG Rating and Sustainalytics ESG Risk Rating, enabling us to be showcased on the product repository of the Sustainable & Green Exchange (STAGE) established by HKEX. In recent years, we have also consistently appeared in the Euronext Vigeo World 120 Index.



## Our Sustainability Framework



Guided by our **Vision, Mission and Core Values**

Aligned with our **Sustainability Policy** and other **Key Corporate Policies**

Commitment	Objective	Approach
Operating our business in a responsible and transparent manner while supporting sustainable development and meeting the long-term energy needs of our community	Striving to be a world-class electricity supplier, a good corporate citizen and an employer of choice	Integrating sustainability considerations into our operations and engaging with our stakeholders to create shared value

### Strategic Directions



#### 1 Running a Sustainable Business

Ensuring a strong foundation for supporting sustainable development

##### Material Areas

- 1.1 Delivering long-term value for our investors through sustainable growth
- 1.2 Upholding high standards of corporate governance and disclosure
- 1.3 Managing risks and opportunities effectively
- 1.4 Building mutual trust with our stakeholders
- 1.5 Fostering a culture of innovation



#### 2 Sharing our Planet

Sustaining a beautiful and liveable planet for our future generations

##### Material Areas

- 2.1 Combating climate change
- 2.2 Minimising the environmental impact of our operations
- 2.3 Promoting environmental awareness



#### 3 Serving Hong Kong

Making our home a prosperous, smart and caring city

##### Material Areas

- 3.1 Providing a reliable and affordable electricity supply
- 3.2 Delivering excellent customer services
- 3.3 Caring for the community



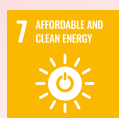
#### 4 Working with Partners

Engaging with our employees and business partners to ensure safe and responsible business operations

##### Material Areas

- 4.1 Caring for our employees and their families
- 4.2 Improving health and safety performance continuously
- 4.3 Managing our supply chain responsibly

### Supporting the United Nations' Sustainable Development Goals, specifically:



**Goal 7**  
Affordable and Clean Energy



**Goal 9**  
Industry, Innovation and Infrastructure



**Goal 13**  
Climate Action



# Materiality

We review and update our materiality assessment every year to identify and understand new developments impacting our business and our stakeholders. Building on our previous materiality assessment, we stepped up our efforts in 2021 to better identify material issues. The materiality assessment process involves comprehensive desktop-research and stakeholder engagement. As a result, a total of 24 material topics were identified. Some material topics considered previously were consolidated with related topics, while some topics were renamed for better clarity.

The outcomes of our 2021 materiality assessment have been reviewed and endorsed by the Sustainability Committee. Among the 24 material topics, "Business Ethics", "Greenhouse Gas Emissions", "Supply Reliability, Plant Availability and Generation Efficiency" and "Occupational Health and Safety" have been identified as the top material topics under the respective strategic directions of our Sustainability Framework. The overall priority of material topics remains largely consistent with the previous year's results. The outcomes serve as good reference for refining our goals and targets, helping us allocate our resources more effectively to create shared value for the Group and our stakeholders.



## 2021 Materiality Assessment Process

### Step 1 IDENTIFY

- Re-evaluation of material topics from the previous year
- Analysis of new information on global megatrends, ESG reporting and rating standards and material topics identified by our peers
- Consideration of internal updates to our corporate strategy, policies and practices



24 potentially material topics were identified for further evaluation.

### Step 2 PRIORITISE

- Sending out online questionnaires to stakeholder representatives, including employees, customers, business partners, local communities, education sector, engineering sector and professional institutions, green groups and social non-governmental organisations (NGOs), asking them to rank the relative importance of 24 topics and provide other views
- Conducting in-depth interviews with representatives of some stakeholder groups to gain deeper understanding of online survey responses



The 24 topics were prioritised under the four strategic directions of our Sustainability Framework, reflecting importance to stakeholders as well as importance to HKEI.

### Step 3 VALIDATE

- Review and refinement of the Step 2 findings by the Sustainability Management Committee
- Review and endorsement of the materiality assessment outcomes by the Sustainability Committee



The 2021 Materiality Assessment Outcomes have been fully reflected in the preparation of this report.





## 2021 Materiality Assessment Outcomes

Material topics identified under each strategic direction of our Sustainability Framework are listed below in descending order of importance. Cross-referencing to material areas in our Sustainability Framework is shown in brackets.

- Business Ethics (1.2)
- Corporate Governance (1.2)
- Management of Risk and Opportunities (1.3)
- Contingency Preparedness (1.2, 4.2)
- Stakeholder Engagement (1.4)
- Innovation (1.5)
- Economic Performance (1.1)

### Why they matter?

At HKEI, strong corporate governance is at the core of running our business in a responsible and ethical way. A breakdown in corporate governance caused by operational negligence, legal violations or failure to follow acceptable standards of corporate behaviour can threaten a company's reputation or financial stability. These consequences go beyond employees and shareholders to affect customers, suppliers and the community. Transparency is equally essential for demonstrating how the benefits generated by an electric utility are shared across the community.

**RUNNING A  
SUSTAINABLE BUSINESS**



- Greenhouse Gas Emissions (2.1)
- Climate-related Risks and Opportunities (1.3, 2.1)
- Impact on Air Quality (2.2)
- Energy Consumption and Saving (2.2, 3.2)
- Water and Effluents (2.2)
- Materials and Waste (2.2)
- Biodiversity Conservation (2.2)
- Promoting Environmental Awareness (2.3)

### Why they matter?

Climate change affects the business of all power utilities, including HKEI, creating both risks and opportunities that drive a global transition towards a low-carbon future. Climate impacts emerge in the form of physical risks to infrastructure and transitional risks prompted by changing regulations and market expectations. We need to constantly refresh our business strategies and investment plans to keep climate considerations front and centre.

**SHARING  
OUR PLANET**



- Supply Reliability, Plant Availability and Generation Efficiency (3.1)
- Access to Electricity and Affordability (3.1)
- Customer Privacy, Health and Service (3.2, 4.2)
- Asset Management and Security (3.1)
- Community Relations and Investment (2.3, 3.3)

### Why they matter?

As one of the major energy suppliers in Hong Kong, HKEI recognises that access to affordable energy can improve quality of life and create economic wealth to benefit community livelihoods. Effective community engagement is also the way to build mutual respect, trust and confidence with our stakeholders. On the other hand, lack of consultation and collaboration can lead to adverse impacts giving rise to potential disruptions for project planning or operations.

**SERVING  
HONG KONG**



- Occupational Health and Safety (4.2)
- Human Capital Management (1.2, 4.1)
- Sustainable Supply Chain (4.3)
- Human Rights Management (1.2, 4.1, 4.3)

### Why they matter?

HKEI has a long history of addressing health and safety risks. Encouraging safe and healthy practices within the workplace through systematic management provides lasting benefits for the workforce and the general public. Empowering people and upholding high standards of business ethics throughout the value chain brings to life HKEI's vision to excel in the power business in Hong Kong.

**WORKING  
WITH PARTNERS**





# Sustainable Development Goals

HKEI supports the United Nations' 2030 Agenda for Sustainable Development, which aims to end poverty, protect the planet and ensure peace and prosperity for all people by 2030.

From among the 17 Sustainable Development Goals (SDGs), we have identified three SDGs that are most closely aligned with our corporate strategy and business priorities: Affordable and Clean Energy (Goal 7), Industry, Innovation and Infrastructure (Goal 9) and Climate Action (Goal 13). We have established internal targets to gauge our progress of helping achieve these SDGs and are committed to reporting annually on our performance against these targets.



## Goal

**7** AFFORDABLE AND CLEAN ENERGY

**AFFORDABLE AND CLEAN ENERGY**

Internal targets	Status in 2021
Maintain a safe and reliable electricity supply → <b>Maintain better than 99.999% reliability rating</b>	<b>Achieved</b> A supply reliability rating of >99.999% was achieved in 2021.
Gain access to diverse and cost-competitive liquefied natural gas (LNG) supplies worldwide to alleviate considerable pressure on tariffs due to increased consumption of natural gas → <b>Commission the offshore LNG terminal in 2022</b>	<b>Construction work in progress</b> Offshore installation of all nine supporting jackets and part of the Terminal topside structures had been completed.
Provide subsidies to underprivileged households for adopting energy-efficient electrical appliances → <b>Subsidise 4,000 households by 2023</b>	<b>In progress</b> 2,384 households had received subsidies as at the end of 2021.
Increase the use of renewable energy (RE) → <b>Increase the aggregate electricity generated from RE sources of HK Electric and its customers to over 6 GWh/year by 2023</b>	<b>In progress</b> Aggregate electricity generated from RE sources of HK Electric and its customers was ~5.8 GWh in 2021.
Provide free energy audits for non-residential customers and subsidies to building owners for implementing energy efficiency enhancement projects → <b>Complete 1,000 audits and subsidise 500 buildings by 2023</b>	<b>In progress</b> 630 audits had been completed and subsidies had been approved for 324 buildings as at the end of 2021.

## Goal

9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



INDUSTRY,  
INNOVATION AND  
INFRASTRUCTURE

### Internal targets

Enhance asset integrity (in the face of climate change)  
→ **Complete enhancement of anti-flooding facilities for low-lying substations within 100 m of the northern coastal line of Hong Kong Island by 2021**

Deploy smart meters  
→ **Complete full-scale deployment by 2025**

### Status in 2021

#### Achieved

A total of 168 substations had been retrofitted with anti-flooding systems.

#### In progress

The roll-out of smart meters was ~20% complete as at the end of 2021.

## Goal

13 CLIMATE  
ACTION



CLIMATE  
ACTION

### Internal targets

Replace coal-fired units with gas-fired units  
→ **Commission three new gas-fired units, L10, L11 and L12, in 2020, 2022 and 2023, respectively**



Reduce carbon emissions per electricity unit sold  
→ **Ensure yearly average emissions do not exceed 0.6 kg of CO<sub>2</sub>e per kWh by 2023**

Engage stakeholders on combating climate change and adopting low-carbon lifestyle  
→ **Organise 1,000 education and promotion activities by 2023**

### Status in 2021

#### In progress

L10 was commissioned in February 2020, while commissioning of L11 and construction of L12 were in progress as at the end 2021.

Synchronisation of L11 to the grid was achieved in November 2021. Commercial operation of the unit will commence in May 2022.

Civil construction of the Main Station Building for L12 had been substantially completed. Erection of plant equipment had also commenced.

#### In progress

Average emissions amounted to ~0.71 kg of CO<sub>2</sub>e per kWh in 2021.

#### In progress

741 activities had been organised as at the end of 2021.



Running a  
Sustainable Business

# Growing Together towards a Brighter Future







# Running a Sustainable Business



## Management Approach

At HKEI, we strive to fulfil our Vision, Mission and Core Values by integrating sustainability considerations into every aspect of our business as outlined in our Sustainability Framework and elaborated in detail throughout this report. We believe that good corporate governance and sustainable business practices go hand-in-hand and enable us to create long-term value for our investors and other stakeholders.

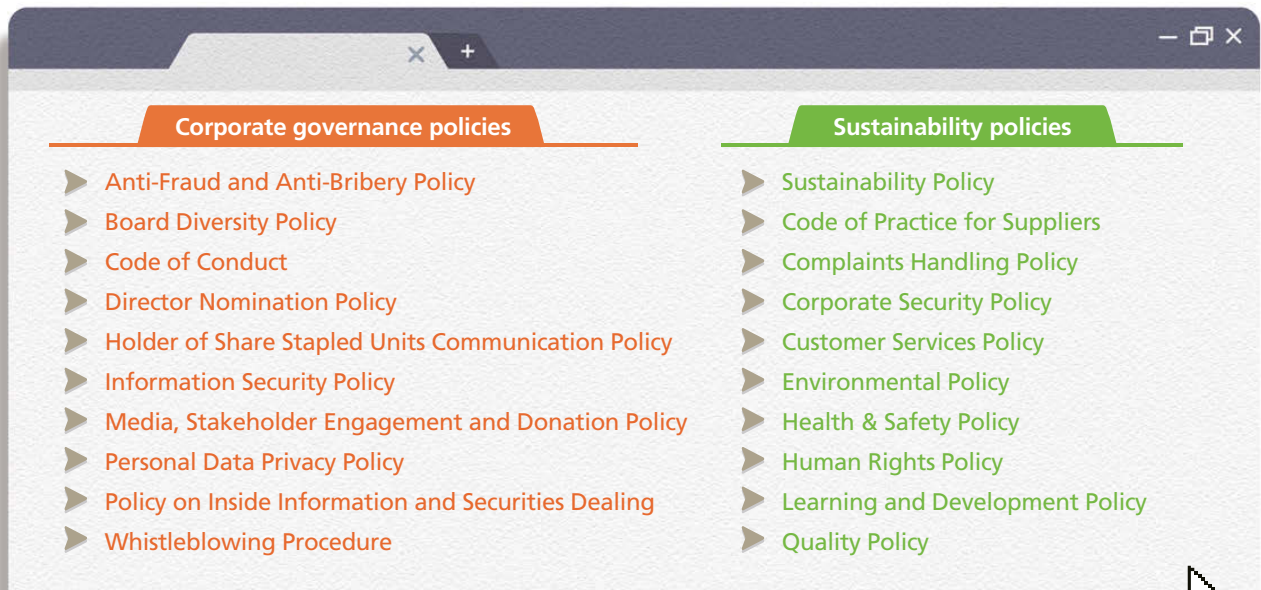
Our corporate governance framework addresses the broad range of ESG topics that are material to our business. The Board is the highest governance body of the Group. It is supported by the Sustainability Committee in overseeing implementation of our Sustainability Framework and assisted by the Audit Committee in ensuring that appropriate and effective risk management and internal control systems are in place. Both Board-level committees are supported at management level by dedicated

committees chaired by the CEO, namely the Sustainability Management Committee and the Risk Management Committee. The CEO also leads an Innovation Steering Committee to promote new ideas and application of new technologies that will achieve better quality outcomes for our business.

Ultimately, our business is carried out by and for our stakeholders, including customers, shareholders, employees, business partners, local communities and government authorities among other key stakeholder groups. We believe in open and effective communication that will facilitate a meaningful exchange of views in order to enhance the ability of our organisation to adapt and keep pace with changes in today's world of heightened risk and uncertainty.

### Key Corporate Policies

The following key corporate policies are available on our [corporate website](#):



# Sustainable Long-term Growth

We strive to excel in the power business in Hong Kong by supporting the sustainable development of the city with a safe, reliable, clean and affordable electricity supply while delivering sustainable growth and long-term value to our investors. We also attach great importance to combating climate change and are committed to collaborating with the Government on the best way forward to realise carbon neutrality for Hong Kong.



The offshore liquefied natural gas terminal will help improve the security and price competitiveness of our fuel supply at Lamma Power Station.

To achieve our Vision and Mission, we are guided by the following three long-term strategies:



## World-class Power for a World-class City

We will maintain world-class supply reliability and customer service, which is essential for Hong Kong's continued economic success. At the same time, we are embracing innovation and new technologies to help transform Hong Kong into a green and smart city characterised by high quality of life. We are investing in various decarbonisation initiatives, including switching from coal to gas with a target to phase out the entire coal-fired power generation fleet by the early 2030s. We are also introducing smart meters throughout our network, promoting energy efficiency and conservation (EE&C) and renewable energy (RE) in the community, as well as facilitating more widespread use of electric vehicles (EVs).

investments will enable steady growth in our asset base, which in turn will generate stable and growing returns for our long-term investors. Having already made considerable progress towards decarbonising our business through coal-to-gas transition, we welcome the Government's plan to achieve carbon neutrality before 2050 for electricity generation in Hong Kong. In addition to developing a large-scale offshore wind farm, we are studying the potential of other zero-carbon energy sources and technologies.



## Prudent Financial Management and Efficient Operations

Prudent financial management is essential in the current environment of heightened risk and rising prices. We will maintain an optimal capital structure with strong liquidity and strive to minimise our operating costs in order to safeguard the affordability of electricity supply for our customers while delivering sustainable returns to our investors.



## Steady Growth in our Asset Base

We will continue to undertake pragmatic investments in power generation, transmission and distribution consistent with our commitment to providing a world-class power supply and supporting sustainable development. These



## Corporate Governance

We are committed to upholding the highest ethical standards throughout our business, aligned with the principles of openness, integrity and accountability in accordance with our Core Values. This commitment underpins the efficiency and transparency of our operations, attracts investment, enhances shareholder value and helps protect the rights of shareholders and other stakeholders.

Our corporate governance framework is aligned with the Corporate Governance Code set out in the Listing Rules of the Hong Kong Stock Exchange. In 2021, we formalised and updated several policies and procedures, including our Anti-fraud and Anti-bribery Policy, Human Rights Policy, Whistleblowing Procedure and Intellectual Property Policy.

We have zero-tolerance against any form of fraud or corruption. In accordance with our Anti-fraud and Anti-bribery Policy, the Board is accountable for overseeing anti-fraud and anti-corruption initiatives within the Group, including risk management, internal controls, communication, training and monitoring. The Executive Directors support the Board to ensure effective implementation of these initiatives, including investigating fraudulent or corrupt activities.

During the year, the Directors were provided with training on anti-corruption to keep them informed of current trends and issues. More than 220 colleagues also attended a webinar on the Prevention of Bribery Ordinance. As part of our Orientation Programme, new joiners receive training on our Code of Conduct, which covers fraud prevention and whistleblowing. In addition, over 100 employees attended training on anti-discrimination to enhance their awareness and understanding of relevant legislation, and our corporate policies and guidelines.

Our Intellectual Property Policy reflects the Group's commitment to protect our own property and not to infringe upon the rights of third parties in accordance with the Copyright Ordinance of Hong Kong. We have Copyright Guidelines in place to assist our employees in making correct use of copyrighted materials.

In 2021, there were no instances of material non-compliance for HKEI. There were also no ongoing or concluded legal cases regarding corrupt practices brought against HKEI and its employees.

For more information about our corporate governance, please refer to our [Annual Report](#).







## Key Governance Practices



### Risk management

- ▶ **Enterprise Risk Management Framework** (overseen by our **Risk Management Committee**) to identify, assess, mitigate and monitor key business, financial, operational and compliance risks, including top corporate risks and material emerging risks
- ▶ **Compliance Framework** (overseen by our **Compliance Committee**) to ensure company-wide compliance with legal and regulatory obligations
- ▶ **Crisis Management Plan** to ensure business continuity and effective response to emergencies (each business unit also implements its own respective contingency plans)



### Business ethics

- ▶ **Code of Conduct** supplemented by comprehensive human resources policies and procedures to provide guidance for our employees on ethical issues, including reporting and treatment of unethical behaviour
- ▶ **Anti-fraud and Anti-bribery Policy** and **Fraud Prevention and Awareness Policy** to set out the minimum standards of conduct that all employees are required to comply with in order to minimise exposure to any form of fraud or bribery risk
- ▶ **Monitoring mechanism** to review compliance with anti-corruption laws and the Code of Conduct, including a **biannual anti-bribery control assessment**
- ▶ **Human Rights Policy** to uphold human rights across the organisation and encourage stakeholders throughout our value chain to increase protection of human rights
- ▶ **Whistleblowing Procedure** to provide reporting channels and guidance for our employees and other stakeholders to report any suspected impropriety, misconduct or malpractice
- ▶ **Code of Practice for Suppliers** to outline standards related to ethics, human and labour rights, health and safety, environmental protection and climate action, and cybersecurity for our suppliers

## Fighting the Virus Together

HK Electric remains resilient in the face of the COVID-19 pandemic. During the year, our response to the public health situation has remained at Emergency-level, triggering various measures under our Contingency Plan for COVID-19 to reduce risk of infection of our employees, other workers and the public, while maintaining our operations and services. To cope with the changing situation throughout the year, our Contingency Plan has been updated and refined from time to time by a working committee led by the Operations Director and extensive precautionary and response measures remain in place.

We believe that vaccination is the most effective means to protect the community from the pandemic, so we have introduced a range of measures to encourage our employees "to get the jab", including group bookings at community vaccination centres, vaccination leave, gift coupons and vaccine bubble. We also organised a vaccination outreach programme at LPS for our employees and contractors' personnel. All of our employees have been vaccinated against COVID-19 except those who are medically exempt or those with special reasons, such as pregnancy.





# Sustainability Risks and Opportunities

In the current environment of heightened uncertainty, it is more important than ever for HKEI's Enterprise Risk Management Framework to encompass a wide range of economic, environmental and social risks, including emerging risks for our business.

With foresight and early action, we can transform potential risks into opportunities for our business and our community. Climate change is undoubtedly one of the greatest challenges facing Hong Kong and the world today, but the prospect of transitioning to a low-carbon economy also presents tremendous opportunities. We must actively cultivate our stakeholders' trust by engaging with them to find and implement solutions.

For more information about our risk management approach, risk factors and strategies, please refer to our [Annual Report](#).



## Managing Climate-related Risks and Opportunities

The Financial Stability Board has established the Task Force on Climate-related Financial Disclosures (TCFD) to develop recommendations for climate-related financial disclosures with the objectives of supporting organisations to manage climate-related risks and opportunities effectively, and empowering financial markets to channel investment towards sustainable and climate-resilient solutions.

This section provides an overview of how we manage climate-related risks and opportunities under four thematic areas of the TCFD recommendations. We will continue to review our work and conduct studies to improve our management approach and disclosures.

### Governance

The Board has established a Sustainability Committee to assist it in carrying out its responsibility for overseeing the Group's Sustainability Framework, including climate-related issues. At management level, there is a Sustainability Management Committee chaired by the CEO, which supports the Sustainability Committee for development and implementation of sustainability initiatives, including assessing and managing climate-related risks and opportunities. For more information, please refer to the chapter on [Our Business and Approach to Sustainability](#).

In 2021, HK Electric entered into a framework agreement with State Grid Shanghai Municipal Electric Power Company and State Grid International Development Company Limited to share experiences in the application of clean power technology



for achieving carbon neutrality and keep Executive Directors and senior management abreast of the latest trends in climate-related issues. Under the framework, different types of collaboration and activities will be organised to enhance the knowledge of management personnel and professionals on energy and carbon issues and technologies.

### Strategy

Our approach to managing transition and physical risks posed by climate change focuses on:

- Decarbonising our operations progressively, particularly in our power generation activities;
- Promoting EE&C, RE, EVs and low-carbon lifestyles among our stakeholders including customers, suppliers, employees and the public; and
- Ensuring that our power plants and networks operate reliably under changing and extreme weather conditions.

The megatrend of transitioning to a low and ultimately zero-carbon economy poses significant transition risks for our business, particularly the challenge of helping achieve Hong Kong's target for carbon neutrality before 2050. Our SCA



with the Government for 2019-2033 provides stability in terms of financial and service regulation, however the Government's strategies on air quality, decarbonisation and electricity market reform, among other factors, may impact the Group's performance in the medium to long term. Moreover, failing to address increasing expectations from the public to take action on climate change may present reputational risks to the Group. At the same time, this megatrend and quest for climate actions present tremendous opportunities for the Group's business.

We contribute to the decarbonisation of Hong Kong through managing both the direct impact of our operations and the indirect impact we could make across our value chain. Over

the years, we have made substantial progress in decarbonising power generation through coal-to-gas transition and harnessing RE. Looking ahead, we will progressively phase out coal-fired generation, increase the share of RE in our generation portfolio and continue to help our customers and the community decarbonise and "go green". We will also keep track of new energy developments with an open-mind towards innovative zero-carbon energy technologies and solutions such as use of hydrogen. To ensure the energy needs of our society will continue to be met, we will maintain a close dialogue with our stakeholders, as we proceed with this decarbonisation journey. More information can be found in the chapters on [Sharing our Planet](#) and [Serving Hong Kong](#).

### Our Responses to Key Climate-related Transition Risks

Key transition risks	Impacts	Our responses
Policy, legal and market risks	Increased exposure to risks due to potential climate-related regulation and policy changes may have impact on our capital expenditure and operational costs. Electricity demand may also change as climate-related factors are taken into account, such as EE&C.	<ul style="list-style-type: none"> <li>• Ceasing coal-fired power generation by the early 2030s</li> <li>• Substantially increasing RE applications and exploring new low/zero-carbon electricity business</li> <li>• Collaborating with the Government on the best way forward to decarbonise and achieve carbon neutrality before 2050</li> <li>• Planning for long-term capital investments that best balance supply reliability, environmental performance, tariff affordability and financial return</li> <li>• Ensuring approved decarbonisation projects are completed on schedule</li> <li>• Promoting electrification and providing necessary supporting services for various sectors, from domestic use and private transport to commercial use, public transport and construction sites</li> </ul>
Technological risks	Adoption of new and emerging decarbonisation technologies may involve additional costs and system reliability implications	<ul style="list-style-type: none"> <li>• Developing an offshore wind farm in Hong Kong waters</li> <li>• Keeping track of new energy development and innovative generation solutions</li> <li>• Formulating strategies and practicable measures to mitigate system operations challenges (e.g. due to intermittent nature of RE) and ensure supply reliability</li> <li>• Collaborating with academia and engaging external consultants to conduct research and studies, as necessary</li> </ul>
Reputational risks	Our reputation may be at risk if we fail to address the expectations and demands of our customers or community for low/zero-carbon energy and supporting services on EE&C.	<ul style="list-style-type: none"> <li>• Decarbonising our power generation progressively, particularly to cease coal-fired power generation by the early 2030s</li> <li>• Deploying Advanced Metering Infrastructure for all customers to help them optimise energy use</li> <li>• Facilitating local RE development through the Feed-in Tariff Scheme and RE Certificates</li> <li>• Promoting low-carbon lifestyles and energy saving through education, funding schemes and related services</li> <li>• Maintaining effective communication with our stakeholders on our sustainability performance through suitable means and channels</li> </ul>



Extreme weather and gradual changes in weather patterns caused by climate change pose acute and chronic physical risks that could give rise to considerable financial impact on our business. To mitigate these risks, we continue to review and build climate resilience into our power infrastructure and operations in a strategic and systematic manner.

A working group chaired by the Operations Director has been established, which meets regularly to review the resilience of HK Electric against extreme weather events and seek enhancement opportunities. We conduct climate resilience studies on a regular basis to ensure adequate measures are in place to safeguard our critical power infrastructure against climate hazards, as well as to maintain fuel supply security,



uninterrupted logistics support and timely attendance to customer service calls under extreme weather conditions. We also have a Crisis Management Plan in place to cope with emergency situations.

### Our Responses to Key Climate-related Physical Risks

#### Key physical risks

These include acute risks caused by extreme weather events such as super-typhoons, more torrential rains and powerful thunderstorms, as well as chronic risks arising from longer periods of higher ambient temperature and rising sea levels.

#### Impacts

These risks pose immediate or longer-term threats to our operations such as direct damage to our power infrastructure, interruption of logistics support and disruption to supply chain, affecting our supply reliability, customer service and even employee safety.

#### Our responses

- Imposing stringent requirements on reliability for new generation, transmission and distribution facilities and equipment in high ambient temperature
- Conducting a study of possible overtopping wave at our facilities under super-typhoons
- Installing anti-flooding systems and enhancing the flood walls at LPS and adopting higher ground-level design standards for new generating units and substations
- Clearing the storm drain system of LPS and at rooftops of buildings before the rainy and typhoon seasons
- Installing tidal meters and wind sensors at LPS to monitor the tidal level and wind speed, and sharing this data with Hong Kong Observatory for projection of seawater levels and storm surge under extreme weather conditions
- Adopting underground and submarine cables for nearly our entire transmission network
- Imposing stringent anti-flooding requirements for new substations vulnerable to storm surge
- Installing flooding alarms, bund walls and sump pumps at substations subject to flooding risk from storm surge
- Decommissioning some basement and sunken substations
- Using CCTV to monitor conditions of substations during storm surge
- Conducting risk assessment for substations subject to land-slide risk and taking into consideration risks of land-slide and flooding due to surface runoff from nearby slopes when designing new substations
- Improving cable entry sealing of substation to prevent flooding of cables inside cable trench due to water seepage
- Converting 11-kV open-ring distribution feeders to 22-kV closed ring feeders that have more margin and greater resilience against high ambient temperature
- Arranging typhoon emergency teams on standby to undertake operations and repairs for different severity levels
- Establishing dedicated IT reporting platform with mobile applications for effective coordination of emergency response
- Reviewing and enhancing safety precautions for our employees working under adverse weather conditions
- Decentralising storage of critical spares
- Providing advice for property managers in commercial and residential buildings with high flooding risk on installing anti-flooding systems in their switch rooms





Lamma Power Station L11 Synchronisation Ceremony

### Risk Management

The identification, assessment and management of climate-related risks are incorporated into our Enterprise Risk Management Framework and climate change risk has been included in our corporate top risk register. The Framework provides top-down and bottom-up approaches to identify, assess, mitigate and monitor key risks at corporate and operating unit levels in a pro-active and structured manner. Climate-related risks are regularly reviewed by the Sustainability Management Committee and Sustainability Committee, as well as the Risk Management Committee and Audit Committee.

### Metrics and Targets

We conduct regular reviews of our climate-related metrics and targets in order to keep track of our performance. In

2017, the Science Based Targets initiative (SBTi) recognised our carbon reduction target for 2022. We are formulating a longer-term target for reducing emissions towards net zero in line with climate science.

To contribute to the decarbonisation of Hong Kong, we target to phase out coal-fired generation by the early 2030s. At LPS, two more new gas-fired generating units, namely L11 and L12, have been scheduled to be commissioned in 2022 and 2023, respectively.

On top of our existing 800-kW wind turbine and 1.1-MW solar power system, we are planning for an offshore wind farm with installed capacity of not less than 150 MW located southwest of Lamma Island, targeting for commissioning by 2027. We also plan to install additional solar power systems with totally 1.2-MW capacity on our premises by 2023.

We have developed a set of internal targets corresponding to three United Nations' SDGs that are material to our business, namely, Affordable and Clean Energy (Goal 7), Industry, Innovation, and Infrastructure (Goal 9) and Climate Action (Goal 13) as elaborated in the chapter on [Our Business and Approach to Sustainability](#).

Each year, we disclose our greenhouse gas (GHG) emissions through our Sustainability Report and in response to CDP's climate change questionnaire. In 2021, we enhanced our GHG emissions inventory to report more completely on carbon footprint, including major sources of indirect emissions (Scope 3 emissions) in accordance with ISO 14064.



Lamma Power Station



# Stakeholder Engagement

At HKEI, we acknowledge the impact of our daily operations and business strategies on stakeholders and believe in open and effective communication to facilitate a meaningful exchange of views. As part of our formal stakeholder engagement process, we engage regularly with representatives of 10 key stakeholder groups through various channels. These groups have been identified with due consideration of their level of dependency and influence on our business.



During the pandemic, we have continued to engage with our stakeholders while also maintaining social distancing using virtual conferencing and social media.



## Engaging with our Stakeholders



Stakeholder groups	Why are their views important?	Usual engagement channels
Customers	Electricity is a daily necessity for our customers.	1, 2, 3, 4, 5, 6
Shareholders	We are accountable to our shareholders.	1, 2, 6
Employees	We have a responsibility to care for our employees who devote much of their time to us and we depend on them for our success.	1, 2, 3, 4, 5, 6
Business partners	Having common sustainability values is important in business relationships.	1, 2, 3, 5, 6
Local communities	We are committed to giving back to society and minimising the impact of our operations on neighbouring communities.	1, 2, 3, 4, 6
Green groups and social NGOs	They are our key sustainability partners.	1, 2, 3, 4, 6
Education sector	We support green education particularly for young people.	1, 2, 3, 4, 5, 6
Engineering sector and professional institutions	They are our key industry partners.	1, 2, 4, 6
Media	The media is an important partner for communication with the public.	1, 6
Authorities and legislators	They have a regulatory role in our utility business.	1, 2, 4, 6

1 Meetings / Conversations / Enquiries / Interviews

2 Visits / Talks / Seminars / Workshops / Exhibitions

3 Advisory services / Community programmes / Volunteering services / Social & recreational activities / Sponsorships & scholarships / Award schemes

4 Consultation panels / Focus groups / Liaison teams

5 Surveys / Suggestion schemes

6 Mobile apps / Intranet / Website / Social media / News & publications

## Mutual understanding & trust

Stakeholders:  
Views and expectations

HKEI:  
Aspirations, plans and constraints



### Responding to our Stakeholders



2021 stakeholders' feedback	Our responses
<p><b>Customer</b></p> <p>HKEI has provided consistent quality customer service over the years, and supported customers in energy-saving efforts including monitoring usage and offering subsidies for energy-efficient equipment.</p>	<p>We strive to meet and exceed our customers' expectation. As early as 1992, we established the Customer Liaison Group as one of the essential channels to collect feedback from customers. Over the years, we have been listening to their views and responding to their expectations, such as expanding channels to provide greater convenience to customers in handling electricity-related matters.</p> <p>We have launched a suite of funding and service initiatives known as Smart Power Services to promote EE&amp;C, RE and low-carbon lifestyles among our customers and in the community.</p>
<p><b>Green Group</b></p> <p>HKEI is active in sharing information about sustainability best practices but can go further as a facilitator by mobilising customers to conserve energy.</p>	<p>We have also launched a video version of our quarterly newsletter "HK Electric On-line" to better communicate with our customers and the public about company updates, green initiatives and community programmes.</p> <p>Please refer to the chapter on <a href="#">Serving Hong Kong</a> for more details.</p>
<p><b>Employee</b></p> <p>Greater transparency and better communication about the company's sustainability performance, both internally and externally, would help raise employees' awareness.</p>	<p>Our employees play a critical role in our sustainability journey and one of the key responsibilities of our Sustainability Management Committee is to promote the understanding of sustainability within the Group.</p> <p>We launched an 18-month internal education campaign in May 2020 and have organised a variety of activities to enhance our employees' awareness of HK Electric's sustainability commitments and performance.</p> <p>Please refer to the <a href="#">Case Story</a> in this chapter for more details.</p>
<p><b>Social NGO</b></p> <p>HKEI collaborates effectively with social organisations to deliver community initiatives that directly address social issues. HKEI's long-term approach to community projects and consistent employee volunteer base are key to their meaningful contributions.</p>	<p>Caring is one of our core values. We have been undertaking various elderly care and education programmes, together with the Government, district councils, green groups and social NGOs, for many years. We also support community care projects through volunteering services, donations and sponsorships.</p> <p>Our flagship community programmes "CAREnJOY for the Elderly" and "University of 3rd Age" have serviced the needs of the elderly in Hong Kong for more than a decade.</p> <p>Please refer to the chapter on <a href="#">Serving Hong Kong</a> for more details.</p>



## 2021 Highlights of Engagement Activities

### Employees and business partners

- An 18-month internal education programme to promote understanding of sustainability among our employees
- Safety Climate Index survey to evaluate the awareness and perceptions of our employees on safety culture
- Joint Consultation meetings and focus group meetings to exchange views with our employees
- “Hear Your Voice” communication channel to connect our young talent with senior executives and foster open dialogue
- Various wellness initiatives and promotion campaigns to help our employees and contractors stay safe and healthy



- Sustainable Procurement Survey to evaluate sustainability performance of suppliers and contractors

### Shareholders

- Annual General Meeting with shareholders
- Participation in different local and global benchmarking initiatives to allow investors to learn more about our sustainability performance



### Customers

- Various initiatives and promotion activities under our Smart Power Services to encourage and support our customers to go green
- Meeting with Customer Liaison Group to exchange views and update them on company development





## Local communities, green groups, social NGOs and education sector

- Various educational activities under the Happy Green Campaign themed “Decarbonisation: Our New Mission” to enhance environmental awareness among the public, particularly young people
- Online eco-heritage tours under the Green Hong Kong Green programme to foster public appreciation of Hong Kong’s eco-heritage resources
- Enhanced digital-based services under the “CAREnJOY for the Elderly” programme to support the elders-in-need
- Helping local retirees pursue lifelong learning and continue to contribute to the community through the “University of 3rd Age” network



## Engineering sector and professional institutions

- Participation in knowledge and experience sharing activities organised by professional bodies
- Collaboration in the “Belt and Road Advanced Professional Development Programme in Power and Energy” to nurture senior-level talent in the energy industry
- Participation in meetings and forum of the Joint Utilities Safety and Occupational Health Policy Group to discuss safety issues and benchmark safety practices



## Authorities and legislators

- Meeting with legislators to update them on company development
- Working closely with relevant authorities to ensure proper implementation and transparency of the SCA
- Joining hands with Occupational Safety and Health (OSH) Council as one of its OSH Strategic Partners to promote OSH culture
- Meeting with relevant government departments and other utilities through the Joint Utilities Policy Group to discuss issues of shared concern

## Media

- Press releases, interviews and social media posts to keep media informed on corporate initiatives





## Case Story

# Sustainability – A Matter for All

**“Sustainability must be a matter for all. We want to make sure that everyone, from senior management to frontline workers, understands what sustainability means, and how it impacts us and our operations. We want to empower our employees to make a difference.”**



**Wan Chi-tin**  
Managing Director  
HK Electric

In 2020, we began an 18-month sustainability education programme to enhance our employees' awareness of HK Electric's sustainability commitments and performance and to further embed sustainability across our business.

With input from our colleagues based on an initial survey, we developed a comprehensive training programme of workshops, seminars and games to help our colleagues gain a better understanding of sustainability in a fun and engaging way. External experts were invited to lead sessions on what sustainability means and current trends. To support this learning, we enriched the Sustainability Corner on our Intranet portal with videos, articles and interactive games. We also publish a “Sustainability Quote of the Week” to stimulate thought, discussion and actions.

Our Sustainability Champions play a critical role in helping drive this campaign and embed sustainability across our business. Nominated by each business division, Sustainability Champions receive in-depth training, promote sustainability issues among colleagues, and meet regularly to provide perspective and recommend areas for improvement in their respective divisions.

How effective has our sustainability education campaign been so far? In a post-campaign survey, 97.3% of respondents provided positive feedback and say they are now doing more to support sustainability within HK Electric.



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### Our Efforts Paid Off

**A comparison of pre and post-campaign surveys for employees showed that the percentage of respondents agreeing to the following statements increased after the campaign.**

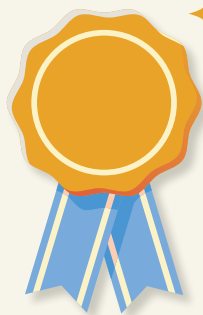
“I understand what sustainability is.”

“Employees can support the company in implementing sustainability.”

“I have supported the company in implementing sustainability in my daily work.”

“I am willing to support the company in implementing sustainability.”

## Sustainability Education in Numbers



**27** Sustainability Champions nominated by all divisions



**2** training workshops for Sustainability Champions



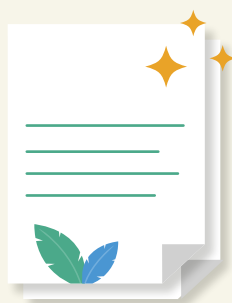
**>1,800** employees attended sustainability training



**1** new company-wide screen-saver and wallpaper explaining different sustainability aspects



**3** theme talks and **6** interactive videos produced on sustainability topics, including protecting the environment, plastic waste reduction, sustainability reporting and green finance



**14** articles highlighting sustainability initiatives with interactive games



**76** thoughts and ideas shared by Management and Sustainability Champions, one every Wednesday



**2** employee surveys, pre-campaign and post-campaign to gauge understanding and collect feedback

[Corporate Governance and Shareholder Relations](#)

[Stakeholder Engagement](#)

[Caring for our Employee](#)

**"To combat climate change and its impact, every one of us needs to learn to make hard but right decisions for the environment and commit to change together. Our Earth, our planet, our blue marble, or whatever we choose to call it – is our only home, and protecting it must start from us."**

**Jacqueline Chan**  
Sustainability Champion  
from Corporate Development Division

**"We need to put our mind into our 'customers' shoes' to tailor-make services that best fit them."**

**Alice Choy**  
Sustainability Champion  
from Customer Services Division

**"In the globalised world we live in, even local actions can have far-reaching consequences."**

**Tse Bo-yue**  
Sustainability Champion  
from Internal Audit Department



# Innovation

At HKEI, we adopt novel approaches that will help us achieve our business objectives more quickly and cost-effectively, giving rise to better quality outcomes. Innovation is essential for delivering on our Sustainability Framework and charting a sustainable course for our business in a rapidly changing world. We seek to innovate continuously as an integral part of our corporate strategy.



Our Innovation Steering Committee nurtures new ideas for streamlining work processes, improving performance and enhancing customer experience, including the adoption or development of new technologies such as mobile apps, big data and artificial intelligence (AI). With their first-hand knowledge and experience of our business, we recognise that employees are in the best position to help us identify areas for improvement. We strive to acknowledge and reward their contributions by fostering collaborative relationships built on mutual respect and trust.

At the heart of our innovation culture is an online community called Inno Hub, which brings together diverse perspectives and helps disseminate relevant information. Since its launch in 2018, Inno Hub has captured around 500 new ideas at various stages of development. Some business units have also established smaller and more focused groups, such as the TechWatch Team and online Innovation Forum that are dedicated to identifying and advancing good ideas within their specific business areas.

We invest about \$2 million annually to digitalise business operations. More than 90 colleagues from various departments have successfully developed and launched over 140 apps using our information technology platform, eConnect. These apps include spreadsheets, work inspection records and reminders. In addition to our own workforce, we also encourage our suppliers, contractors and other business partners to download and utilise these apps.

In 2021, we introduced over 40 new innovations across the business, such as deploying AI cameras to enforce site safety, developing a non-contact type low-voltage (LV) panel fuse blown detector to improve supply reliability and using battery energy storage system to supply greener on-site power for heavy machinery.

Building on the success of our Continuous Safety Improvement and Innovation Scheme in 2020, the Innovation Steering Committee launched the HK Electric Innovation Award in 2021. During the year, we received 38 entries from our employees in various categories ranging from health and safety to sustainable development, operational improvement and quality of services.

We are actively seeking out opportunities for collaboration with independent research institutes, universities and business partners. We are working with one local university, for example, on applying machine learning to forecast load trends and improve reactive power control in zone substations. In 2021, a prototype of this technology was successfully developed for future deployment.

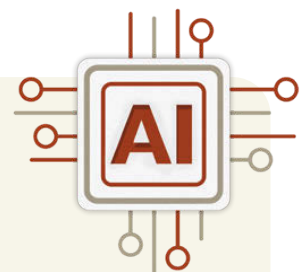
## Wider Application of AI

In 2021, we extended the application of AI to more projects such as the retro-commissioning (RCx) study for Hongkong Electric Centre and economic load dispatch for gas-fired units at LPS.

Energy modelling is considered a crucial part of a RCx process to evaluate different energy saving opportunities prior to implementation. In the RCx study for Hongkong Electric Centre, we applied AI models using a machine learning algorithm called XGBoost to simulate the energy consumptions of the building's chillers under different

chilled water supply temperatures in order to optimise the temperature setting.

As part of our system operations improvement work during the coal-to-gas transition, we utilised AI to develop an in-house automation programme to enhance the operating regime for gas-fired units at LPS. The solution can optimise the coal fuel consumption and boost the percentage of gas-fired generation to reduce carbon emissions, while meeting the variations of system demand.



## Smart Vest



Injury due to improper manual handling is one of the most common types of occupational accident. Such accidents may cause low back pain or musculoskeletal disorders. Our team has developed a smart vest that can remind its user to maintain a proper posture during work.

The smart vest is integrated with a gyro sensor and a rechargeable super-capacitor that supports wireless charging. When the user performs manual handling, the gyro sensor will continuously detect the tilting angle of the user's backbone. An audible warning signal in form of "beeping" sound will be generated to alert the user when the tilting angle reaches the set limit (e.g. due to excessive torso leans when performing manual handling). The frequency of the "beeping" sound will increase as the tilting angle continues to increase.

The sensor can be fully charged in 15 minutes and can work for a couple of weeks without the need to be recharged when in normal use. It will enter into sleep mode to save energy if no motion is detected for a certain period of time (e.g. when the vest is not in use) and will be automatically reactivated when motion is detected again.

## Internet of Things (IOT) Sensors for Equipment Healthiness Monitoring



We have deployed IOT sensors of LoraWan and Bluetooth type to monitor plant operations at LPS. IOT sensors are generally wireless and easy to install, which greatly reduce the duration and cost of installation comparing with conventional hardwired sensors.

Authorised users can access the data measured by these IOT sensors anytime via mobile apps or web portal and promptly arrange maintenance if any abnormality is identified. During the year, 14 pieces of such kind of vibration and temperature sensors were installed on plant equipment at locations that are remote and not easily accessible.

## Electronic Permit-to-Work System (e-PTW)



The first e-PTW for LPS was launched in June 2021 to replace the traditional way of issuing hard copy of Safety Documents for work on power plant equipment. By making use of advanced mobile technology, the e-PTW enables Authorised Person to issue electronic Safety Documents to Competent Persons by using mobile devices and personal computers anytime and anywhere. In addition, Electronic Lockout Boxes with programmable door locking function are used to securely keep the Safety Keys. Based on the success of this pilot project, we are extending the use of e-PTW to other kinds of Safety Documents.

## Online Knowledge Management Platform



We understand the importance of delivering consistent experience to our valuable customers to gain customer trust and confidence. Knowing our products well and being able to respond quickly to customers with a total solution is

essential to achieve this. In 2021, the Customer Services team leveraged SharePoint and Tableau functionalities to engage the team in the digital transformation and systematic running of knowledge management.

A weekly quiz on various facets of our operations and new service initiatives is developed by experienced supervisors and posted on the SharePoint for the individuals to conduct self-test to refresh their operational knowledge regularly. To turn data into actionable insights, Tableau is used to analyse the quiz results of individuals and the whole team to closely monitor staff competency and identify areas for more training and coaching. We have developed a total of 22 quizzes in 2021 since the inception of the online knowledge management platform in July. The platform has been well received by our colleagues as a tool to help them strengthen their job skills and knowledge.





Sharing our Planet

# Going Green Together







# Sharing Our Planet



## Management Approach

At HK Electric, we are committed to minimising the environmental impact of our business in order to help combat climate change and improve local air quality among other important environmental objectives.

We support the Government's environmental and climate policies, and comply with applicable laws and regulations. Our strategy and management approaches for safeguarding the environment are articulated in our Environmental Policy, which was reviewed in 2021 and subsequently updated to provide more detailed guidance on how to achieve continuous improvement. The updated policy addresses both the direct and indirect impact of our business, including working with suppliers, contractors and other business partners to promote environmental stewardship in our supply chain.

Environmental risks are integrated into our Enterprise Risk Management Framework and climate change has been identified as one of the principal risks to our business. Please refer to the chapter on [Running a Sustainable Business](#) for more information.

HK Electric's Environment Committee coordinates the full integration of environmental considerations into all

aspects of business planning and operations with robust environmental management and energy management systems certified to international standards ISO 14001 and ISO 50001, respectively. We prevent and mitigate adverse environmental impacts in a systematic way through environmental impact assessments, mitigation measures, and regular environmental monitoring and audits. In 2021, 60 environmental management programmes were formulated to improve environmental performance with reference to measurable targets.

Environmental stewardship cannot be achieved in isolation. We collaborate with the Government and NGOs through education campaigns, and service and funding schemes to promote environmental awareness among our employees, business partners and customers, as well as the general public, with particular emphasis on engaging young people.



 [With Power We Care](#)



# Climate Action and Clean Air

In 2021, the global community continued to experience harmful effects from climate change associated with extreme weather events around the world. To help accelerate action towards the goals of the Paris Agreement, the United Kingdom hosted the 26<sup>th</sup> United Nations Climate Change Conference of the Parties (COP26) in Glasgow. The HKSAR Government has published Hong Kong's Climate Action Plan 2050 in line with this global agenda, bringing together our city's overall strategies, plans, targets and actions to achieve carbon neutrality before 2050.



HK Electric supports Hong Kong's decarbonisation targets and initiatives, including the Carbon Neutrality Partnership led by the Environment Bureau, the Low Carbon Charter led by the Business Environment Council and Hong Kong Green Building Council's Advancing Net Zero programme. In addition to decarbonising power generation for our customers, we actively promote low-carbon solutions such as EE&C, RE and EVs. We are also actively reducing emissions of other air pollutants to help achieve fresher air and clearer skies for our city.

Detailed disclosure concerning our climate impact and carbon strategies can be found in our annual response to CDP's climate change questionnaire.



## Decarbonising Power Generation

Switching from coal to natural gas is a clean, reliable and cost-effective way to reduce carbon emissions and improve air quality. A majority of our \$26.6 billion 2019-2023 Development Plan has been allocated to facilitate this transition at LPS with three new highly efficient combined-cycle gas-fired generating units featuring advanced Selective Catalytic Reduction emissions control technology.

We commissioned the first new gas-fired unit (L10) in February 2020. The second new gas-fired unit (L11) was successfully synchronised in November 2021 with full commissioning expected in May 2022. Subsequently, we will retire one aging gas-fired unit and two aging coal-fired units. Our third new gas-fired unit (L12) is under construction and will be commissioned in 2023. Other remaining coal-fired units at LPS are scheduled to be phased out by the early 2030s.



[Farewell to the Coal Era](#)

In 2021, power generated from natural gas contributed around 50% of total output and the carbon emissions were about 26% lower than the 2005 level. After 2023, when all three new gas-fired units are fully operational, the share of power generated from natural gas will increase significantly leading to further substantial reductions in carbon emissions.



To ensure the commercial and operational viability of coal-to-gas transition, we have partnered with CLP Power to build an offshore LNG terminal using Floating Storage and Regasification Unit technology. The terminal will enhance the security and cost competitiveness of fuel supply at LPS by creating a new channel to receive natural gas from diverse markets. Project construction began in

November 2020, proceeded steadily during 2021, and is scheduled for completion in 2022.

HK Electric supports the SBTi, which is a collaboration between CDP, the United Nations Global Compact, World Resources Institute and the World Wide Fund for Nature to promote best practices in setting science-based targets.

In 2017, SBTi recognised HK Electric's carbon reduction target for 2022. We are now in the process of formulating a longer-term target for reducing emissions towards net zero in line with climate science.

Moving forward, we continue to offer our full support to the Government on promoting low and zero-carbon energy sources and carbon reduction technologies.



[HK Electric - Your Partner for a Low-carbon Future](#)

## Comprehensive GHG Emissions Inventory

HK Electric contributes to global warming by producing direct emissions from power generation at LPS (known as Scope 1 emissions), as well as indirect emissions from various activities throughout our value chain (known as Scope 2 and Scope 3 emissions). In 2021, we enhanced our GHG emissions inventory to provide a more comprehensive picture of our total carbon footprint, including major sources of indirect emissions.

In 2021, our Scope 3 emissions were mainly associated with fuel-related activities and capital goods amounting to 1.1 million tonnes of CO<sub>2</sub>e. This represents approximately 13% of our total carbon footprint. (Please see [Summary of Statistics](#).)

### GHG Emissions Inventory

CO<sub>2</sub>e



## Promoting EE&C, RE and EVs

At HK Electric, we believe that widespread adoption of EE&C, RE and EVs can play an integral role in reducing our city's emissions and improving local air quality.

We offer a Feed-in Tariff (FiT) scheme and Renewable Energy Certificates (RECs) to our customers as part of our Smart Power Services package to support local development of distributed RE sources. In 2021, participation in the FiT scheme continued to grow with 105 new RE systems successfully connected. RECs are also popular among our customers who wish to support local development of RE while offsetting their own carbon footprint. Please refer to the chapter on [Serving Hong Kong](#) for more information about other funding and service schemes to promote EE&C and EVs under our Smart Power Services.

Currently, HK Electric owns and operates an 800-kW Lamma Winds and a 1.1-MW solar power system on Lamma Island. In 2021, these systems generated around 2 GWh of green electricity. Together with RE produced under the FiT scheme and HK Electric's other small-scale RE installations, a total of around 5.8 GWh of green electricity was supplied to the HK Electric power

system and was fully subscribed under the REC scheme. This represents an increase of 66% compared with the previous year.

We plan to install additional photo-voltaic panels on the rooftops of our facilities and office buildings on Hong Kong and Lamma Islands. These installations will contribute around 1.2 MW of additional installed capacity.

We also continue to explore options for large-scale local RE generation and are planning for an offshore wind farm with installed capacity of not less than 150 MW located southwest of Lamma Island.



## Improving Local Air Quality

HK Electric has adopted state-of-the-art pollution combating technologies to reduce emissions of sulphur dioxide, nitrogen oxides and respirable suspended particulates as much as practicable from our operations. In 2021, emissions of these pollutants from LPS were in full compliance with the emission caps specified by the Government. During the year, we also concluded consultations with the Government on Technical Memorandum No. 9, which sets more stringent emissions caps that are due come into force from 2026.

We operate six monitoring stations located south of Hong Kong Island and on Cheung Chau Island to continuously monitor the impact of emissions from LPS on ambient air quality. We submit the monitoring data to the Government and also publish it on our corporate website.



## Case Story

# Getting to Net Zero

As climate change continues to affect the globe in unprecedented ways — changing weather patterns, raising sea levels, disrupting national economies and affecting people’s lives — it is more important than ever that we act now to mitigate and adapt to these changes. We are committed to helping Hong Kong achieve carbon neutrality before 2050 in line with the city’s Climate Action Plan 2050 and the global agenda. In addition to switching from coal to gas-fired generation, we are working hard to increase RE generation and studying to introduce other zero-carbon solutions, such as hydrogen-fuelled power, to help Hong Kong achieve carbon neutrality.

## Harnessing more wind power

HK Electric is a pioneer of RE in Hong Kong. On Lamma Island, our 800-kW wind turbine known as “Lamma Winds” has been in operation since 2006, and our commercial-scale solar power system has been in operation since 2010.



To further harness wind power, we initiated a plan years ago to build a large-scale offshore wind farm located southwest of Lamma Island and have undertaken feasibility studies, environmental impact assessments and in-situ wind resource measurements. We are now re-visiting the project with a view to increasing the installed capacity of the wind farm from 100 MW to not less than 150 MW.

The proposed offshore wind farm, which we anticipate will be completed and commissioned in 2027, is expected to generate approximately 400 million units of green electricity annually.



## Potential use of hydrogen

HK Electric is also studying the feasibility of moving to hydrogen-fuelled power, using green hydrogen to generate electricity. Hydrogen is a clean fuel that does not emit any carbon on combustion. Although this technology is still new, it has exciting potential to accelerate the transition to net-zero carbon.

Our Projects Division is currently exploring the feasibility of repurposing our gas-fired generating units at Lamma Power Station Extension to allow them to operate with hydrogen fuel. In the mid-term, this could be accomplished by using different natural gas and hydrogen blends, with the goal of transitioning to 100% hydrogen fuel in the longer term.



***" With anticipated advancements in hydrogen technology, there are new opportunities to explore and modify our existing gas-fired units in a cost-effective and environmentally friendly way. As a member of the project team for over a year, I realise that technical challenges remain with respect to retrofitting, ensuring safe handling of volatile hydrogen and securing a reliable supply of hydrogen fuel. However, hydrogen, being the most common and simplest element in the universe, definitely has great potential of becoming the cleanest energy solution for future and can help us get to net-zero carbon. "***

**Tracy Lam**  
Engineer, Projects Division

***" Keeping pace with the global RE development, the offshore wind farm will benefit our city by providing renewable energy source and help us reach our goal of net-zero carbon. I am thrilled to be a part of the team working on such a meaningful project. Meanwhile, as with any project, we are mindful of the potential impacts on the environment and community arising from the construction and operation of the wind farm. As an engineer, my job is not only to handle the technical issues of the project, but also to work closely with relevant stakeholders to ensure their views and concerns are considered throughout project development. "***

**Percy Kwok**  
Engineer, Projects Division



# Responsible Resource Management

Our planet’s shared natural resources are limited and must be conserved. In addition to adopting energy saving practices throughout our business operations, HK Electric nurtures a culture of responsible consumption and resource management based on the principles of 4Rs: Reduce, Reuse, Recover and Recycle.



## Our Partnerships to Protect the Environment

In 2021, we strived to promote responsible resource management through various partnerships.



### Biodiversity

- Greening Partner Charter



### Energy Saving

- Energywi\$e Certificate
- Charter on External Lighting
- Energy Saving and 4T Charters



### Water Resources

- Let’s Save 10L Water Campaign



### Waste Management

- Wastewi\$e Certificate
- FoodWaste Lean & Green Label Scheme
- Food Wise Charter
- Green Event Pledge



## Energy Saving Opportunities

Buildings represent close to 90% of the total electricity consumption in Hong Kong. Consequently, there are enormous opportunities for energy and carbon savings in our built environment.

At HK Electric, we are committed to leading by example in the design and management of green buildings. We conduct

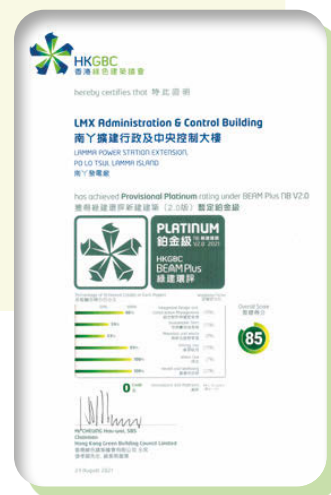
regular carbon and energy audits to evaluate opportunities for further energy savings. We also utilise data collected from energy meters to enhance energy monitoring in our buildings and to fine-tune our energy saving plans. Our ISO 50001 energy management system already encompasses four buildings at LPS, and we have plans to expand the scope by incorporating additional facilities in the coming years.

In accordance with our new energy saving targets adopted in 2021, we are striving to reduce energy consumption in our key office premises by 5% in 2025 compared with 2020. During the year, we implemented energy saving measures such as upgrading mechanical ventilation and air-conditioning systems with more efficient models. We also plan to install additional solar panels on selected facilities and office buildings.

To improve the energy efficiency of our buildings' equipment and systems, we continued to conduct retro-commissioning (RCx) utilising AI-based systems and smart temperature sensors to optimise air-conditioning and realise energy saving opportunities. We target to implement RCx in Hongkong Electric Centre and a building at LPS by 2023.

## Green Building Design

In 2021, our Lamma Extension Administration and Control Building received a Platinum rating in Provisional Assessment under BEAM Plus New Buildings Version 2.0.



## Responsible Waste Management

We prioritise waste prevention and reduction, as well as the reuse and recycling of waste materials, in accordance with our comprehensive waste management approach. When other waste management options have been exhausted or are not available, we dispose of waste in full compliance with relevant laws and regulations. Hazardous waste streams, such as waste oil, are handled by licensed contractors under a trip-ticket system.

Wherever possible, we seek out opportunities to reuse and recycle waste within our own operations. We have developed innovative solutions to reuse retired EV battery banks as portable energy storage for operating tools and equipment

used for cable jointing, and to provide back-up energy storage in substations. In 2021, we made use of retired EV batteries to develop two portable electrical power stations that help reduce the usage of diesel generators at site. During the year, we collected and reused 9,600 litres of waste oil to lubricate coal unloading machinery at LPS and converted 294 m<sup>3</sup> of garden waste into nutrient-releasing mulch for fertiliser. We also recycled about 95% of 34 kT of construction waste generated from our major construction projects as infill for land reclamation.

## Sustainable Use of Ash and Gypsum

Ash and gypsum are two major types of non-hazardous by-products produced from coal-fired power generation. We work with qualified third parties to recycle these materials as inputs to production for other industrial purposes. As we progress with our plans to displace coal-fired power with natural gas at LPS, the production volume of ash and gypsum will continue to decline. Our target is to reduce ash and gypsum production by 37% in 2024 compared with 2019.





### Innovative Way to Recycle Sediment Waste

HK Electric has worked closely with researchers from Hong Kong Polytechnic University to develop a recycled fill material using by-products from the LPS Navigation Channel Improvement project and coal-fired power generation at LPS. The specially designed recycled fill material combines dredged marine sediment with coal ash and cement.



During laboratory trials, 17 mixes were created and tested to assess the influence of different variables on compressive strength of the final product, including dryness of the marine sediment and the precise ratio of various inputs. The result is a carefully-crafted mixture that can be mass produced on site at LPS.

During 2021, the new recycled fill material was successfully applied in multiple locations during construction on Lamma Power Station Extension (LMX). This important development is consistent with our commitment to prioritise waste reduction and recycling by diverting waste from waste disposal. It is particularly valuable for helping reduce the stream of by-product from the LPS Navigation Channel Improvement project that is otherwise bound for the Government's sediment disposal site.

We collect and recycle various types of waste from our office buildings, including food waste, paper, metal, plastics, used batteries, compact fluorescent lamps and printer cartridges.

We strive to avoid plastic waste from our staff canteens by banning disposable tableware and plastic straws. As a signatory of the Food Wise Charter, we work continuously to reduce food waste by various means ranging from thoughtful meal ordering and preparation, to food waste separation at designated collection counters and treatment with a decomposer to produce fertiliser. When circumstances allow

after the pandemic, we look forward to resuming our usual practice of donating surplus food to a local charity, Food Angel.

Throughout our business, we are reducing paper consumption by digitalising work processes and purchasing recycled paper. During the promotional period from 1 June to 31 December 2021, we encouraged our customers to switch to e-bills and autopay or Faster Payment System (FPS) by offering a one-off \$30 incentive. Customers can choose to offset the value of this incentive against their electricity charges or donate it to one of our designated green groups.



### Water Resources Conservation

We acknowledge the importance of managing water risk and seek to use water in a sustainable way. We participate in the annual CDP water security questionnaire to disclose our water risk management practices and performance. Our Environmental Policy outlines our commitment to implementing practical measures for reducing water consumption, reusing or recycling wastewater and minimising the impact of effluents that are discharged from plants.

We have set a target to collect plant effluent and rain water for reuse at LPS each year. We also target to reduce consumption of town water in our key office premises by 1% in 2025 compared with 2020.

Smart water meters have been installed at LPS to monitor water use in real time. In 2021, we collected and reused 113,640 m<sup>3</sup> of rainwater and plant processing water. Dedicated storage and treatment facilities are in place to collect and recycle the wastewater generated during construction work at LMX site.

We undertake wastewater treatment before discharging effluents, including treatment to remove oil, grease, suspended solids and heavy metals. A pilot pumping system has been installed at the LMX urea handling plant to collect spent urea solution from the drainage system. In 2021, we recovered 36 m<sup>3</sup> of waste urea solution.





## Biodiversity Protection

HK Electric has a proud legacy of helping conserve the ecology of Lamma Island by controlling air, noise, water and light pollution, while actively cultivating native plant species and protecting local biodiversity. Our fish deterrent system, for example, generates low-frequency sounds to deter small fish from becoming caught up in seawater inlet culverts at LPS.

Safeguarding biodiversity is an important objective of environmental impact assessment studies that are completed in the course of all major development projects, including the LPS Navigation Channel Improvement, Offshore LNG Terminal and Offshore Wind Farm. During the implementation phase of all projects, we undertake environmental monitoring and audit programmes to ensure that recommended mitigation and remedial measures are fully implemented.

During the year, we monitored water quality conditions to ensure that marine habitats were not adversely affected by construction work for LPS Navigation Channel Improvement. A Marine Conservation Enhancement Fund and a Fisheries



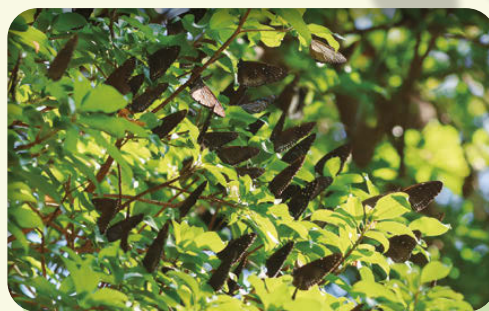
Enhancement Fund have been established as part of the Offshore LNG terminal project to support conservation and sustainable development of local fishing industries. Nineteen funding applications received in 2021 amounting to around \$27 million have been approved.



## Protecting Butterflies on Lamma Island

In November 2021, Green Power and Living Lamma, two local NGOs, discovered a new wintering site for butterflies on Lamma Island, at which around 3,000 danaids aggregated in a particular location for the first official record. It is believed that the butterflies were taking the site as a stop-over and might leave the site in a few weeks to continue their migration.

At that time, HK Electric had a construction site in close proximity to the wintering site. As soon as we were informed by Green Power, we promptly decided to suspend the site work for four weeks and required our employees and contractor to observe the basic rules provided by Green Power to avoid disrupting the butterflies' long-haul migration. We are glad to see that our contractor has taken the conservation measures very seriously in order to help us protect this beautiful species together.



Photos by Green Power



# Education and Awareness

HK Electric believes that every member of our community can contribute to creating a more sustainable future for our city. It is essential that we continue to enhance public education, awareness and participation if we are to realise this vision.



## Happy Green Campaign

In 2021, HK Electric’s Happy Green Campaign adopted a new theme entitled “Decarbonisation: Our New Mission” to promote awareness about EE&C, RE and low-carbon lifestyles among young people. Due to the ongoing pandemic, we continued to deliver educational contents in a fun and light-hearted way via social media, such as Green TV on the campaign’s mini-site and Facebook page.



## Pillar Box Design Competition



In July, we invited members of the public to help us transform HK Electric’s roadside pillar boxes into beautiful works of art promoting decarbonisation messages.

More than 480 submissions were received from participants in three

categories — Primary School, Secondary School and Open. The entries were judged against the theme “Decarbonisation: Our New Mission”, in aesthetics, creativity and ability to inspire.



In 2021, more than 40 secondary school students were nominated by their schools to join the Happy Green Ambassador Programme and they attended training on how they can promote green living in school and the community. Outstanding Ambassadors of the previous year attended a “Smart City Local Tour” hosted by representatives from HK Electric, Cyberport and local start-ups to share views on how various sectors are working together to develop Hong Kong into a smart city.

During the year, our Happy Green Schools programme continued to expand. The network now covers more than 500 primary and secondary schools throughout Hong Kong. We continued to implement Other Learning Experience (OLE) activities in hybrid-mode, including 22 interactive drama shows, four STEAM workshops in partnership with Learning through Engineering, Art and Design (LEAD) of Hong Kong Federation of Youth Groups (HKFYG), a green campus TV partnership with M21 of HKFYG, and three virtual tours to HK Electric’s Smart Power Gallery. We also provided funding of up to \$10,000 each for 17 schools to implement green projects on campus.

Our annual “Green Energy Dreams Come True” competition returned in 2021 after a one-year suspension due to the pandemic, and expanded its scope to cover tertiary institutes. Ten projects from secondary schools and seven projects from tertiary institutes received funding of up to \$50,000 each to help make the students’ green dreams a reality.



## Green Hong Kong Green

Our Green Hong Kong Green (GHKG) programme is now in its 17<sup>th</sup> year. This award-winning initiative is co-organised by HK Electric and the Conservancy Association to foster public appreciation of Hong Kong's eco-heritage resources through guided tours. In 2021, GHKG received a bronze award from the 17<sup>th</sup> China Golden Awards for Excellence in Public Relations in the category of Environmental Protection and Green Promotion.

In March 2021, we launched a new eco-heritage route in North Point entitled "The Eastern Sparkle" with a series of promotional videos, including interviews with local residents and highlights of scenic spots and special ecological features. We also ran a mobile phone photo competition on GHKG's Facebook page to attract public interest.

We introduced monthly online tours via Zoom from April in lieu of physical tours, which remained suspended throughout



[The Eastern Sparkle](#)

the year due to the pandemic. More than 1,300 people participated in nine online tours following four eco-heritage routes. The online tours featured guest speakers sharing stories about local ecology and history, as well as interactive games with prizes.



## Environmental Campaigns

We encourage our employees and others to participate in a range of green campaigns organised by the Government, green groups and other NGOs.

In 2021, we supported "Hong Kong Green Day" and "International Coastal Clean-up Hong Kong" organised by the Green Council, as well as the "Green Earth Companion" programme organised by The Green Earth and "Clean Up the World in Hong Kong" organised by Green Power. We also support an annual campaign led by The Conservancy Association entitled "No Hill Fire" to raise awareness about fire prevention during the Ching Ming and Chung Yeung



Festivals when it is traditional to burn paper offerings giving rise to higher fire risk in Hong Kong's countryside.

In celebration of the United Nations' World Environment Day on 5 June 2021, more than 850 employees joined in activities focused on environmental protection and low-carbon lifestyles during our month-long campaign to "Go Green". These activities, centred around four basic necessities of life — apparel, diet, living and transport — included a quiz, a workshop on urban organic planting, and recycling of used books and electronics.



[World Environment Day 2021](#)



Serving Hong Kong

# Caring for our City Together







## Management Approach



 With Power  
We Serve

HK Electric plays an essential role in enhancing the quality of life in our city. We work tirelessly to meet and exceed the expectations of our customers and our community because only with the support of these stakeholders can our business continue to thrive.

Our commitment to excellent reliability and service is reflected in our corporate policies on Quality, Customer Services, Complaints Handling, Personal Data Privacy, Information Security and Corporate Security. These guide us to achieve total customer satisfaction through continuous improvement.

Our Customer Services Steering Committee monitors our service performance with reference to specific and measurable targets, including our pledged Service Standards. Our Stakeholder Satisfaction Steering Committee seriously considers all complaints received and oversees their appropriate resolution.

Throughout our operations, we implement quality management, asset management and information security management systems certified to ISO standards 9001, 55001 and 27001, respectively. We

also have a physical security management system in place for our key facilities and premises.

In accordance with our obligations under the current SCA, we are committed to fulfilling the Government's energy policy by supplying safe, reliable and environmentally friendly electricity at reasonable cost. To accomplish these objectives, we implement a range of funding and service schemes — known collectively as Smart Power Services — helping customers and the community in decarbonisation through adoption of renewable energy, energy efficiency and conservation, mobility and construction site electrification, and low-carbon lifestyle. Many of these initiatives are specifically targeted at families and small businesses who are most in need.

We pride ourselves on the many ways in which HK Electric gives back to Hong Kong. Our community investment strategy strives to create and sustain long-lasting social impact through partnership. We engage with community groups to build social capital through a range of programmes focused on environmental education and care for the elderly.

## Reliable and Affordable Power

An efficient and uninterrupted supply of power is the cornerstone of Hong Kong's status as an international centre for trade and finance. It is also integral to everyday life in our high-rise city; powering public transport and building services and supporting essential medical and communications services particularly during the COVID-19 pandemic.

In 2021, we continued to demonstrate extraordinary resilience by achieving a high power supply reliability rating in excess of 99.9999% for the second year in a row. The average number of voltage dips experienced by our customers was also the lowest in 14 years.



### 2021 Power Supply Performance

# >99.9999%

record-high supply reliability rating;  
>99.999% for the 25<sup>th</sup> year in a row since 1997

# <0.5 minute

unplanned customer minutes lost;  
<1.0 minute for 13 consecutive years since 2009



### World-class Power System

We implement a comprehensive and proactive approach to ensure the robustness of our power system through strategic investments that maintain, upgrade and improve our equipment, technologies and processes. In addition to various capital enhancement projects, such as our new gas-fired generating units and offshore LNG terminal, we are continuously enhancing both the capacity and the reliability of our transmission and distribution network.

We are in the process of implementing recommendations from our Network Reliability and Operations Review conducted in 2020. In 2021, we commissioned 33 new distribution substations or transformer pillars and converted 11 distribution substations from 11-kV to 22-kV to improve supply reliability, as well as commissioning our first set of 360-kVA mobile electricity generators with parallel operation function to enhance emergency preparedness. We also reviewed and formulated initiatives and action plans to further enhance our transmission reliability, such as undertaking enhanced preventive measures to guard against transmission cable damage and preparing for network









expansion to serve new large-scale developments in the eastern and southern parts of Hong Kong Island.

We strive to operate the most reliable transmission and distribution network in the world using remote online monitoring and control systems. Recognising that "an ounce of prevention is worth a pound of cure", we adopt a comprehensive maintenance programme that utilises early detection and advanced diagnostic techniques to identify potential problems and ensure timely repair or replacement of primary and secondary equipment.



### Proactive Risk-based Asset Management for our Electricity Network

Risk monitoring approaches	Assets: Typical measures	Purposes
 <b>Condition monitoring and advanced diagnostic techniques for network components</b>	<b>Switchgears:</b> Advanced online partial discharge detection system	 Early detection of incipient faults to avoid potential component failure
	<b>11-kV distribution cables:</b> Very-low-frequency-monitored withstand test	 Early detection of water ingress in cable insulation layer to avoid potential cable faults
	<b>Low-voltage network:</b> Low-voltage fault indicator (currently subject to trial)	 Improving efficiency of fault identification and trouble shooting
 <b>Health Indices register for network components</b>	<b>Primary and secondary assets (e.g. switchgears, transformers, relays, and remote terminal units):</b> Formulation of critical indices	 Timely refurbishment or replacement to avoid equipment failure

#### 2021 findings and enhancements

**20**

11-kV cable faults were averted.

**29**

potentially faulty 11-kV cables were removed.

**505**

cables were tested.

**25**

weak cable components were identified for replacement.

**53**

11-kV and **45** LV faulty cable joints/bodies recovered from repair or replacement were dissected, from which failure modes such as partial discharge, water ingress or damage by prior road works including termite attack were identified.

**27**

aged 11-kV joints identified and replaced for cables tested with poor Health Index previously were dissected in 2021 and the causes for defects at these joints, which led to high dissipation loss factor in the cable circuit, were revealed.

In 2021, we completed a number of enhancement projects of our Energy Management System (EMS) and Distribution Management System (DMS) at HK Electric's 24-hour System Control Centre. These systems incorporate internally-developed smart grid features to control and monitor power generation, transmission and distribution. They play a central role in enabling safe, reliable and efficient electricity supply to our customers while reducing emissions.

To ensure operational continuity and emergency preparedness, we carry out changeover drills on our back-up EMS and DMS on a regular basis. We conduct reviews and enhancements to ensure that protection of these critical cyber assets is in line with international standards. We also closely review the operation regime of the generation facilities to ensure various targets for emission control are being met taking into account the commissioning of new gas-fired units.



The COVID-19 pandemic continues to affect global supply chains, giving rise to risks for our operations. We have therefore introduced precautionary measures, including increasing our inventories of essential equipment.





## Physical and Cyber-Security

We have comprehensive management systems in place to protect our facilities and information assets from physical and cyber-security threats.

Our Physical Security Management System enables us to identify potential physical security threats and to establish, implement, operate, monitor, review and maintain all appropriate measures for the management of the associated risks. We adopt two-factor authentication, video monitoring and analytics, and automatic detection of open access doors at key operational premises. We have also established contingency plans for large-scale public events to safeguard electricity supply facilities and ensure supply reliability.

Our in-house team of cybersecurity specialists implements a holistic, risk-based approach to combating data breaches and cybersecurity failures, overseeing a robust cybersecurity management framework in close coordination with external service providers. This management framework addresses the technical, regulatory and managerial aspects of cybersecurity with a “defence-in-depth” approach that integrates multiple layers of security to identify, protect, detect, respond to and recover from cybersecurity incidents.

Our System Operations Cyber Security Incident Response Plan characterises and classifies reportable cybersecurity events. We also have recovery procedures in place for individual critical IT systems in accordance with our Crisis Management Plan, and conduct regular external audits of our Customer Information System to ensure that security controls conform to international standard ISO 27001.

We have adopted seven strategies proposed by the Department of Homeland Security of the United States to defend industrial control systems. To safeguard our information assets against unauthorised access and malicious attacks, we have also implemented Next Generation Firewall and Intrusion Prevention System, Advanced Persistent Threat Protection Solutions, Mail Gateway, Secure Web Proxy, and Anti-malware Systems.



The Hong Kong Police Force delivers a seminar on “The Trend of Cyber Security and Technology Crime” to our employees.

Frontline employees play an essential role in preventing and reducing cybersecurity threats, so we engage with them to help us achieve continuous improvement. We conduct regular training on data privacy and data protection in addition to our dedicated cybersecurity awareness programme, and maintain a “Cybersecurity Corner” on our Intranet featuring relevant news and information. For more information about how we strengthen awareness of cybersecurity among our employees, please refer to the ensuing [Case Story](#).



## Smart Access Control

We implement a facial recognition attendance system to facilitate access control for site operatives of LMX by installing Smart Gates with a real time face recognition and monitoring system at the site entrances. This control system minimises our dependence on security guards and increases the efficiency of the access registration process, helping us save over 300 manhours per month.

Site management can also perform real-time monitoring and analysis on the site workforce through a cloud-based data platform. Compared to the traditional palm scanning system, this contactless biometric identification also reduces infection risks during the pandemic.





## Case Story

# Guarding against Cybersecurity Threats

As the frequency and sophistication of cybersecurity threats continues to increase around the world, it is more important than ever that we protect our critical utility and information assets. Cybersecurity attacks threaten the resilience of our organisation by potentially disrupting business operations and services to customers. They could also result in financial losses and undermine our reputation and credibility in the market place.

We are committed to protecting our people, systems, information, facilities and property from cybersecurity threats. We take a vigilant, proactive approach that combines promoting a strong cybersecurity culture with robust management processes and controls in order to ensure that all employees understand the potential risks, and have the knowledge and skills to protect, defend and respond to cyber-attacks.

We provided regular updates to our colleagues on major IT policies and guidelines, such as our Mobile Device Policy

and Cyber Security Strategy and Management Framework, through short videos and quizzes. In addition to regular training as part of our dedicated cybersecurity awareness programme, in 2021, we held a series of events focused on phishing and ransomware.

We introduced four short videos to help employees learn how to protect against phishing attacks, in which four colleagues from different divisions shared their experiences and practices of handling and reporting phishing emails.

### 4-step Rubric for Phishing Emails



#### Consequence

The consequence of being deceived by phishing emails

#### Share Responsibility

The importance of sharing responsibility and knowledge when combating phishing emails



#### Awareness

How to increase the awareness towards phishing emails by identifying the telltale signs

#### Tackle

The 5-step approach P-R-O-V-E to tackle external emails, where P-R-O-V-E stands for Preview, Remove, Organise, Verify and Escalate



**"We should not merely regard combating phishing emails as a job duty. When we conduct anything online, whether at work or at home, we should develop a careful mindset and stay alert to risks."**



**Alex Ng**  
Group Legal Counsel &  
Company Secretary

**"No company can rely on technology alone to block all phishing emails as there will always be phishing emails that successfully find their way to colleagues' mailboxes.**



**Vincent Chow**  
Group Treasurer

**"To me, phishing drills are like mock exams in our school days, and they can help refresh our memory and familiarise ourselves with tricks of phishing emails so that we are better able to identify them and not be fooled."**



**Victor Fan**  
Manager  
(Electrical Contracts)

**"Our team takes care of the public mailbox of HK Electric. By adopting a five-step approach known as Preview, Remove, Organise, Verify and Escalate in handling incoming emails, we can help screen out irrelevant emails."**



**Janette Wong**  
Assistant Manager  
(Administration Services)

We also conduct regular phishing drills to gauge awareness, test responses and bolster employee confidence. Employees who fall prey to the phishing drills are required to attend mandatory training. In 2021, the results of our phishing drills were not only satisfactory, but also steadily improving, demonstrating that employee awareness continues to improve year-on-year.

Keeping up-to-date on the latest cybersecurity threats is a critical responsibility of our Management Team. In 2021, 70 division heads and their direct reports attended two cybersecurity awareness workshops.

We view the rapidly evolving cybersecurity landscape as a critical part of our business. We are committed to constantly evaluating our risk exposure and strengthening our response.





### Alleviating Economic Hardship

With the pandemic showing no signs of easing, many families and small businesses in Hong Kong continue to struggle financially. HK Electric remains steadfast in our commitment to supporting our customers and our community during these difficult times. We strive to maintain tariffs at an affordable level and provide targeted support for those who are most in need.

In 2021, we expanded the scope of our Smart Power Care Fund to facilitate the purchase of energy-efficient kitchen, laundry and water-heating equipment and appliances by Small and Medium Enterprises (SMEs) in a range of sectors as well as NGOs delivering educational and community care services. Together with the distribution of dining coupons again, more than 300 SMEs and 40,000 underprivileged families benefited directly from this round of relief measures.

During the year, we continued to implement concessionary tariff schemes for the most vulnerable members of society and offer a Super Saver Discount to encourage our customers to save energy.



### 2022 Tariff Adjustment and Relief Measures

In November 2021, HK Electric announced an upward tariff adjustment for 2022 due to the dramatic rise in global fuel prices outside our control.

Following the annual adjustment, the Fuel Clause Charge increased to 27.3 cents per unit of electricity effective 1 January 2022. While the Basic Tariff remains unchanged at 109 cents per unit of electricity, a Special Rebate of 1 cent per unit of electricity was introduced to help ease the impact of the tariff increase. As a result, the Net Tariff for 2022 increased by 7% to 135.3 cents per unit of electricity compared to 2021.

	January 2021 (¢/unit)		January 2022 (¢/unit)
Basic Tariff	109.0	▶	109.0
Fuel Clause Charge	17.4	▶	27.3
Special Rebate	-	▶	-1.0
<b>Net Tariff</b>	<b>126.4</b>	▶	<b>135.3</b>

HK Electric has set aside \$63 million from our three existing funds to provide support for the underprivileged and to promote energy efficiency and low-carbon living.

In 2022, we issued another round of dining coupons to subsidise consumption of food and beverages for low-consumption residential customers and those enjoying our concessionary tariff scheme at participating eateries run by SMEs. Electricity subsidy for households living in sub-divided units (SDUs) has also been increased from \$600 to \$1,000 and we will continue to assist residents in these dwellings to carry out rewiring work for installation of HK Electric's individual tariff meters and improving electrical safety. We will also provide subsidies up to a total of \$25 million to assist eligible building owners to undertake projects to enhance energy efficiency of building services in communal areas.

## Serving our Customers

At HK Electric, we are committed to service excellence at every level. In 2021, we met or surpassed all 18 of our pledged Customer Service Standards for electricity supply, connections, accounts and meters, enquiries and emergency services, among others.



### Excellent Service

We continue to overcome unprecedented challenges during the pandemic to deliver exceptional customer services. During the year, we received a number of prestigious customer service awards, as well as 2,024 commendations from our stakeholders. We achieved an average customer satisfaction score of 4.7 out of 5 in after-service surveys.

In 2021, four complaints from stakeholders were received, compared with eight the year before. All the complaints were product or service-related and handled in accordance with established procedures.

Responding to growing customer demand for digital services and personalisation, especially since the pandemic, we have introduced a suite of online platforms that enhance the digital experience of our customers and allow them to manage their accounts at their convenience. Service requests can be made online via easy-to-use request forms. For a hassle-free, streamlined experience, customers can track the progress of their applications for supply, transfer, termination and autopay, as well as their requests for special meter readings via an online portal.



We are enhancing our services for tradespeople. In 2021, we updated HK Electric's Guide to Connection of Supply to reflect changes in the Code of Practice for Electricity (Wiring) Regulations, updates on interface requirements between customer installations and the supply system, as well as new services offered by HK Electric. We also developed an online tool for tradespeople and customers to design and construct electrical installations, with the objective of helping avoid costly and time-consuming mistakes.

### Transition to a Smarter City

We are making good progress in rolling out Advanced Metering Infrastructure (AMI) in connection with the installation of smart meters to help transform Hong Kong into a world-class smart city. The project is targeted to be completed by 2025. As at the end of 2021, we have achieved our interim target of deploying more than 120,000 smart meters on our customers' premises.

AMI facilitates the introduction of new digital services that will allow our customers to optimise their energy use, including our new Account-On-Line web interface and mobile app launched in 2021. Customers can view their energy consumption at half-hourly, daily and monthly intervals, and use this information to predict future consumption or receive personalised alerts.

AMI is also helping improve operational efficiency by replacing manual meter readings and enhancing data accuracy. Encrypted energy consumption data is transmitted safely and securely via a wireless network.





## Caring for our Customers

### Greater Convenience



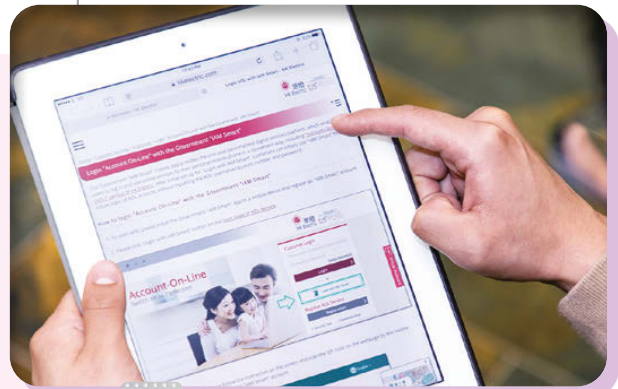
#### Customer Emergency Services Centre

24-hour emergency telephone call and SMS services



#### Account-On-Line Service

Round-the-clock interactive access to electricity account and information regarding planned shutdowns and supply interruptions via our website and app



[Go Digital with Account Matters](#)



#### E-billing / E-payment / Group Billing / Bill of Small Outstanding Amount Services

Green and convenient options for billing and payment



#### One-stop Services for SMEs / Data Centres

Comprehensive services for business start-ups and energy management



#### Customer Relationship Management Programme

Ambassador visits to corporate customers with one-stop service on technical and account matters



#### Virtual Assistant "Elsie"

Available on our website and mobile app to answer general enquiries 24 hours a day, 7 days a week

### Supporting Special Needs



#### For Ethnic Minorities

Forms and pamphlets in eight languages of ethnic minorities



#### For the Hearing-impaired

Videos supported with sign language, SMS enquiry service and teleloop system at our service counters



#### For the Visually-impaired

Voice-assisted e-bill service and braille bills



#### For the Elderly

"Web for the Elderly" and express counter equipped with magnifying glasses



#### For the Disabled

Automatic doors for access to our Customer Centre and a dedicated wheelchair-friendly counter



## Connecting with our Customers

Our Customer Liaison Group (CLG) is a valuable forum for exchanging ideas with our customers and gauging public opinion on important issues.

In 2021, this group of 45 members comprises representatives of domestic and corporate customers, district and community organisations and NGOs. We engage with the CLG members through virtual conferences and in face-to-face meetings when appropriate in order to share information and exchange ideas about our latest developments.

Other customer communication channels include service hotlines, after-service surveys, a quarterly newsletter "HK Electric On-line" and an annual brochure, as well as suggestion, feedback, and commendation forms. In 2021, we launched "KR44 TV", which is a video version of our quarterly newsletter "HK Electric On-line", and produced informative videos on our environmental work, customer services and new service offerings.



## Personal Data Protection

We are committed to safeguarding customer privacy in compliance with the Personal Data (Privacy) Ordinance (PDPO) and other relevant codes of practice, including our own Privacy Policy Statement and Group Personal Data Privacy Policy.

The Group Personal Data Privacy Policy is supported by a Privacy Management Programme, including annual personal data inventory reviews and privacy impact assessments to evaluate the effectiveness of data handling and identify areas for improvement. It is reviewed on an annual basis and updated as appropriate.

In 2021, the Privacy Commissioner for Personal Data, Hong Kong (PCPD) conducted an inspection of our customer personal data system and considered that in the protection of our customers' personal data, HK Electric complies with the requirements of Data Protection Principle 4 of Schedule 1 to the PDPO.

We organise regular seminars to raise awareness among our employees about personal data protection. In 2021, we organised a Privacy Awareness Week with virtual training sessions for our employees on various issues relating to the collection, disclosure and use of personal data relevant to our daily operations. Virtual training sessions were also arranged to brief our employees on the amendments to the PDPO in the year to address the issue of doxxing.

In addition to issuing guidelines for our employees on handling customer data, we have a Data Loss Prevention System in place to prevent unauthorised disclosure of personal data through the internet, emails, portable storage devices and file transfers.





# Smart Power Services

HK Electric fosters EE&C and promotes RE and EVs in the community through a suite of funding and service initiatives known as Smart Power Services targeting residential, commercial and industrial customers, as well as education and welfare organisations.

In 2021, we also expanded our services to include Smart Power for Construction Site to help reduce emissions of carbon and other pollutants from construction activities.

We continue to engage with stakeholders about Smart Power Services through a range of channels, such as our dedicated webpage and YouTube channel, mobile app, phone hotline and email enquiry service. In 2021, we worked with the Aberdeen Kai-fong Association to integrate Smart Power Services into proposed transitional housing in Stanley, and with the Conservancy Association to assist local NGOs in replacing traditional buses with EVs.

During the year, there were around 300 public events to promote Smart Power Services, including in-person and virtual tours of our Smart Power Gallery and online seminars and workshops. We also produced several videos on Smart Power Services as well as success stories to promote decarbonisation benefits to the public.



## Smart Power Services Earn Accolades



In 2021, HK Electric received the following accolades for its Smart Power Services, Smart Power Care Fund and integrated digital solution for "Care and Share" SME Caterers Subsidy Scheme:

★ **SDG Achievement Awards Hong Kong 2021**  
"Gold Award" and "Outstanding Impact Award"

★ **The Hong Kong ICT Awards 2021**  
"Silver Award" under the Smart Business Award (Solution for SME) category

★ **2021 IDC Future Enterprise Awards for Hong Kong**  
"Best in Future of Industry Ecosystems"

★ **The 17<sup>th</sup> China Golden Awards for Excellence in Public Relations**  
"Gold Award" under the Corporate Social Responsibility category







## 2021 Highlights

### Energy Efficiency

#### 2021 Accomplishments

**Smart Power Building Fund:** Subsidies for building owners to enhance energy efficiency of communal building services (\$25 million allocated annually)

73 applications were approved representing 108 buildings and ~\$24 million in subsidies.

**Smart Power Energy Audit:** Free energy audits for non-residential customers to help identify energy saving potential

210 free energy audits were conducted.

**Smart Power Loan Fund:** Interest-subsidised loans for eligible customers to finance energy efficiency enhancement projects

3 major banks have participated in the loan provision.

**Smart Power EV Charging Solution:** One-stop service for customers to implement EV charging solutions

We supported ~400 cases of application for the Government's EV-charging at Home Subsidy Scheme, involving ~50,000 car-parking spaces.

**Smart Power for Construction Site:** One-stop service to provide timely electricity supply for construction sites

>10 construction sites have been served since the launch of this programme in April 2021.

**Smart Power for Data Centre:** One-stop service for industry practitioners to develop low-carbon data centres

2 service requests were received from customers.

### Renewable Energy

#### 2021 Accomplishments

**Feed-in Tariff Scheme:** Purchasing electricity generated by customers' RE power systems at \$3-5 per unit of electricity

105 grid connections were made amounting to >2 MW in total capacity.

**RE Certificates:** For sale to interested customers at \$0.5 premium per unit of electricity

~5.8 GWh of green electricity was generated in 2021 and fully sold.

### Green Education

#### 2021 Accomplishments

**Smart Power Education Fund:** Promoting EE&C, RE and low-carbon lifestyles to the public through our Happy Green Campaign and other programmes (\$5 million allocated annually)

There were ~80,000 participants in various activities. (Please see the chapter on [Sharing our Planet](#) for more information.)

### Supporting the Needy

**Smart Power Care Fund:** Eight programmes providing subsidies for people in need to adopt low-carbon lifestyles, improve the living environment and enhance electrical safety

#### 2021 Accomplishments

~41,140 underprivileged families benefited from:

- Energy-efficient Appliances Subsidy Programme
- SDU Electricity Charges Relief Programme
- SDU Rewiring Subsidy Programme
- "Care and Share" SME Caterers Subsidy Scheme

61 NGO community centres benefited from:

- NGO Catering Subsidy Programme

83 non-residential customers benefited from:

- Energy-efficient Equipment Subsidy Programme
- 27 projects were approved under:
- Energy-efficient Community Subsidy Programme
  - Smart to Care Subsidy Programme



## Going Green through Electrification


### Supporting Construction Sites to Achieve Zero Emissions

HK Electric has been working hard to map out appropriate solutions to support the construction industry to reduce carbon emissions. In 2021, we launched our Smart Power for Construction Site with the aim of replacing diesel generators on construction sites with a timely and adequate supply of grid electricity. This service not only helps reduce the impact of air and noise pollution for site workers and local residents, but also cuts carbon emissions by up to 60% throughout the construction life cycle.

The scope of our service includes estimation of electricity demand, advance planning for temporary and permanent power supplies, advice on developing RE and EV charging facilities, and recommendations on energy efficiency measures. We support the developers to implement battery energy storage systems that deliver a convenient and reliable power supply designed to meet the instant peak demand of heavy-duty electrical construction equipment such as tower cranes.

We have also taken the lead in promoting electrification on the construction site of our newest gas-fired unit at LPS. We assisted our contractors to estimate electricity demand and arranged optimal workflow for power supply. We supply power to the site through a low-voltage cable and transformer pillar, subject to power demand.




 [Smart Power for Construction Site](#)

### Driving the Popularisation of EVs

HK Electric's Smart Power EV Charging Solution assists customers applying for the Government's \$2 billion "EV-charging at Home Subsidy Scheme", which subsidises the installation of EV charging-enabling infrastructure in car parks of private residential buildings. We have issued around 400 power supply capacity confirmation letters to Management Offices and Owners' Incorporations, covering around 50,000 car-parking spaces. Until the end of 2022, we will also continue to provide free EV charging to the public at our charging stations on Hong Kong Island.



 [Smart Power EV Charging Solution](#)

We deploy EVs in our own vehicle fleet. We have set a target to increase the proportion of EVs in our corporate fleet from 50% in 2020 to 53% in 2025. Many fossil-fuel vehicles still remaining are medium-weight or heavy ones with no suitable electric versions for the time being. As at the end of 2021, over 50% of parking spaces on HK Electric's premises have been equipped with EV chargers. Depending on operational needs, even more EV chargers will be installed. Our target is to increase the number of EV chargers on company premises from 196 in 2020 to 228 by 2025.



## Caring for the Community

Caring for the community is an integral part of our corporate mission. We contribute our technical skills, volunteering time, resources and professional expertise towards helping those in need. For decades, our focus has been on elderly care and green education. We work closely with trusted partners and NGOs to implement long-lasting, win-win solutions on these pressing social issues.

In 2021, HK Electric was awarded the “10 years+ Caring Company Logo” by the Hong Kong Council of Social Service in recognition of our culture of service and community care.



### Caring for the Elderly

Now in its 13<sup>th</sup> year, “CAREnJOY for the Elderly” (CAREnJOY) is one of our signature community programmes. In 2021, we continued to partner with nine NGOs to encourage the elderly to stay connected with their local communities.

Whenever possible, we resumed some face-to-face community services that were otherwise suspended due to the pandemic. Approximately 1,100 elders across Hong Kong and Lamma Islands received gift bags containing personal items to fight the virus together with other daily necessities under the “CAREnJOY Go-Go-Go” initiative. Another 180 elders attended four community-based talks on energy efficiency and electrical safety.

During the year, we continued to enhance our digital-based services for elders-in-need. We extended our reach via social media pages of partner NGOs and expanded our “CAREnJOY Non-stop” initiative, which provides useful information via mobile phone messages about energy saving, health tips and dementia prevention. In 2021, we reached about 9,000 elders and CAREnJOY ambassadors each week through this initiative.

CAREnJOY Go-Go-Go





### Embracing the Golden Third Age

The U3A ("University of 3rd Age") Network of Hong Kong was co-founded by HK Electric and the Hong Kong Council of Social Service in 2006. It aims to encourage local retirees to pursue their interests, fulfil their dreams and contribute to the community. In 2021, we financed 48 self-learning centres operated by 16 social service agencies.

We were able to resume smaller scale training activities at U3A centres with appropriate social distancing measures in place while continuing to expand our online offerings. Seven online sharing sessions were organised for over 470 U3A students. In lieu of in-person celebrations, we released a video entitled "Embracing Change" to recognise the achievements of U3A students in 2020.



[Embracing Change](#)



### Giving to Good Causes

HK Electric supports various charitable causes through sponsorships and donations to aid beneficiaries ranging from students of low-income families to NGOs, green organisations and community groups. In addition to funding the U3A centres, our Centenary Trust also continued to provide scholarships for 70 secondary school students with financial needs in 2021.

Since 2004, we have participated in a programme managed by Caritas that refurbishes used computers and related equipment for donation to underprivileged households. In 2021, we contributed 509 computer items to this programme.

Please also refer to the previous section on [Smart Power Services](#) for more information about our funding or services to support people-in-need.



## HK Electric Volunteers

We encourage and support our employees to contribute their time, knowledge and expertise towards local community affairs. The HK Electric Volunteers team has grown from just a few hundred members in 2004 to more than 1,200.

In 2021, HK Electric volunteers participated in 32 service activities totalling 1,320 service hours. Although in-person services were significantly reduced due to the pandemic, we did resume some services with appropriate social distancing

measures in place. We also developed health and safety guidelines for volunteers working outdoors in extreme weather.

Some highlights during the year include delivering personal care necessities to underprivileged families in Eastern district, books recycling, online tutoring and storytelling for children, planting trees and participating in beach clean-ups.



## Story Time with Uncle Wan

In October 2021, Wan Chi-tin, Managing Director of HK Electric, became a storyteller for a group of young children at a library run by Read-Cycling, an NGO dedicated to book recycling. Mr. Wan shared a story about reuse and waste reduction. More than 400 used books were also donated to two children services centres to promote the message of green reading.





Working with Partners

# Achieving Shared Goals Together







# Working with Partners



## Management Approach

Our employees, contractors and other suppliers are essential business partners who play a key role in helping us achieve our vision of excelling in the power business in Hong Kong and ensure safe and responsible business operations.

We are proud to be an “employer of choice” with the ability to attract and retain top talent. Our Human Resources Steering Committee oversees our human resources strategy – SHINE — and is responsible for guiding our continuous efforts in nurturing a harmonious and productive workforce. The acronym SHINE stands for Synergy, Holistic development, Ideal workplace, Nurturing future leaders and Excellence.

We are committed to cultivating a rewarding and fulfilling work environment and improving our workplace diversity and inclusion. We empower our people to achieve their full potential through collaboration, team-work and open dialogue. In addition to rewarding our employees fairly and competitively for their performance, we support their wellbeing through our comprehensive wellness programmes and invest in their professional development in accordance with our Learning and Development Policy.

HK Electric’s Health & Safety Board oversees the company’s health & safety performance. We work hard to ensure safe, accident-free workplaces for our employees and contractors in accordance with our Health & Safety Policy, which focuses on risk mitigation and integrates health and safety considerations into all aspects of our business. The

policy is reviewed at least once every two years. We also have safety management and asset management systems in place that conform to the highest international standards: ISO 45001 and ISO 55001. This helps ensure the safety of our customers and the public, as well as our employees and contractors.

As a responsible corporate citizen, we expect and require all business partners to uphold the core values of our business and work with us to achieve shared goals for sustainable development. Our Code of Practice for Suppliers specifies high standards of ethics, human and labour rights, health and safety, environmental protection and climate action, and cybersecurity for our business partners. In 2021, we stepped up our efforts to ensure that procurement contracts and processes comply with the ISO 20400 Sustainable Procurement – Guidance. We also formalised our Human Rights Policy to uphold human rights across our organisation and to encourage business partners throughout our value chain to do the same.





# Human Capital Management

Our workforce is our most important asset. We strive to treat our colleagues fairly, reward their performance and take care of their wellbeing, while listening and responding to their needs. In 2021, HK Electric was ranked as the sixth Most Attractive Employer in Hong Kong in the Randstad Hong Kong Employer Brand Research.

We offer competitive remuneration packages and extensive career-development opportunities in order to attract and retain the right talent. Consequently, many colleagues enjoy long and fulfilling careers with us. To overcome labour-supply challenges facing our industry, we seek out both experienced candidates and young people embarking on new careers in the power sector.

In 2021, our voluntary turnover rate was 6.0%, up from 2.4% in 2020. This increase was attributed to a more active job market compounded by higher levels of emigration from Hong Kong over the period.



## Embracing Diversity and Inclusivity

As an equal opportunity employer, HK Electric is committed to fair and equal treatment in all aspects of human resource management — from recruitment and training to promotions, compensation, benefits and termination — irrespective of gender, disability, family status, race, age, sexual orientation or other personal attributes. We strictly adhere to these principles in our recruitment processes, selecting new hires based on objective criteria and job-related requirements in accordance with the Employment Ordinance and Equal Opportunity Ordinance.

Discrimination, harassment, vilification or victimisation of our employees will not be tolerated under any circumstances. We encourage all employees to voice concerns. Formal procedures are in place to ensure that employee grievances are handled promptly and fairly in a transparent manner.



We seek to cultivate a diverse workforce with a mix of talent, experience and perspectives that will enhance our business operations. Despite being in the power business, we strive to increase representation of women at all levels of our organisation to promote gender diversity.

Our commitment to rewarding excellence in an objective and fair manner is reflected in our pay-for-performance policy and the competitive nature of our remuneration and benefits packages. All colleagues receive annual performance appraisals and we offer extensive career development and advancement opportunities through internal promotions and transfers. To ensure that HK Electric continues to be an attractive employer, we review and benchmark remuneration annually with reference to relevant industries and comparable organisations. More details on the benefits offered to our people can be found on our [corporate website](#).



## 2021 Voluntary Turnover Rate

Overall turnover rate (%)

6.0



Gender group	Male	Female
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Turnover rate (%)	5.2	9.2
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Age group	Age 30 or below	Age 31-40	Age 41-50	Age 51 or above
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Turnover rate (%)	12.9	7.8	3.8	2.4
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## 2021 Employee Profile\*



Gender group	Male	Female
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Ratio (%)	80.3	19.7
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Age group	Age 30 or below	Age 31-40	Age 41-50	Age 51 or above
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Ratio (%)	19.4	23.2	21.4	36.0
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Employment contract	Permanent	Contract
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Ratio (%)	92.7	7.3
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\* All our employees are based in Hong Kong and nearly all are locally employed. For more details on our employee profile, please refer to our [corporate website](#).



## Engaging with Employees

Our Joint Consultation (JC) committee has been facilitating effective and open communication between employees and management for more than 40 years. Over 70 directly-elected representatives from various employee groups participate in this committee to share employees' needs and ideas to management and also receive information about corporate developments and policies and convey them to their constituents. In 2021, the JC committee met 18 times online to discuss a range of current topics ranging from business operations to employee welfare.

Each year, we organise dedicated sessions to facilitate a company-wide exchange of views. In 2021, more than 80 colleagues participated in quarterly focus groups with management representatives. We also introduced a new communication channel, "Hear Your Voice" to connect young talent with senior executives and foster open dialogue. Three group sessions were arranged for 15 talent to meet with our Operations Director and around 100 talent met with different levels of executives on a one-on-one basis to share



their thoughts about development opportunities and career aspirations. Other internal communication channels include our intranet portal news, the My HKE mobile app, the Ideas Click online suggestion platform and an employee hotline.



## Promoting Employee Wellbeing

We want our employees to be healthy in body and mind, so we offer a comprehensive wellness programme with a wide range of initiatives. The easing of social distancing restrictions in 2021 allowed us to resume some face-to-face activities. Whether online or in-person, we continued to focus on building resilience, as well as promoting physical and psychosocial wellbeing and good family relationships. In 2021, for the seventh year in a row, HK Electric was recognised as a “Happy Company” by the Promoting Happiness Index Foundation and the Hong Kong Productivity Council under the Happiness-at-Work Promotional Scheme.

In March and April 2021, we organised online fitness challenges, such as push-ups and soccer juggling, to encourage our colleagues to keep active during the pandemic. Our Runners’ Club held six online training



workshops on running and warm-up techniques, sports physiology, tips on healthy diet and avoiding sports injury. Between May and July, 15 colleagues participated in a virtual running challenge over a series of weekends. In October, 85 colleagues attended a free physical fitness test in our workplaces organised by the Leisure and Cultural Services Department of the Government.

Online interest classes on a range of subjects from Chinese calligraphy to urban organic planting and hiking remained popular among colleagues during the year. These sessions were broadcast live during lunch hours and were attended by more than 200 participants. In March, 30 colleagues attended an online parenting seminar offering useful tips for educating children about managing money.



We strive to cultivate a caring and supportive work environment and nurture our employees’ skills for self-care and resilience that are especially important during the current pandemic. In 2021, we launched a two-level psychosocial programme aimed at helping managers and supervisors develop inner strength for coping with challenges at work or in daily life. We also organised a webinar entitled “Positive Thinking for Effective Communication” to help employees harness positive emotions to enhance their interpersonal relationships. In addition, 38 colleagues attended an online training from Christian Family Service Centre to cultivate emotional intelligence through drawing exercises.

The Good Neighbours’ Club composed of 76 members continued to offer emotional support for their peers. In 2021, we held a refresher counselling workshop for 20 veteran members and two basic employee counselling skills workshops for new members. The Club also maintains an online learning and resource platform.

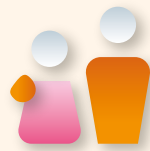


## 2021 Wellness Initiatives



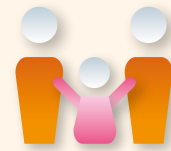
### Physical and intellectual wellbeing

- Interest activity groups and online interest classes on various topics
- Health talks, fitness courses and recreational facilities
- Distribution of fruit
- Flu vaccinations
- Medical check-ups for eligible employees
- Tips on physical wellness



### Emotional and social wellbeing

- Volunteering activities
- Employee Recreational Subsidy
- 24-hour Employee Counselling Hotline Service manned by professional counsellors
- Good Neighbours' Club with 76 members
- E-buddy programme to help new hires assimilate quickly and effortlessly into our corporate culture
- In-house training programme on psychosocial wellness



### Good family relationships

- 5-day week
- Lactation rooms for breastfeeding mothers
- Medical check-up plans and flu vaccinations for employees' family members at preferential rates
- Children's Education Subsidy
- Talk on parenting



## Attracting Talent

We strive to attract quality talent. As part of our strategy to raise awareness about training and employment opportunities with HK Electric, we actively inspire young people to explore careers in Science, Technology, Engineering and Maths (STEM). We promote our trainee programmes through fairs, expos and other events organised by universities, the Vocational Training Council (VTC) and the Hong Kong Institute of Construction and offer an Industrial Placement

Programme for third-year university students in IT-related disciplines to gain on-the-job experience. In 2021, we recruited six new Graduate Trainees.

In addition to the annual "E&M Go!" event organised by the Hong Kong Electrical and Mechanical Industry Promotion Working Group, we have partnered with other organisations, such as The Hong Kong Polytechnic University, to contribute our professional and technical support for enhancing their teaching and learning programmes, aiming at encouraging young people to pursue further training and professional development in relevant fields.

In 2021, we joined the Industry Partner Collaboration Scheme organised by VTC STEM Education Centre to create seamless STEM education and career pathways for students. This 3-year collaboration will help introduce young talent to our Craft Apprentice Scheme and Trainee Technician Programme.





## Opportunities for Growth

Guided by our Learning and Development Policy, we are committed to investing in learning and development of our employees for their own career advancement and in support of the business operations and company development. HK Electric has been named a Manpower Developer (2020-22) by the Employees Retraining Board in its Manpower Developer Award Scheme.

We must ensure that our workforce has the necessary skills and expertise to continue to excel in all core areas of our business. In order to sustain HK Electric's robust talent pipeline, the Managing Director conducts an annual succession planning exercise with the support from the Human Resources Division to evaluate management and leadership needs and identify potential successors for critical roles.

We regularly assess employees' training needs in consultation with line managers as part of our performance appraisal process with reference to our business objectives and perceived challenges. Technical and operation divisions coordinate technical or functional training, while the Human Resources Division is responsible for other learning and development programmes based on our Four-level Leadership Competency Framework.

We foster a culture of continuous learning. In 2021, we directed more resources to self-paced or blended learning and delivered a total of around 58,000 hours of face-to-face and online learning programmes to employees. We adopted a blended learning approach to training on performance planning for over 60 participants, which comprised two self-learning videos and a one-hour online tutorial designed to maximise learning effectiveness and efficiency.



Six webinars on a range of topics, including preventing procrastination, establishing credibility, positive thinking, cyber security, budget control and overcoming

biases were arranged under the One-hour Learning Series or Knowledge Sharing Series for all employees. We also placed emphasis on just-in-time learning with a series of 1.5-hour supervisory skills sessions for small groups of supervisors and managers to learn and reflect on their supervisory styles and enhance their knowledge, skills and confidence in leading others.

Our comprehensive and structured trainee programmes are recognised by the Hong Kong Institution of Engineers. We have also organised a Professional Development Programme to accelerate the growth of selected young talent within our organisation.

In 2021, seven mid-level leaders participating in our Leadership Development Programme took part in six learning sessions covering proactive leadership, servant leadership, talent development, managerial decision-making, systems thinking and innovative technology. Eighteen first-line leaders of our Young Talent Development Programme attended learning activities on resilience, learning agility, coaching and team alignment using a watch-read-share learning approach. We offered two self-paced e-learning modules on Situational Leadership for these participants to encourage them to learn anywhere and anytime.

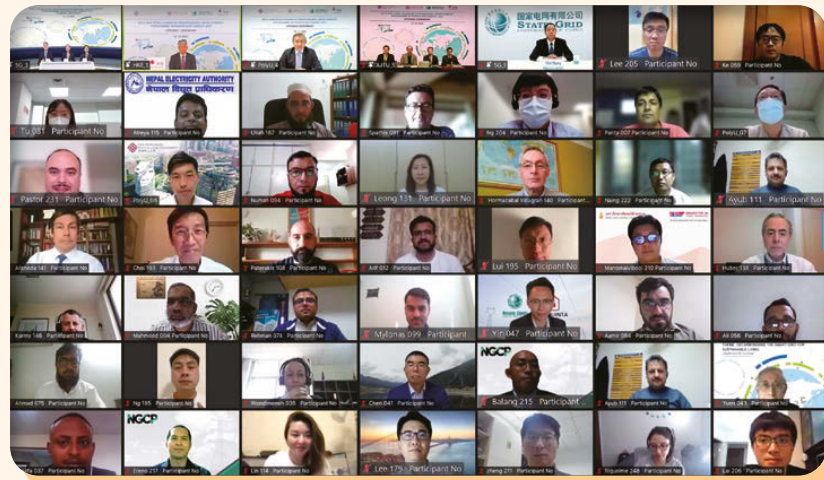




The HK Electric Institute nurtures technical and professional competencies of employees by facilitating knowledge transfer. Following the establishment of our in-house multimedia studio, more learning videos and learning resources have been produced. All employees can also enjoy interactive learning via our intranet portal and My HKE app.

### Collaboration to Nurture Talent

In 2021, HK Electric continued to collaborate with the State Grid Corporation of China, Xian Jiaotong University and The Hong Kong Polytechnic University to organise the "Belt and Road Advanced Professional Development Programme in Power and Energy" connecting and developing senior-level talent in the energy industry. Under the theme of "Decarbonising the Smart Grid for Sustainable Living", 10 online seminars and discussions were organised for more than 250 professionals from the electric power industry, academia and governments to share the latest technologies and experience.




[Belt and Road Advanced Professional Development Programme in Power and Energy 2021](#)

### 2021 Employee Training

	Gender group		Employee category			Overall
Percentage of employees trained (%)	 <b>99.5</b>	 <b>99.4</b>	 <b>98.6</b>	 <b>99.5</b>	 <b>100</b>	<b>99.5</b>
Average training hours per employee	 <b>32.0</b>	 <b>24.9</b>	 <b>34.1</b>	 <b>30.9</b>	 <b>23.8</b>	<b>30.6</b>

## Talent Development at HK Electric

	Programme	Aims	Activities
 <b>Development programmes</b>	<b>Trainee and professional development</b>	Support trainees and young intakes to build professional careers	<ul style="list-style-type: none"> <li>Familiarisation visits, environmental seminars, sharing sessions, a mentorship programme and a graduation camp</li> <li>Workshops on career development, presentation and writing skills, business etiquette, team building and inter-generation communication</li> </ul>
	<b>Rotational development</b>	Nurture untapped leadership potential	<ul style="list-style-type: none"> <li>Rotational assignments provide exposure across business functions</li> <li>Tailor-made learning opportunities based on individual development needs</li> </ul>
	<b>Young talent development</b>	Advance young talent into first-line leadership roles	<ul style="list-style-type: none"> <li>Two-year intensive development programme with learning based on competency assessments and personal development planning</li> <li>Mentorship from department heads</li> <li>Experiential learning, case discussion, experience sharing, benchmarking visits and action-learning projects</li> </ul>
	<b>Leadership development</b>	Prepare mid-level leaders to succeed critical leadership roles	<ul style="list-style-type: none"> <li>Two-year intensive development programme focused on personalised career goals and preparation for taking on senior leadership roles</li> <li>One-on-one mentorship by senior executives</li> <li>Structured learning through leadership boot camp, book reviews, topical workshops, sharing with management representatives from other organisations and action-learning projects</li> </ul>
	<b>Executive education</b>	Ensure sustained competitiveness and long-term development	<ul style="list-style-type: none"> <li>Designed to equip executives with cutting-edge knowledge, sharpen strategic thinking and provide multiple perspectives</li> <li>Executive education in collaboration with tertiary and professional institutions both locally and overseas</li> </ul>
 <b>Knowledge sharing</b>	<b>HK Electric Institute</b>	Transfer knowledge and expertise to the next generation	<ul style="list-style-type: none"> <li>Courses on power engineering delivered by experienced current and retired employees</li> <li>Other self-learning modules available in areas of customer service, commercial matters, cybersecurity, code of conduct, legal compliance, and general knowledge</li> </ul>
	<b>Seminars &amp; workshops</b>	Strengthen learning culture at all levels	<ul style="list-style-type: none"> <li>Regular sessions on various topics</li> <li>New topics available from time to time</li> </ul>
	<b>Knowledge inventory</b>	Enable systematic planning for knowledge succession	<ul style="list-style-type: none"> <li>Individual business units update knowledge inventories annually</li> <li>Definition of critical knowledge items, identification of knowledge owners and successors</li> </ul>



# Health & Safety

At HK Electric, we have a robust culture of safety. We recognise that health and safety risks arise in all areas of our business, including workplace incidents involving employees and contractors, power supply interruptions affecting critical community facilities and customers with special needs, incidents involving power facilities affecting neighbouring communities and unsafe use of electricity on customer premises.

Our goal is to achieve zero accidents among our employees and contractors and to provide customers with a safe and reliable supply of electricity. We organise a wide variety of health and safety programmes, promote safe use of electricity, maintain high standards of safety at all facilities and implement advanced technologies, such as in-house developed smart grid features and AI cameras, to enhance safe operation of our network and site safety. We also remain vigilant and well-prepared for unexpected events.

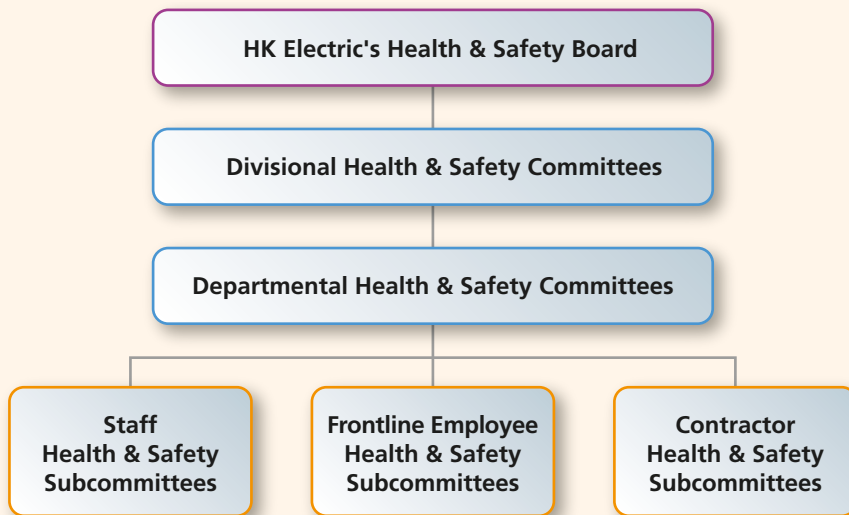


## Safety First

HK Electric's Health & Safety Board, chaired by the Managing Director, oversees implementation of the company's Health & Safety Policy and related guidelines. It is supported by divisional/departmental health and safety committees for monitoring health and safety performance. We also have a number of sub-committees for engaging with employees and contractors on health and safety issues.



## Health & Safety Governance Structure



We have three Safety Management Systems in place certified to international standard ISO 45001 covering our operations at LPS, our electricity network and development of new power infrastructure. LPS also has a Natural Gas Safety Management System covering the design, construction, commissioning, operation and maintenance of gas facilities and gas-fired generating units.

HK Electric's Corporate Health & Safety Manual is a comprehensive document designed to align the safety management procedures and practices of the company with recommendations from the Labour Department's Code of Practice on Safety Management. It is reviewed and updated regularly to ensure compliance with best practices for our industry and government regulations.



## De-risking Human Factors on Workplace Safety

In 2021, we participated in the annual Health & Safety Conference hosted by Power Assets. The conference entitled “De-risking Human Factors on Safety at Work” provided a forum for Power Assets’ member companies, including HK Electric, to share best practices on minimising human errors.

### Virtual Reality Safety Training



The key to excellent occupational health and safety performance is proactive engagement with employees and contractors. We promote health and safety awareness by educating our employees and contractors about safety culture, encouraging knowledge-sharing and offering a wide range of incentives to maintain incident-free operations.

Every three years, we conduct a company-wide survey to determine our Safety Climate Index (SCI), which provides an objective measure of our safety culture from the perspectives of our employees throughout the organisation. Our SCI survey results in 2021 indicate that there has been overall improvement since 2018. All business units have developed further action plans for implementation in 2022.



## Safety Performance

Over the past few years, the number of Lost Time Injuries recorded in our workplaces has remained consistently low. The annual Lost Time Injury Frequency Rate and Lost Time Injury Severity Rate have also dropped in 2021 as compared to 2020. However, we missed the overall target set for achieving continuous improvement in both rates, which is to achieve a reduction as compared to the average over the previous three years. Nonetheless, the two incidents in 2021 were investigated thoroughly and preventive measures have been implemented as a result.

	2018	2019	2020	2021
Number of Lost Time Injuries	1	1	3	<b>2</b>
Lost Time Injury Frequency Rate*	0.05	0.05	0.17	<b>0.11</b>
Lost Time Injury Severity Rate*	0.05	1.02	19.35	<b>10.06</b>

\* Per 200,000 employee-hours



### 2021 Risk Prevention Indicators

498

Work Safe Behaviour observations

2,136

safety inspections

11

average safety training hours per employee

575

near-miss incidents

4,407

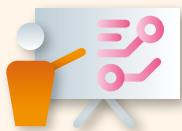
risk assessments

### Health & Safety Management Practices



#### Rules, procedures and practices

- Comprehensive safety rules, procedures and instructions to ensure all operations are 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 on and follow-up to every workplace incident to prevent recurrence
- Work Safe Behaviour programme to eliminate risky behavior in a range of operational areas
- 5S Good Housekeeping programme to enhance workplace efficiency, occupational health and safety, space utilization, and cleanliness
- Workplace hygiene inspections and participation in Hong Kong's voluntary Indoor Air Quality Certification Scheme to ensure a healthy working environment
- Oil-free distribution substations and zone substations to reduce potential fire hazards
- Contingency plans and procedures



#### Training and awareness

- Comprehensive safety training for employees with the introduction of virtual reality technology to bring training sessions to life
- Health and safety alerts for employees
- Company-wide Safety Climate Index survey every three years
- Promotional campaigns for employees and contractors including Health & Safety Week; Safety, Health & Environment Day; Life First Campaign; Environmental, Health & Safety Quiz; Safety Forum; and health and safety talks
- Relevant safety information on our website for third-party contractors carrying out work near our power supply lines
- Promoting safe use of electricity to customers through group tours of our Power Quality Centre



#### Encouragement

- Incentive and award schemes to recognise employees for zero-accidents
- Incentive scheme for safe driving
- Incentive scheme for reporting near-miss incidents
- Membership of the "Charter on Preferential Appointment of OSH Star Enterprise", involving a pledge to give preference to contractors with effective safety management systems in place for repair, maintenance, alteration, and addition works

## Partnerships are Key to Health and Safety

In December 2021, HK Electric's holistic approach to managing health and safety was recognised by the 20<sup>th</sup> Hong Kong Occupational Safety and Health (OSH) Award.

We received four Gold Awards under the categories of "Safety Culture Award", "Safety Management System Award (Other Industries)", "5S Good Housekeeping Best Practices Award (Other Industries)" and "OSH Annual Report Award", as well as Excellence and Outstanding Awards in "Safety Performance Award (Other Industries)".



With years of outstanding achievements, HK Electric was also presented with the "OSH MVP Award: 15 Years Plus" and was invited to be one of the first batch of "OSH Strategic Partners" to join hands in promoting the OSH culture among employees, business partners, contractors and the public.



## Contingency Preparedness

Interruptions to the power supply may significantly affect community facilities, such as hospitals, road traffic control systems, communication infrastructure and building lifts. We make every effort to deliver a reliable power supply and provide 24-hour emergency customer support via telephone and SMS. Contingency plans are in place and regularly reviewed for crisis situations, such as natural disasters or force majeure events that cause disruption to the power system in order to ensure smooth and efficient recovery.

We take extra care of the special power needs of customers operating life-support equipment by encouraging them to register with us so that we can provide advance notification

of planned power supply interruptions. We also have special contingency plans in place for hospitals. Please refer to the chapter on [Serving Hong Kong](#) for more information about supply reliability and customer service.

Our contingency planning process takes into account health and safety risks to our employees, contractors, customers and the public during potential emergency situations, such as fire, oil and chemical spills, typhoons, floods, emergency evacuations, confined space rescues, heat-stroke and serious accidents. We conduct regular drills with our employees, contractors and customers to enhance our response capabilities.



Confined space rescue drill at Lamma Power Station

There is a three-level contingency plan in place to minimise health risks and sustain business continuity during an outbreak of influenza or similar public health crisis. In response to the COVID-19 pandemic, we implemented our contingency plan at Emergency Response Level, working hard to reduce the risk of infection for employees and contractors' personnel while maintaining our operations and services. Throughout the pandemic, all business units have reviewed and refined their plans to respond quickly and effectively to the evolving situation, including work-from-home scenarios.



# Managing our Supply Chain

In our business, we work with a wide range of suppliers from contractors and consultants to vendors of materials and technical equipment, to help us construct, operate and maintain our power facilities and support our daily operations. We work closely with these partners to ensure the success of our business and promote sustainable development.

Our Code of Practice for Suppliers (CoP) sets out high standards for business ethics, including compliance with applicable laws and regulations, respect for intellectual property rights and data privacy, competitive business practices and prevention of bribery and conflict of interest. The CoP also covers our expectations on human and labour rights—such as eliminating child and forced labour, respect for freedom of association and implementing anti-discrimination policies—as well as health and safety, environmental protection and climate action, and cybersecurity.

We strongly encourage all suppliers to report publicly on their sustainability performance and to influence their business partners to comply with the principles outlined in the CoP.



## Responsible Procurement

HK Electric is one of the founding members of the Hong Kong Sustainable Procurement Charter organised by the Green Council. In accordance with our Green Purchasing Policy and Green Purchasing Guidelines, we strive to work with suppliers who conserve resources and protect the environment. For selected commodities, our procurement decisions take into account environmental impact together with other selection criteria such as quality, price and punctuality.

In 2021, our Provision of Contracts and Procurement Services were verified by the British Standard Institution as having complied with ISO 20400: Sustainable Procurement – Guidance. This signifies that we have adopted a systemic approach to ensure material sustainability considerations are integrated into our procurement process to minimise the environmental, social and economic impacts of our procurement activities and engage our suppliers in contributing to sustainability.

Our supply chain comprises predominantly local companies, defined as those based in Greater China, including Hong Kong. With the exception of coal, other major input materials at LPS, such as natural gas, limestone and ultra-low sulphur diesel, are supplied by local companies. In addition, we procure approximately 93% of general goods and services locally.

Every tender or quotation received by HK Electric is handled according to established commercial procedures. We evaluate our fuel, limestone and urea suppliers on a special case-by-case basis, which includes consideration of their sustainability performance. In 2021, these suppliers accounted for approximately 1.6% of suppliers in our supply chain.

Major suppliers of other materials and services undergo screening for environmental and health and safety performance in order to be accepted onto our Recognised Tenderers Register (RTR). We periodically review the RTR and request the suppliers to submit updates on their sustainability performance. In 2021, we evaluated 34 major suppliers in this way and their overall performance was satisfactory.

During the year, we required all active suppliers in one of the categories of our RTR to complete and submit a Sustainable Procurement Survey (SPS). We used this information to evaluate their performance and to guide decision-making on how to enhance our sustainable procurement processes and procedures in future. We are planning to extend the SPS to active suppliers in other categories of our RTR.

In 2021, the number of environmentally friendly products listed in our Electronic Ordering System increased to over 165. Our annual expenditure on these items amounts to about \$385,000.

## 2021 Number of Suppliers by Geographical Region



● Hong Kong	887
● Asia (excluding Hong Kong, Mainland China)	39
● Mainland China	16
● United Kingdom	10
● Europe (excluding United Kingdom)	12
● United States	7
● Australia	3
● Canada	1
Other regions	0
<b>Total</b>	<b>975</b>



### Influencing our Suppliers

We work closely with our suppliers to achieve shared sustainable development goals, including protecting public health during the pandemic. All contractors and their employees are required to comply with health and safety precautions to help combat disease transmission. During the year, we awarded 38 personnel employed by our contractors with “Healthy Stars”, “Safety Stars” and “Environment Stars” to acknowledge their excellent performance.

Our Contractor Handbook includes detailed guidelines on environmental protection, health and safety, quality

assurance, housekeeping and security. We meet with contractors regularly to monitor their performance and obtain feedback. In addition to working with contractors’ Safety Officers to conduct site inspections, we encourage all contractors’ employees to report near-miss incidents and offer their suggestions for preventing potential hazards in our workplaces. We have a merit and demerit point system and a safety incentive scheme in place to incentivise our contractors to pursue workplace safety. In 2021, we implemented a programme to review contractor safety documents and the performance of contractors’ Safety Officers in order to

develop consistent requirements for site inspections among our various contractors.



Coastal clean-up with our contractors



## Case Story

# Partnering for Better Environment and Wellbeing

Cultivating and strengthening our partnerships is a crucial part of our work that not only immeasurably enhances our business and workplace culture, but also benefits the larger community of Hong Kong.

## In our workplaces...

Our “Life First” campaign focuses on enhancing safety in high-risk activities such as working at height and heavy machinery and lifting operations.

In May, we partnered with the Construction Industry Council (CIC) and three contractors to express our appreciation for good health and safety culture at LMX site by distributing “Lo Pan Rice” to 600 employees and workers. Master Lo Pan was a legendary carpenter, engineer and inventor who lived about 500 BC and who is still revered to this day as the patron deity of tradespeople.

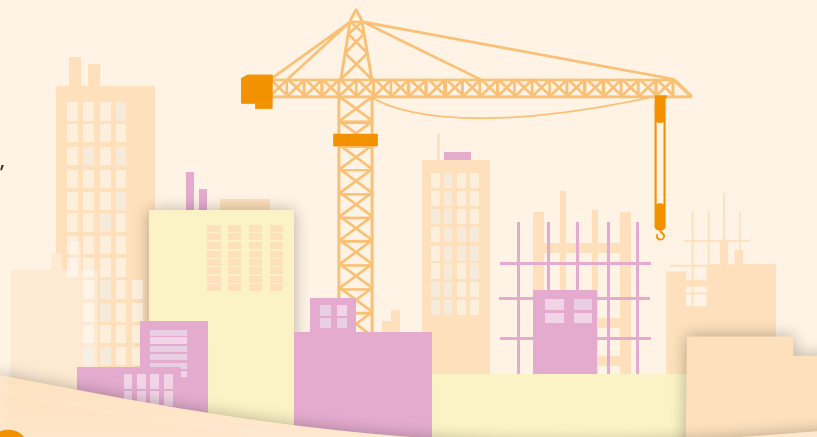


[“Lo Pan Rice” Campaign 2021](#)

## For the environment...

To enjoy health and wellbeing in our own lives, we must promote health and wellbeing in our natural environment. To help combat the dramatic rise in plastic waste from take-away food containers during the COVID-19 pandemic, we have banned disposable Styrofoam lunch boxes at LPS and LMX.

During the year, our volunteers participated in the CIC’s Shoreline Clean-up Campaign. More than 200 employees and contractors’ personnel turned out to help clean up Tai Wan To Beach near LPS.



## Among people...

We encourage our employees and contractors' personnel to be healthy in mind and body. In December, we hosted a SHE Day to combat the culture of smoking among some workers at LMX site. We supported them to kick the habit and improve their health by distributing gift bags containing nicotine patches and health supplements.

In 2021, we continued fighting the COVID-19 pandemic by distributing over 600 "Lucky Bags" with personal hygiene products such as face masks and sanitisers. In February, we conducted mass testing of 993 employees and contractors' personnel at LMX site under the CIC COVID-19 Testing Service Scheme. We also organised an outreach vaccination

programme at LMX in July and August to encourage our employees and contractors' personnel to receive COVID-19 vaccinations.



*"Over the past two decades, the high incidence of respiratory disease in Hong Kong has exacerbated the impact of new viruses, such as avian influenza, SARS and COVID-19. By taking precautionary steps, such as encouraging workers to stop smoking, we hope to improve our collective respiratory health and contribute to a healthier and more resilient community."*

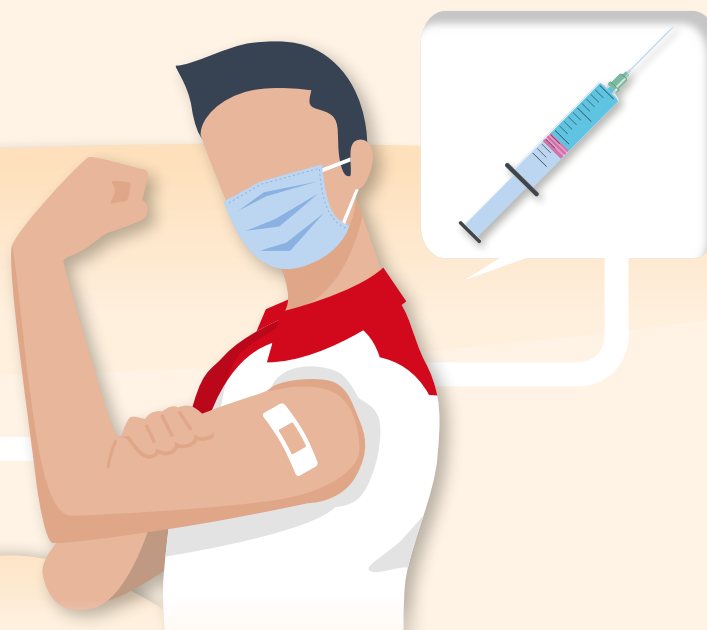
**Kwan Ying-leung**  
General Manager (Projects)  
HK Electric

*"Widespread vaccination against COVID-19 is critically important to stopping the virus and re-opening Hong Kong. We wanted to educate our LMX staff and contractors about the benefits of the COVID-19 vaccine and also provide them with the opportunity to receive it. So we tried to make it as easy and convenient as possible and were gratified to see high participation rates."*

**Thomas Cheong**  
Senior Manager (Construction Management)  
HK Electric

*"The smoke-free campaign is a good reminder of the importance of living a healthy life, not only for myself, but also for my family. I am grateful that I work for a client company that cares about my health and encourages me to get healthier."*

**Tony Wong**  
Wai Luen Development Ltd.  
A participant in the SHE Day





# Key Statistics and Targets

## Status of Targets in 2021

Environment	Status
Collect at least 100,000 m <sup>3</sup> of plant effluent and rain water for reuse at LPS in 2021	Achieved
Plant diverse species of native trees or shrubs at LPS in 2021 to support biodiversity	Achieved
Reduce food waste at the canteen of LPS in 2021 as compared to 2020	Achieved
Reduce vehicle fleet's fuel usage in 2021 as compared to 2020	Achieved
Increase EV mileage in 2021 as compared to 2020	Missed <sup>[1]</sup>
Obtain at least one Wastewise Certificate and one Energywise Certificate under the Hong Kong Green Organisation Certification Scheme in 2021	Achieved
Commission two new gas-fired generating units, L11 and L12, at LPS by 2022 and 2023, respectively	In progress <sup>[2]</sup>
Reduce CO <sub>2</sub> e per unit of electricity sold to not higher than 0.6 kg/kWh in 2023 from 0.93 kg/kWh in 2005 (just before natural gas was introduced to LPS)	In progress
Reduce total electricity consumption, water consumption, paper consumption and waste generation of our key office premises including Hongkong Electric Centre, Electric Tower, Electric Centre and seven main buildings at LPS by 5%, 1%, 10% and 10%, respectively, in 2024 as compared to the baseline figures in 2019	In progress <sup>[3]</sup>
Reduce production of ash and gypsum at LPS by 37% in 2024 as compared to the baseline figures in 2019	In progress
Health & Safety	Status
Achieve a reduction in the Lost Time Injury Frequency Rate (LTIFR) in 2021 as compared to the average over the previous three years	Missed <sup>[4]</sup>
Achieve a reduction in the Lost Time Injury Severity Rate (LTISR) in 2021 as compared to the average over the previous three years	Missed <sup>[4]</sup>
Obtain at least three Excellent Class Indoor Air Quality (IAQ) Certificates under the Government's IAQ Certification Scheme in 2021	Achieved
Organise a series of health talks and interest classes through online platform to enable our employees to maintain a healthy and balanced lifestyle in 2021	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 2021	Achieved
Complete at least 200 audits for Smart Power Energy Audit in 2021, particularly for NGOs, schools and SMEs	Achieved
Confirm energy efficiency enhancement project subsidies for at least 100 buildings in 2021, including residential buildings, commercial buildings, NGO premises and schools	Achieved
Launch a promotion programme on electronic billing/electronic payment in 2021 to encourage more customers to go green	Achieved
Further expand the Plant Ownership Programme at LPS by adding at least one new project in 2021 to enhance plant reliability and availability, and to facilitate development of young engineers	Achieved
Support 8,500 senior citizens through various community programmes in 2021	Achieved
Engage 26,000 fans via our corporate and campaign Facebook pages in 2021	Achieved
Develop and implement a fraud management framework and facilitate divisions/departments to perform fraud-risk assessments in 2021 to identify assets or areas that are prone to fraud risks and enhance employee awareness of fraud risks	In progress <sup>[5]</sup>

### Notes:

<sup>[1]</sup> Due to the significant decrease of corporate vehicle fleet mileage in 2021, the EV mileage has also decreased compared with 2020.

<sup>[2]</sup> New gas-fired generating unit L11 was successfully synchronised in November 2021 and targeted for commissioning in 2022, while the construction works for L12 is in full swing. Please refer to the chapter on [Sharing our Planet](#) for more information.

<sup>[3]</sup> The timeline of this target has been revised from 2020-2024 to 2021-2025 in order to align with the Government's Carbon Neutrality Partnership programme.

<sup>[4]</sup> Please refer to the chapter on [Working with Partners](#) for more information.

<sup>[5]</sup> The timeline of this target has been revised from "2021" to "2023" considering the number of divisions/departments and their schedules. Facilitation will commence in H1 2022.



# Awards and Recognition

It is encouraging that our ongoing efforts have been widely recognised with various awards in the areas of quality, health and safety, environmental protection, community involvement, customer service, and corporate and staff achievements. For a full list of our awards in 2021, please refer to our [Annual Report](#).





# Summary of Statistics

Environment	2021	2020	2019
<b>Fuel Consumed<sup>[1]</sup></b>			
Gas (TJ)	40,201	40,981	27,568
Coal & oil (TJ) <sup>[2]</sup>	62,421	59,472	82,996
<b>Licence Compliance</b>			
Percentage of Compliance (%)	100	100	100
<b>Air Emissions</b>			
SO <sub>2</sub> (kT) <sup>[1]</sup>	0.82	1.08	1.94
NO <sub>x</sub> (kT) <sup>[1]</sup>	5.33	5.41	7.59
RSP (kT) <sup>[1]</sup>	0.12	0.13	0.18
CO <sub>2</sub> (million T) <sup>[1]</sup>	7.35	7.16	8.48
Direct GHG emissions (million T of CO <sub>2</sub> e) <sup>[3]</sup>	7.39	7.19	8.51
Indirect GHG emissions from imported energy (million T of CO <sub>2</sub> e) <sup>[4]</sup>	0	–	–
Other indirect GHG emissions (million T of CO <sub>2</sub> e) <sup>[5]</sup>	1.10	–	–
CO <sub>2</sub> e per electricity unit sold (kg/kWh) <sup>[6]</sup>	0.71	0.71	0.81
<b>Material Non-hazardous Wastes<sup>[7]</sup></b>			
Ash collected for industrial uses (kT) <sup>[1]</sup>	162	154	230
Gypsum collected for industrial uses (kT) <sup>[1]</sup>	47	39	70
Construction waste from major construction projects for recycle (kT)	32	–	–
Construction waste from major construction projects for disposal (kT)	2	–	–
<b>Material Hazardous Wastes<sup>[8]</sup></b>			
Waste oil collected for recycle (litre)	0	0	2,000
Waste oil collected for disposal (litre)	151,800	82,700	132,087
Other material hazardous wastes recorded in volume for recycle (litre)	0	0	0
Other material hazardous wastes recorded in volume for disposal (litre)	13,600	19,800	0
Other material hazardous wastes recorded in weight for recycle (kg)	17,750	0	0
Other material hazardous wastes recorded in weight for disposal (kg)	16,080	53,248	23,694
<b>Water Consumption/Discharge<sup>[1]</sup></b>			
Marine water withdrawal & discharge (million m <sup>3</sup> )	1,971	1,738	1,930
Town water consumption (million m <sup>3</sup> ) <sup>[9]</sup>	1.99	1.87	2.35
Wastewater discharge (million m <sup>3</sup> )	0.24	0.25	0.26
<b>Noise Abatement Notice</b>			
Number of notices received	0	0	0
<b>Certificate Accreditation</b>			
Number of ISO 14001 certificates	3	3	3
Number of ISO 50001 certificates	1	1	1
<b>Health &amp; Safety</b>			
Number of fatalities	0	0	0
Number of Lost Time Injuries	2	3	1
Lost Time Injury Frequency Rate (LTIFR) (per 200,000 employee-hours)	0.11	0.17	0.05
Number of days lost/charged (no. of employee-days) <sup>[10]</sup>	179	348	19
Lost Time Injury Severity Rate (LTISR) (per 200,000 employee-hours) <sup>[10]</sup>	10.06	19.35	1.02
Longest period without a Lost Time Injury (no. of days)	154	165	213
Number of reported traffic accidents (no. of cases)	10	7	6
Traffic Accident Frequency Rate (TAFR) (no. of cases per million km travelled)	5.9	3.8	3.4
Number of ISO 45001 certificates	3	3	3



Operations	2021	2020	2019
<b>Customer Service</b>			
Number of customers (thousands)	584	583	581
Average rating of customer satisfaction level (5-point scale)	4.7	4.7	4.6
Number of pledged service standards	18	18	18
Percentage achieved (%)	100	100	100
<b>Installed Capacity<sup>[1,11]</sup></b>			
Gas (MW)	1,060	1,060	680
Coal & oil (MW) <sup>[2]</sup>	2,555	2,555	2,555
Renewable energy (MW)	1.9	1.8	1.8
<b>Performance</b>			
Electricity sold (millions of kWh)	10,361	10,134	10,519
Plant availability (%)	89.0	89.5	90.9
Thermal efficiency (%)	37.6	37.6	35.5
Transmission and distribution losses (%)	3.3	3.4	3.4
<b>Electricity Supply Reliability</b>			
Supply reliability rating (%)	>99.9999	>99.9999	>99.999
Unplanned customer minutes lost (minutes)	0.3	0.3	0.6
<b>Certificate Accreditation</b>			
Number of ISO 9001 certificates	8	8	8
Number of ISO 27001 certificates	1	1	1
Number of ISO 55001 certificates	2	2	2

Notes:

<sup>[1]</sup> For power generation only.

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

<sup>[3]</sup> HK Electric's direct GHG emissions (Scope 1 emissions) are mainly attributed to power generation. The 2021 figure is slightly higher than 2020 due to higher electricity sold and challenges in acquiring additional gas supply. The figures are independently verified according to ISO 14064-1:2018.

<sup>[4]</sup> HK Electric is a vertically integrated utility and does not purchase energy from third parties for consumption. Hence, our indirect GHG emissions from imported energy (Scope 2 emissions) are reported as zero and are independently verified according to ISO 14064-1:2018.

<sup>[5]</sup> HK Electric's other indirect GHG emissions (Scope 3 emissions) refer to indirect GHG emissions arising as a consequence of its operations and activities, including those from transportation, products used, use of our products and other sources (our town water demand). The figures are independently verified according to ISO 14064-1:2018.

<sup>[6]</sup> HK Electric's GHG intensity refers to direct GHG emissions and indirect GHG emissions from imported energy (Scope 1 + Scope 2 emissions) per unit of electricity sold.

<sup>[7]</sup> HK Electric's material non-hazardous wastes include ash and gypsum generated from power generation and construction waste generated from major construction projects required to be managed under the mandatory construction waste disposal charging scheme.

<sup>[8]</sup> 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.

<sup>[9]</sup> Town water is provided by the Water Supplies Department of the HKSAR Government. Please refer to [Water Supplies Department's website](#) for the information about the source of water.

<sup>[10]</sup> For Lost Time Injuries in which disability continues beyond the closing date (31<sup>st</sup> December) of a specific year, days lost of the year were estimated on the basis of medical opinion as to probable ultimate disability.

<sup>[11]</sup> To achieve Hong Kong's fuel mix target of around 50% gas generation from 2020, HK Electric not only had to build a new gas-fired unit L10, but also defer the retirement of an old gas-fired unit GT57. Instead of the original schedule of 2020, GT57 will now retire in 2022 when another new gas-fired unit L11 comes into operation. This is an interim measure to achieve the above government objective. The installed capacity in 2021 without GT57 would otherwise be 3,272 MW.

<sup>[12]</sup> For economic / financial data, please refer to our [Annual Report](#).



# Looking Ahead

As a power utility, we play a crucial role in supporting Hong Kong's economic and social development. As a responsible business, we have a duty of care for 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 & Safety, and Partners & Community for 2022 and beyond. Specific targets in support of the United Nations' Sustainable Development Goals and Carbon Neutrality for Hong Kong can be found in the chapters on [Our Business and Approach to Sustainability](#) and [Running a Sustainable Business](#).

## Environment

- ◆ Collect at least 80,000 m<sup>3</sup> of plant effluent and rain water for reuse at LPS in 2022
- ◆ Plant diverse species of native trees or shrubs at LPS in 2022 to support biodiversity
- ◆ Reduce food waste at the canteen of LPS in 2022 as compared to 2021
- ◆ Reduce vehicle fleet's fuel usage in 2022 as compared to 2021
- ◆ Increase the proportion of EV mileage in the fleet mileage in 2022 as compared to 2021
- ◆ Increase the proportion of EVs in our corporate fleet to 53% by 2025
- ◆ Obtain at least one Wastewi\$e Certificate and one Energywi\$e Certificate under the Hong Kong Green Organisation Certification Scheme in 2022
- ◆ Commission two new gas-fired generating units, L11 and L12, at LPS by 2022 and 2023, respectively
- ◆ Reduce CO<sub>2</sub>e per unit of electricity sold to not higher than 0.6 kg/kWh in 2023 from 0.93 kg/kWh in 2005 (just before natural gas was introduced to LPS)
- ◆ Reduce total electricity consumption, water consumption, paper consumption and waste generation of our key office premises including Hongkong Electric Centre, Electric Tower, Electric Centre and seven main buildings at LPS by 5%, 1%, 10% and 10%, respectively, in 2025 as compared to the baseline figures in 2020
- ◆ Reduce production of ash and gypsum at LPS by 37% in 2024 as compared to the baseline figures in 2019
- ◆ Improve the average Power Usage Effectiveness (PUE) of two data centres at Electric Centre and Electric Tower by 5% by the year 2024
- ◆ Implement retro-commissioning in Hongkong Electric Centre and a building at LPS by 2023

## Health & Safety

- ◆ Achieve a reduction in the Lost Time Injury Frequency Rate (LTIFR) in 2022 as compared to the average over the previous three years
- ◆ Achieve a reduction in the Lost Time Injury Severity Rate (LTISR) in 2022 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 2022
- ◆ Organise a series of health talks and interest classes through online platform to enable our employees to maintain a healthy and balanced lifestyle in 2022

## Partners & Community

- ◆ Fulfil all our customer service pledges, embracing supply reliability, speediness of provision of supply and other customer services, including emergency services, in 2022
- ◆ Complete at least 200 audits under Smart Power Energy Audit in 2022, particularly for NGOs, schools and SMEs
- ◆ Confirm energy efficiency enhancement project subsidies for at least 100 buildings in 2022, including residential buildings, commercial buildings, NGO premises and schools
- ◆ Launch a promotion programme on electronic billing and Autopay/Faster-Payment-System (FPS) in 2022 to encourage more customers to switch to electronic services.
- ◆ Further expand the Plant Ownership Programme at LPS by adding at least one new project in 2022 to enhance plant reliability and availability, and to facilitate development of young engineers
- ◆ Support 10,000 senior citizens through various community programmes in 2022
- ◆ Engage 36,000 fans via our corporate and campaign Facebook pages in 2022
- ◆ Increase the number of "Green" items available on our electronic ordering system to more than 27% for general office commodity items group in 2022
- ◆ Facilitate key divisions/departments to perform fraud risk assessment by 2023 to identify areas prone to fraud risks and enhance employee awareness of fraud risks

# Verification Statement



## VERIFICATION STATEMENT

### Scope of Verification

Hong Kong Quality Assurance Agency (“HKQAA”) has been commissioned by HK Electric Investments and HK Electric Investments Limited (collectively known as “HKEI”) to undertake an independent verification of its Sustainability Report 2021 (“the Report”). The scope of HKQAA’s verification covers the data and information of HKEI’s sustainability performance for the period from 1<sup>st</sup> January 2021 to 31<sup>st</sup> December 2021. The Report states HKEI’s commitment, strategies and progress towards sustainability.

### Level of Assurance and Methodology

The process applied in this verification was referring to the International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. Our evidence gathering process was designed to obtain a reasonable level of assurance for devising the verification conclusion. The extent of this verification process undertaken was based on the Core option of the Global Reporting Initiative’s (“GRI”) Sustainability Reporting Standards (“GRI Standards”), GRI’s Electric Utilities Sector Disclosures and the Environmental, Social and Governance Reporting Guide (“ESG Reporting Guide”) of Hong Kong Exchanges and Clearing Limited.

Our verification included the discussion on the stakeholder engagement and materiality assessment processes, and review of the system and process for collecting, collating and reporting of sustainability performance data. Also, the verification procedures covered the review of documentation, interviewing responsible personnel with accountability for preparing the Report and verifying the selected samples of data and information. Raw activity data and supporting evidence of the selected samples were also thoroughly examined during the verification process.

### Independence

HKEI is responsible for the preparation of the Report. HKQAA does not involve in calculating, compiling, or in the 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 undertaken, it is the opinion of the verification team that:

- The Report has been prepared in accordance with the Core option of the GRI Standards and GRI’s Electric Utilities Sector Disclosures. Besides, the Report also addresses a significant number of material disclosures required under the Comprehensive option of the GRI Standards;
- The Report has complied with all mandatory disclosure requirements and “comply or explain” provisions outlined in the ESG Reporting Guide;
- The Report illustrates HKEI’s sustainability performance, covering all material and relevant aspects in a balanced, comparable, clear and timely manner; and
- The data and information disclosed in the Report are reliable and complete.

HKEI has been enhancing its reporting process continuously. The Report provides informative disclosure of HKEI’s sustainability performance and the overall disclosures are transparent, truthful and prudent.

### Signed on behalf of Hong Kong Quality Assurance Agency

Connie Sham  
Head of Audit  
March 2022



# 港燈電力投資

## HK Electric Investments

### 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 [feedback form](#) on our website or by contacting us at:

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The Hongkong Electric Co., Ltd.

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